Sajal Mathur *Editor*

Trade, the WTO and Energy Security

Mapping the Linkages for India

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Centre for WTO Studies
विश्व व्यापार संगठन अध्ययन केन्द्र

Springer

Editor
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Centre for WTO Studies
Indian Institute of Foreign Trade
New Delhi, Delhi
India

ISBN 978-81-322-1954-5 ISBN 978-81-322-1955-2 (eBook)
DOI 10.1007/978-81-322-1955-2
Springer New Delhi Heidelberg New York Dordrecht London

Library of Congress Control Number: 2014942279

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

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Chapter 1
An Introduction to Trade, WTO, and Energy Security: Linkages for India

Sajal Mathur

Abstract International trade, World Trade Organization (WTO), and energy security are three broad topics that each could be subject to standalone and detailed analysis. While some work has been done to examine the interface in an international context, there has been little or no work done to map the inter-linkages or implications for India. This introduction and the subsequent chapters seek to address and fill this gap.

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Views expressed are personal. The author is indebted to colleagues at the Centre for WTO Studies, the co-contributors of this edited volume, and to the trade/energy experts who found time from their busy schedules to comment on the material in this book. The author gratefully acknowledges the outstanding research assistance provided by Ms. Preeti Mann that was instrumental in getting this and other chapters of the book ready for publication. Ms. Sonam Choudhry supported in data collection for this chapter. Professor Abhijit Das, Head, Centre for WTO Studies, provided constant encouragement and invaluable support without which this book would not have been possible.

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S. Mathur (ed.), *Trade, the WTO and Energy Security*,
DOI: 10.1007/978-81-322-1955-2_1,

1.1 Introduction

Energy and international trade experts usually work in their own respective domains and may struggle to fully comprehend and map out trade and energy security linkages. Governance structures for international trade are relatively well-defined with the World Trade Organization (WTO) and the rules-based multilateral trading system coupled with bilateral, regional, and now transcontinental trade agreements setting new benchmarks. International or regional cooperation on energy or energy security, by comparison, has been less elaborate and may still be considered at a nascent stage of development. There are, however, some notable exceptions. The Energy Charter Treaty (ECT) is one such initiative. Some trade agreements such as the North American Free Trade Agreement (NAFTA) have also taken on board energy considerations with a separate 'energy' chapter. The workings of the Organization of the Petroleum Exporting Countries (OPEC) are, of course, well documented.

The linkages between rules governing trade and energy security—with some India focus—are the main theme of this book. This edited volume brings together the views of academics, policy makers, and experts who have extensive experience covering WTO and international trade issues. The WTO interface is important as trade and energy security linkages may assume significance as a topic for negotiation in the not too distant future. There is, of course, still no consensus on how to conclude the Doha Development Agenda (DDA—Doha Round) but that has not dissuaded some commentators from suggesting that the WTO's negotiating agenda needs to be updated to include twenty-first century concerns such as climate change or energy security. India has so far given due attention and priority to concluding the ongoing Doha Round without seeking to overload the agenda with new issues at this stage.[1]

This book is a collection of papers on trade and energy security that were commissioned by the Centre for WTO Studies (CWS) at the Indian Institute of Foreign Trade (IIFT) to deepen the understanding of the interface between energy security and trade rules, particularly from the Indian perspective. Some of the issues that have been covered are mapping of the linkages between trade and energy security in the WTO agreements, case law, accession, and Doha negotiations (Chair texts and proposals); assessing the issues that could be raised by energy deficit or surplus countries and the systemic implications if issues related to energy security are negotiated in the WTO; analyzing the provisions of the ECT and NAFTA vis-à-vis domestic policy; and examining the trade regimes of select

[1] The summing-up by the Chairman at the WTO Eight Ministerial Conference highlights this divergence and reads: "a number of Ministers stressed that for the WTO to remain credible and relevant it needed to address current global challenges. Some of the issues mentioned included climate change, energy, food security, trade and exchange rates, competition and investment. [….] Other Ministers expressed reservations about initiating negotiations on new issues. They were concerned about the possibility of addressing issues selectively or shifting the focus away from unresolved issues in the DDA negotiations" (WTO document WT/MIN(11)/11).

OPEC members and other major suppliers of fossil fuels to India. While the Indian perspective is evident in the contributions, this book may also be of interest to an international audience as trade, WTO, and energy security are global concerns and of relevance to all practitioners and academics working on these issues.

Before diving deeper into the trade, WTO, and energy security inter-linkages, this introductory chapter seeks to provide an overview and set the platform for the subsequent chapters.

1.2 Energy Security Across the Energy Divide

Economies run on energy. All sectors be it agriculture, industry, services, or even households depend on energy. It is hard to imagine one's life without energy. Securing existing reserves or ensuring energy supply in a sustainable and uninterrupted manner is a matter of commercial significance and national importance. This is precisely the reason why countries across the globe are so actively engaged in managing their energy reserves or securing the supply of energy. Energy security is often viewed as an integral element of national security.

But what is meant by energy security? The definition of energy security is guided by the availability or absence of energy resources. One can consider there to be an 'energy divide'[2] determined by endowments of energy resources. Energy surplus nations would naturally view the concept of energy security somewhat differently from energy deficient countries. There is focus on conservation of exhaustible natural resources and managing energy supplies for price and demand volatility in the former. For the latter, the core issue is one of access and security in energy supplies with minimal or no disruptions to commercial or household activity.

While there may be some commonalities across the 'energy divide', the approach to energy security usually concerns 'sovereignty' or 'security' considerations (Pauwelyn 2010). The 'sovereignty'-based approach to energy security is particular to energy abundant countries. The extraction, use, or conservation of exhaustible energy resources is often viewed as a sovereign right or decision of the country. Energy deficient countries are more preoccupied with 'security' considerations in terms of securing supplies to counter market or supply risks, diversifying the energy basket and, to the extent feasible, easing dependence on foreign supplies.

[2] Ayres and Ayres (2009) approach the so-called 'energy divide' to examine how renewable energy can replace fossil fuels. There is little or no focus on the types and relative merits of different energy resources in this book. The use of 'energy divide' is more to suggest that energy surplus and deficit countries may have different notions and priorities when it comes to looking at the trade and energy security linkages in WTO or other fora. This book seeks to limit itself to the more narrow confines of this debate.

Several energy security definitions have been proffered for the Indian context (see Singh 2010). For India, energy is more of a 'security' concern. According to the Integrated Energy Policy (Planning Commission 2006): "The country is secure when we can supply lifetime energy to all our citizens as well as meet their effective demand for safe and convenient energy to satisfy various needs at affordable costs at all times with a prescribed confidence level considering shocks and disruptions that can be reasonably expected". It is also interesting to look at the concept from a different angle and the prism of energy 'insecurity'. According to Bohi and Toman (1993), energy insecurity can be defined as "the loss of welfare that may occur as the result of a change in price or availability of energy." Noronha and Sudarshan (2009) have stressed that energy security in India should cover threats that arise from poverty or energy 'inequity'.

Based on these definitions, it is clear that an energy deficient nation like India needs to ensure availability, affordability, and sustainability for energy security. There are economic and political fallouts if energy security is compromised as witnessed during the oil-shocks of the 1970s or 1990s.

1.3 Trade and Energy Security in India

As the Planning Commission (2006) has noted, energy security in the Indian context raises the following concerns: (i) will India get all the energy it needs even when willing and able to pay the price?; and (ii) how to manage supply disruptions due to external events or factors beyond India's control? In addition to the 'supply risk' there are also 'market risks' due to price volatility[3] or 'technical risks' that could stem from accidents or technical failures that disrupt domestic energy supply or production. Reducing or dealing with these risks include steps to manage demand and increase efficiency in production and use of energy; reduce import dependence and boost domestic production of energy; diversify the energy basket (fuels and suppliers of energy); and expand India's domestic energy resource base and output.

The history of the energy sector in India has seen several twists (Singh 2010). Post independence, India took its first tentative steps to expand exploration and production of oil and gas. The Oil and Natural Gas Commission (ONGC) was set up in the 1950s and 'mineral and oil' was first listed in the Second Five Year Plan. The importance of a national policy on energy was recognized in the 1970s. The growing energy needs of the country coupled with the volatility and oil crisis had a direct economic fallout as the 1970s marked a period of double digit inflation and GDP shrank by 2.5 % in 1979. 'Energy' was covered as a separate topic in the

[3] The market risk associated with sudden or large increases in prices of fossil fuels can be just as damaging as supply risks, i.e., factors or events beyond one's control that may disrupt energy supply.

Sixth Five Year Plan and several private companies in the energy sector were nationalized during this period. The Gulf War and the balance of payments crisis in the early 1990s provided the impetus for economic liberalization and opening of the energy sector. The Government opened exploration and production (E&P) to private investment and in 1997 the New Exploration Licensing Policy (NELP) was introduced to encourage greater private sector participation. The administrative pricing mechanism for petroleum was also gradually dismantled. The India Hydrocarbon Vision 2025 was formulated in 2000 to chart out and safeguard energy security at the turn of the century. Energy security was given a broad policy framework in the Integrated Energy Policy drafted by the Planning Commission in 2006. In 2013, the Kelkar Committee was constituted by the Ministry of Petroleum and Natural Gas, Government of India to chart a Roadmap for Reduction in Import Dependency in the Hydrocarbon Sector by 2030.

India's energy needs are growing with the growth in population and income levels. The country's energy production has for the most part struggled to match pace with both the quantum and growth of its consumption of energy. Given the shortfall, India has had to rely heavily on imports to meet its growing energy requirements.

In 1991, 17.85 % of India's total commercial primary energy supply (TCPES) was met by imports. By 2004–2005 imports accounted for 30 % of TCPES (Planning Commission 2006). According to the Kelkar Committee (2013), India presently imports about 70 % of its oil and 30 % of its gas requirements from abroad. Coal imports amount to 14 % of the demand and are also likely to grow over time. In 2013, India's energy imports amount to US$150 billion or about 35 % of its primary energy requirements. By 2030, the cost of importing our energy requirements is estimated to touch almost US$300 billion. Most of India's energy needs are met with fossil fuels (oil, gas, coal) though there has been a push to diversify and promote alternatives, including renewable energy and non-conventional energy resources.

Figure 1.1 charts out the production and consumption of crude oil and petroleum products in India over the period 2004–2005 to 2011–2012. Crude oil production has remained largely static and the country has had to rely on imports to meet requirements. Domestic production of petroleum products, however, exceeds domestic consumption. Production has increased markedly from 118.58 million tons (mt) in 2004–2005 to 196.71 mt in 2011–2012. Consumption over the same period increased from 111.63 to 148 mt. The surplus production of petroleum products has grown to almost 50 mt by 2011–2012 and has been a major export item in India's trade basket.

On the trade side, Figs. 1.2 and 1.3 show the gross imports, exports, and net imports of crude oil, liquefied natural gas (LNG), and petroleum products in both volume and value terms. India has been a net importer of petroleum products. The country has to rely mainly on imports to meet its crude oil and LNG requirements. However, India has spare refining capacity and some of the crude oil imported is, with value addition, exported as refined petroleum products.

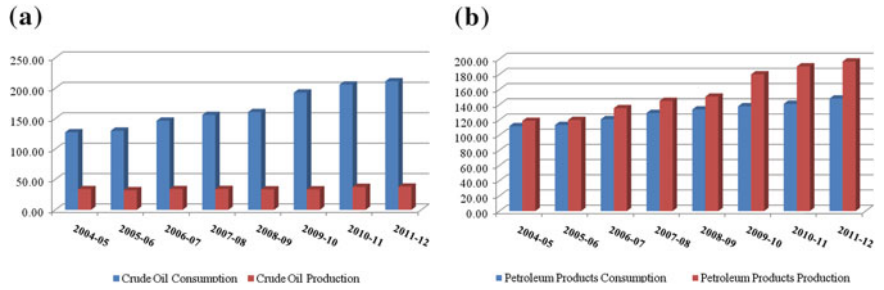

Fig. 1.1 **a** and **b** Production and consumption of crude oil and petroleum products in India (mt). *Source* Basic statistics on Indian petroleum and natural gas (2011–2012)

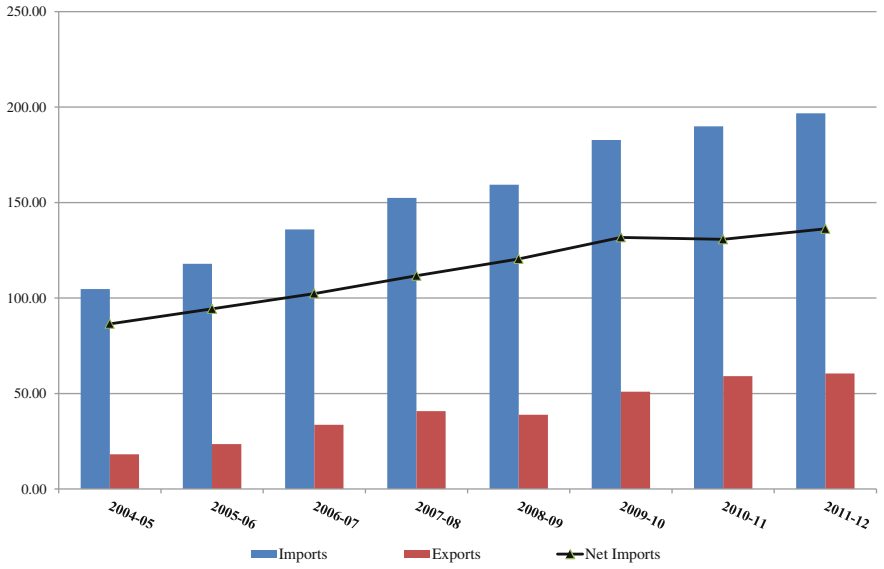

Fig. 1.2 Volume of India's trade in crude oil and petroleum products (mt). *Source* Basic statistics on Indian petroleum and natural gas (2011–2012)

The share of fossil fuel imports as a percentage of India's total imports has grown from just over a quarter (26.33 %) in 2004–2005 to 31.50 % in 2011–2012. Interestingly, petroleum exports as a percentage of India's total exports have grown even faster over the same period and more than doubled from 7.97 % in 2004–2005 to 18.33 % in 2011–2012.[4] Crude oil (HS 27090000) is the single largest import item in India's trade basket amounting to almost 30 % of total

[4] Data from the Basic Statistics on Indian Petroleum and Natural Gas (2011–2012).

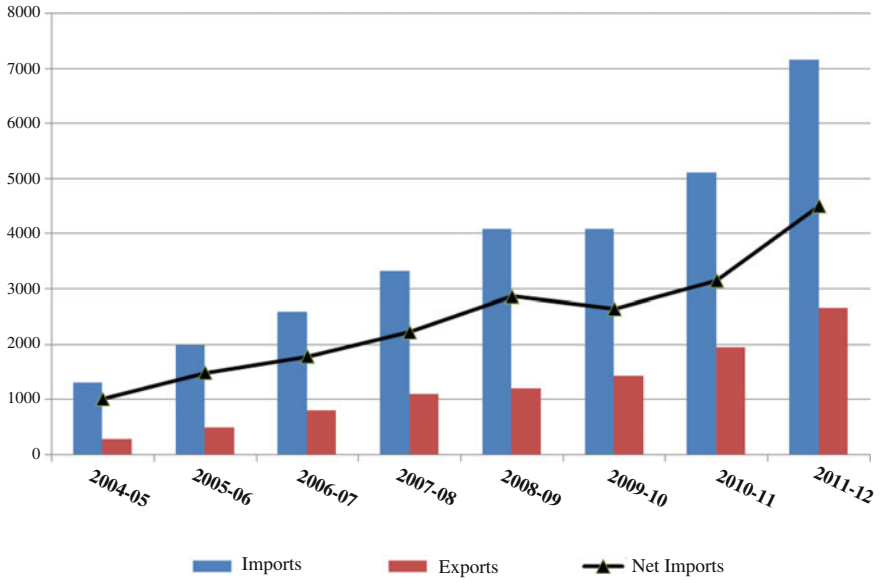

Fig. 1.3 Value of India's trade in crude oil and petroleum products (Rs. Billion), Excluding LNG from net imports. *Source* Basic statistics on Indian petroleum and natural gas (2011–2012)

imports in 2012–2013. High speed diesel (HS 27101930) is the single largest export item amounting to about 7.5 % of India's exports in 2012–2013.[5]

In volume terms (Fig. 1.2), gross imports have almost doubled from 104.69 mt in 2004–2005 to 196.74 mt in 2011–2012. Exports of petroleum products have more than trebled over the same period from 18.21 mt in 2004–2005 to 60.52 mt in 2011–2012. Even though the rate of growth of exports has been greater than the growth in imports, India remains a net importer of crude oil and petroleum products with the net amounting to 136.22 mt in 2011–2012.

Figure 1.3 highlights the 'market risk' and the impact of price and exchange rate volatility on India's energy security. In value (Rupee) terms, even after excluding LNG, the gross import bill for crude oil and petroleum products has grown from Rs. 1319.17 billion in 2004–2005 to Rs. 5117.21 billion in 2010–2011. Just a year later in 2011–2012, the import bill amounted to a whopping Rs. 7173.56 billion (an increase of over Rs. 2,000 billion). With the depreciation of the rupee and the appreciation of crude oil and petroleum prices, India's exports in this sector have also registered strong growth. Exports of petroleum products grew almost ten-fold in value (Rupee) terms from Rs. 299.98 billion in 2004–2005 to Rs. 2664.86 billion in 2011–2012. The gap between gross imports

[5] Data from the Import Export Data Bank, Ministry of Commerce, Government of India http://commerce.nic.in/eidb/ecom.asp (accessed on 15 April 2014).

and exports of oil and petroleum products, however, continued to widen and amounted to Rs. 4508.7 billion in 2011–2012.

Petroleum products dominate India's trade basket. Fossil fuels are considered essential import items and India has to secure its energy needs, regardless of the price. However, the trade balance and size of the current account deficit is impacted with the hardening of prices. In addition to the 'market risk' there can be 'supply risk'. Securing energy supplies and diversifying the energy sources and suppliers especially in a volatile market remains a priority.

India has diversified and sources its oil imports from 59 countries (up from 25 countries in 2006 (Planning Commission 2006)). The Middle East Region is the main source accounting for nearly two-thirds of India's fossil fuel imports. In the Middle East—Saudi Arabia, Kuwait, Iran, Iraq, and the United Arab Emirates (UAE) are among the main suppliers. India has also sourced oil imports from other regions with Nigeria as a major supplier of crude oil to India. In addition, Angola, Brazil, Malaysia, and Venezuela are also among the top 15 suppliers to India (see Chap. 5 for more details).

1.4 WTO and the Energy Sector

Major suppliers of oil and gas were, until recently, operating outside the WTO and the scope of the multilateral trading system. The landscape has been changing and several energy majors, including Saudi Arabia and Russia, are now WTO members. Others such as Iran or Iraq are negotiating WTO entry. The direct fallout of the entry (or the prospective membership) of these oil and gas majors has been that energy may be more directly addressed at the WTO.

There are only two sector-specific agreements in the WTO, namely the WTO Agreement on Agriculture and the Agreement on Textile and Clothing that were both negotiated during the Uruguay Round. Energy products and energy security issues have not been addressed separately in the GATT/WTO framework. There is no standalone WTO agreement on energy or energy security. That is not to say that WTO provisions do not apply to energy products.

The energy sector is covered in the WTO. GATT/WTO provisions that are relevant for the energy sector and specifically energy security have been highlighted in Chaps. 2 and 3 of this book.[6] The analysis in the subsequent chapters will not be repeated here. Rather it may be useful to re-look at the 'energy divide' and see how sovereignty or security concerns of energy surplus or deficit countries are accommodated in the WTO rules framework.

Energy majors have noted that energy resources are exhaustible and that the use or conservation of these resources should remain a sovereign decision of the

[6] Yanovich (2011) and Marceau (2010) have also comprehensively examined WTO rules and energy linkages.

country. There are general and national security exceptions in the General Agreement on Tariffs and Trade (GATT) 1994 covering trade in goods and the General Agreement on Trade in Services (GATS)[7] covering all service sectors (except those supplied in the exercise of governmental authority). The relevance of these exceptions from WTO commitments is that it provides the justification for measures "necessary to protect human, animal or plant life or health" or "relating to the conservation of exhaustible natural resources". National security exceptions provide the grounds for a WTO member to take "any action which it considers necessary for the protection of its essential security interests". The chapeau of GATT Article XX requires that the measures must not be applied in a manner that would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade. Trade restrictions for conservation of exhaustible energy resources may be justified only if equivalent measures to conserve energy resources are applied domestically.

Conservation is not the only preoccupation. Energy majors also need energy and may view energy resources as an 'endowment' to be used at the discretion of the country. Energy-related sectors both upstream and downstream are by corollary seen as areas where energy rich countries have a 'competitive' if not a 'comparative' advantage.

The energy sector in energy rich economies is often dominated by state owned or controlled enterprises and may be subject to the WTO disciplines on state trading enterprises. Investment and competition policies are not directly covered in the WTO but are of relevance in the context of the energy sector. Pricing policy, in particular the practice of 'dual pricing', where energy prices for exports and domestic use are differentiated and energy products sold at a lower price domestically has been the subject of scrutiny in WTO accession negotiations. Some issues have also been raised in the context of the WTO rules negotiations on subsidies and trade remedies in the Doha Round. Under GATS, specific commitments have been made in energy-related sectors such as services incidental to mining, energy distribution, or transportation of fuels.

Transit issues and access to fixed infrastructure such as electricity gridlines or pipeline transportation for oil and gas is important for the energy security of both energy surplus and deficit countries. In the WTO context, the GATT Article V freedom of transit provisions have been buttressed with the Trade Facilitation Agreement[8] concluded at the WTO Bali Ministerial Conference. Though there is no explicit reference to energy transit or to fixed infrastructure in the Agreement, the negotiations itself did include proposals on the subject.

For energy deficit countries, 'security' in access to energy supplies is the main preoccupation. Securing energy supplies with predictability, i.e., without or with

[7] Article XX and XXI of GATT 1994 and GATS Article XVI and XVI *bis* are similar in structure and provide the basis for general and national security exceptions, respectively.

[8] WTO document WT/MIN(13)/36 and WT/L/911 (available online at https://docs.wto.org/).

minimal price or supply volatility is the lens through which these countries would view any WTO rules concerning energy security. For this reason, energy deficit countries would usually be reluctant to impose import restrictions or high tariffs that may hamper the import of energy products. Not surprisingly, import tariffs on energy products are relatively low with the average tariff for fuels bound at 25.3 % in the WTO.[9] Applied tariffs are even lower and averaged just 0.5 % for developed countries and 6.7 % for developing countries in 2007 (World Trade Report 2010; Yanovich 2011).

From an energy deficit countries' perspective, it is export restrictions whether quantitative or price based that may be more of a concern. Quantitative export (and import) restrictions are prohibited and subject to the disciplines of Article XI of GATT 1994. However, as noted earlier, there are exceptions and exemptions that may provide valid grounds for export prohibitions, bans, licensing requirements, or other restrictions on energy products.

As for price-based measures, the WTO's World Trade Report 2010 has highlighted that the incidence of export taxes is greater in the natural resources (and energy) sector vis-à-vis other sectors. 5–10 % of world trade in fuels is subject to export levies. While revenues from export taxes accrue to the exporter, energy deficit countries have been levying internal consumption taxes to manage demand and regulate use of fossil fuels (see also Yanovich 2011).

The GATT/WTO has historically focused more on the import side with provisions and disciplines such as the WTO Agreement on Import Licensing. There are no equivalent disciplines on the export side such as an agreement on export licensing. Similarly, import duties have been the subject of successive rounds of tariff negotiations in the GATT/WTO. Export duties, on the other hand, are seldom bound let alone reduced. Strengthening WTO disciplines on export restrictions and any future commitments or bindings made on export duties are issues that could be on the radar for energy deficit countries.

Chapters 4 and 5 of this book sum up issues that may be tackled in any future negotiation on energy security. There are, of course, 'grey' areas or issues like export duties, export licensing, or (dual) pricing policy that are not covered in detail in the WTO framework. Energy producers and energy consumers may wish to tackle these issues differently in the WTO setting. Just as the definition of energy security differs, trade and energy security linkages at the WTO would be viewed differently by energy surplus and energy deficit countries. For the energy majors, securing market access and adequate policy space for trade in energy products may well be brought up in future WTO negotiations. On the other hand, energy deficit countries or large consumers such as India may view energy security from a different viewpoint and seek disciplines that ensure predictability and securing energy supply with minimal export restrictions or trade disruptions.

[9] There are, however, members who have not bound tariffs on crude oil at the WTO.

1.5 Trade, WTO, and Energy Security: Mapping the Linkages for India

International trade, WTO, and energy security are three broad topics that each could be subject to standalone and detailed analysis. While some work has been done to examine the interface in an international context (see for example Selivanova 2011 or Pauwelyn 2010), there has been little or no work done to map the inter-linkages or implications for India.[10] This contributed volume seeks to address and fill this gap. India is a founding member of GATT/WTO and many of the contributors are trade policy and WTO experts. India has less expertise in regional or global energy treaties and cooperation agreements such as ECT, OPEC, and of standalone energy chapters in bilateral agreements such as NAFTA.

Chapter 2 of this book, "*Energy Security in the WTO Agreements and the Doha Negotiations*" by James Nedumpara maps the legal provisions at the WTO that regulate energy trade. Case law, where relevant, has also been examined. Under the WTO framework, the linkages between trade and energy security are reflected in the areas of technical barriers to trade, quantitative restrictions on exports or imports, tariff commitments, Trade Related Investment Measures, transit, energy subsidies in the context of the WTO Agreement on Subsidies and Countervailing Measures, antidumping, state trading enterprises, GATS and energy services, government procurement, and environmental goods and services. Exceptions and exemptions to WTO obligations relevant in the context of energy security are analyzed in detail. The chapter wraps up by examining the negotiating proposals or chair texts under the Doha Development Agenda that relate to some of the emerging issues in energy security such as subsidies, trade remedies, export prohibitions, and duties in the agriculture and non-agricultural market access negotiations, and environmental goods and services.

Chapter 3 of this book by Sajal Mathur and Preeti Mann on "*GATT/WTO Accessions and Energy Security*" examines the WTO membership commitments of key energy majors or energy transit economies. The accession packages of Mexico, Venezuela, Oman, Saudi Arabia, Russian Federation, and Ukraine are examined in detail. The analysis of the accession packages highlights the discussions and far-reaching commitments in the WTO Accession Working Party Reports and Protocols, with focus on key sections or subsections that cover energy-related issues, namely: pricing policies; state trading and state-owned enterprises; investment and competition policies; import restrictions, including prohibitions, quotas and licensing requirements; export restrictions; export duties; subsidies; transit trade; and trade in services. The energy-related accession commitments of recently acceded members and the issues raised thereof do send signals on the interpretation of existing WTO disciplines by members and also

[10] Banskota (2012) looks at the trade and energy security interface mainly from a regional (South Asia) perspective.

provides a pointer to the principles or templates that may be used in further discussions or rule making on any subject, including energy security.

R. V. Anuradha and Piyush Joshi in Chap. 4 "*Trade and Energy Security: Legal Assessment of the Linkages and Implications for India*" examine the issues that could potentially be considered within the framework of an international agreement focusing on trade and energy. Provisions of the ECT and the 'energy' chapter of NAFTA are used as a basis for making an assessment of the issues and for evaluating the implications for India. The authors highlight that obligations similar to those under NAFTA or the ECT will have a significant impact on India's regulatory framework, including on: atomic energy; import tariffs, and export duties; pricing policy; export licensing and prohibition of energy goods; environment; investment and competition-related obligations across all energy sectors; state enterprises; and energy transit. Given the close link of energy with sovereignty and security-related considerations, reforms in the energy sector may need to be internally driven, rather than necessitated because of external trade or energy-related obligations. However, other factors may force India's hand in the multilateral context such as a push by several oil-producing countries becoming members of the WTO. India would therefore need to consider its options and its position in such scenarios.

Atul Kaushik in Chap. 5, "*India, OPEC and an Agenda for Energy Security Negotiations at the WTO"* provides an analysis of the objectives and functioning of OPEC, a key organization representing oil suppliers. As for the legal implications, it is asserted that GATT/WTO law could provide legal cover for the export prohibitions or production restrictions stemming from the cartelization behavior of OPEC. The chapter examines India's export and import of fossil fuels with a view to delineating the country's interests as a trader. India's energy security is thereafter assessed from the supply side by analyzing the trade policies of principal suppliers of oil and gas, namely the Gulf Cooperation Council, Saudi Arabia, Kuwait, Qatar, Nigeria, and Venezuela. Finally, the chapter concludes by highlighting specific issues that may constitute a part of India's positive agenda in possible negotiations on energy security.

It is neither the scope nor the intent of this publication to cover all aspects of India's energy or trade policies and the steps taken to safeguard the country's energy security interests. This volume, however, does look at the trade and energy security interface in some detail and maps out in the existing linkages in the WTO. Some issues that could be of importance for India in other settings such as the Energy Charter Treaty, OPEC, or specific energy chapters in NAFTA type agreements are also examined. This book is not and will not be the final word on this subject but hopefully will advance the discourse further. It is hoped that this publication is of value to discussions on trade and energy security in or outside the WTO.

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Chapter 2
Energy Security and the WTO Agreements

James J. Nedumpara

Abstract There is a widely considered view that trade in energy and energy products is not adequately governed by the multilateral trade rules administered by the World Trade Organization (WTO). This view is reinforced by the fact the traditional market access restrictions are less of a problem in the energy sector as countries tend to focus on retaining control and sovereignty over energy resources. A mapping of linkages between the WTO rules and trade in the energy sector has highlighted the inadequacy of international trade rules in a number of areas such as export duties and export restrictions, energy transit, renewable energy sector, government support including dual pricing policies, classification of energy services, and lack of flexibility in differentiating goods based on carbon intensity or other such characteristics. Again, when the energy-related trade measures violate WTO rules, the various exceptions and exemptions under the WTO covered agreements also play a central role. Although the growing body of WTO jurisprudence has addressed the inherent inadequacies of the rules in meeting the challenges of energy security, there are several areas where significant improvements in existing provisions and separate or new disciplines may be necessary. This chapter while examining the interaction between WTO rules and energy security also seeks to identify the specific issues in the Chairman's texts in different areas of Doha Round negotiations, which have a direct bearing on trade in energy products.

Views expressed are personal.

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S. Mathur (ed.), *Trade, the WTO and Energy Security*,
DOI: 10.1007/978-81-322-1955-2_2,

Contents

2.1 Introduction

Energy was not specifically addressed by international agreements for a long time, and was mostly treated in a political context as a special case. Specific disciplines on energy did not form part of the original GATT 1947 or even the WTO treaty. One possible reason is that most of energy abundant nations were not contracting parties of GATT or, for that matter, negotiating parties to the Uruguay Round. Moreover, the discussions on energy-related areas were highly politicized and various security considerations influenced the trade policy in the energy sector. For instance, in 1980 Mexico withdrew its application to the GATT because it faced political pressure from other Members over its crude oil export policies. Russia,

the world's largest gas exporter also opposed any liberalization of its natural gas market in its WTO accession negotiations (see Chap. 3 and Pogoretskyy 2011).

It is now commonly understood that existing World Trade Organization (WTO) rules apply equally to energy products and services. To the extent that energy goods or services may be traded, the GATT/WTO principles that govern international trade are fully applicable to trade in energy and energy products. These include the most favoured nation (MFN) and the national treatment principle. WTO rules do not generally apply to energy resources before they are traded (Yanovich 2011). During the Tokyo and Uruguay Rounds, GATT Contracting Parties discussed issues related to dual-pricing practices and resulting subsidies, export restrictions, and export taxes. These issues have gained importance in recent times especially during the WTO accession process of some of the energy abundant countries.

The role of WTO agreements on the energy sector has received increased attention especially in view of the rising role of energy security. Energy security depends on the existence and expansion of adequate energy resource base. WTO and other trade-related agreements regulate to an extent how sovereign nations can explore and exploit conventional forms of energy such as fossil fuels which are increasingly regulated on environmental and conservation grounds in several parts of the world. For example, several countries have been exploring the possibility of applying carbon taxes to energy-related products based on the carbon intensity of the production process. The possibility of trading unconventional forms of energy such as heavy oil, tar sands, and oil shale deposits face significant regulatory difficulties in a number of jurisdictions. Energy security objectives are also met in several countries by laying down energy efficiency standards in the nature of technical regulations. Renewable sources of energy such as hydropower, biomass, wind power, and geothermal energy are widely considered as essential to energy security, while the current international trade regulatory framework is still developing to provide a policy environment that could sustain and support such programs. In the above context, the WTO agreements and future negotiations will have a significant role in influencing government intervention in addressing energy security.

As stated earlier, the linkages with international trade rules and energy security are diffuse and, to an extent, incidental under the WTO Agreements. A number of Annex I WTO Agreements do not address matters relating to energy security. The WTO Agreements that are directly relevant to cross-border energy trade include the General Agreement on Tariffs and Trade (GATT) 1994, the General Agreement on Trade in Services (GATS), the Agreement on Technical Barriers to Trade (TBT), the Agreement on Trade Related Investment Measures (TRIMs), the Agreement on Subsidies and Countervailing Measures (SCM), the Agreement on the Implementation of Article VI of the GATT 1994 (Antidumping Agreement), and the Government Procurement Agreement (GPA). A number of negotiating proposals under the Doha Round also have some bearing on energy security. This chapter examines some of the the key developments in the negotiations related to energy security under the Doha Round.

The organization of this chapter is as follows: Sect. 2.2 will provide an introductory mapping of linkages in international trade and energy security, and

identify the specific provisions in various WTO Agreements that might have interlinkages. Section 2.3 examines the extent and role of exceptions and exemptions under the WTO Agreement that could apply to government measures relating to the energy sector; Sect. 2.4 seeks to identify specific issues in the Chairman's text under the Doha Round negotiations; and Sect. 2.5 concludes.

2.2 Energy Security: Linkage with WTO Agreements

2.2.1 Energy Security and Non-Discrimination Disciplines Under GATT 1994

Energy products are often the subject matter of trade preferences and special treatment among countries. The accession of several energy exporting countries to the WTO in the recent years has only underlined the importance of the MFN principle which is one of the cornerstone principles of the multilateral trading system.

The MFN provision prohibits a WTO Member from treating the products originating in or destined for another member less favorably than the "like" products originating in or destined for any other country (including non-WTO members). Article I of GATT 1994 is broad in scope and covers customs duties and charges of any kind imposed or in connection with importation or exportation or imposed on the international transfer of payments for imports or exports, the method of levying such duties or charges, and all duties and formalities in connection with importation or exportation, as well as internal taxes and domestic regulations.

How does the MFN provision apply for energy products? Although the MFN clause deals with border measures, it also applies to rules and formalities applied in connection with importation and exportation. In other words, when a WTO Member applies customs duties, charges or any export or import regulations, it cannot discriminate the products based on their origin or destination.

The other important pillar of non-discrimination is national treatment, which is the bedrock of the multilateral trading system. Article III of the GATT 1994 sets forth that with respect to internal taxation and domestic laws, regulations and requirements, imported products shall be accorded treatment "no less favourable" than that accorded to "like" domestic products.

National treatment provision occupies a center stage in the discussion on regulation of energy products. One of the important questions is whether it is possible to treat energy products differently depending on the source of energy used in the manufacturing process. To put it in other words, a regulator could ask whether renewable energy generated from wind, sun, and water could be treated differently from fossil fuel. Under the national treatment obligation, WTO Members must tax and regulate imported products no less favorably than "like" domestic products.

Over the years, the WTO dispute settlement panels and the Appellate Body have adopted a case-by-case approach in determining what is "like" under Articles

I and III of the GATT.[1] The GATT Working Party Report on Border Tax Adjustment, adopted by the Contracting Parties in 1970, expressly advocates a case-by-case approach. The Appellate Body report in *EC—Asbestos* case provides useful guidance on the interpretation of the term "like product":

> [T]he interpretation of the term should be examined on a case-by-case basis. This would allow a fair assessment in each case of the different elements that constitute a "similar product". Some criteria were suggested for determining on a case-by-case basis, whether the product is "similar"; the products' end-uses in a given market; consumers' tastes and habits, which change from country to country; the product's properties, nature and quality.[2]

At the core of this debate is the issue whether it is consistent with the principle of non-discrimination for WTO Members to treat products differently based on non-product-related process and production methods?[3] The current focus of the debate on climate change and clean energy products seeks to incorporate concerns relating to negative externalities in the "like product" determination.[4] For example, the carbon footprint of a product or a production process could be a decisive and often distinguishing factor in the energy policy discussion. In order to address this question it is important to examine the criteria outlined by the GATT Working Party Report (GATT 1970). Assume that different VAT rates are applied to biodiesel and petro-diesel products. Such a situation could possibly arise if a government seeks to extend some preferential tax rates to biodiesel or other environmental friendly products based on clean energy considerations. Economic theory posits that tax incentives may be warranted whenever the market fails to provide desirable public goods or to tackle externalities (Stern 2007). Based on this principle, there may be legitimate reasons for giving a preferential VAT rate for biodiesel.

The WTO panels and Appellate Body have not directly addressed the issue whether a differential tax system based on carbon footprint of a production process is permissible under GATT Article III, but a recent ruling in *US—Clove Cigarettes* addressed the question whether the regulatory purpose of the measure is determinative of likeness. The WTO panel in this dispute placed emphasis on the regulatory aim, but the Appellate Body played down the role of the regulatory

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[1] Appellate Body Report on *European Communities—Measures affecting Asbestos*, WT/DS135/AB/R, at paragraph 102 (Hereinafter *EC—Asbestos*); Appellate Body Report on *Japan—Taxes on Alcoholic Beverages*, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R at paragraph 113 (Hereinafter *Japan—Alcoholic Beverages*).

[2] Appellate Body Report on *EC—Asbestos,* paragraph 18.

[3] GATT jurisprudence has made it clear that distinguishing products based on their process and production methods are not valid. The panel in *US—Restrictions on Imports of Tuna* explicitly ruled that distinctions must be based on characteristics that affect tuna as a product. See also Appellate Body Report on *Japan—Alcoholic Beverages* at paragraph 29.

[4] Appellate Body report *EC-Asbestos*, at paragraph 135–136. Although the Appellate Body rejected the 'aim-and-effect' test in *Japan—Alcoholic Beverages*, it noted in paragraph 29 as follows: "[w]e believe it is possible to examine objectively the underlying criteria used in a particular tax measure, its structure and its overall application to ascertain whether it is applied in a way that affords protection to domestic product."

purpose of the measure. The Appellate Body noted that the regulatory concerns underlying a measure, such as health risks associated with a given product are relevant in determining whether the products are "like" only to the extent that these concerns affect the traditional criteria such as "physical characteristics" or "consumer preferences".[5] Despite the rejection of the "aim and effect" of a regulatory measure by the Appellate Body, it is plausible that environment and public policy considerations could affect the interaction of the product in the market place and may still be valid in non-discrimination claims under GATT.

Some previous WTO panels have concluded that products are "like" when they have similar physical characteristics such as molecular or chemical composition. In *Mexico—Taxes on Soft Drinks*, the Panel concluded that soft drinks sweetened with high fructose corn syrup (HFCS) and beet sugar are "like" soft drinks sweetened with cane sugar, because non-cane sugar and cane sugar have very similar chemical composition.[6] The panel also noted that non-cane sugar and cane sugar are both forms of sucrose with identical molecular structure and that the only difference between them is their source. Based on this analogy, biodiesel and petrodiesel are identical in that they are fuels with the chemical properties necessary to be burned by an internal combustion engine.

Competitiveness criteria are also increasingly introduced in domestic legislation. For instance, several countries have considered the imposition of a carbon tax to internalize the social cost of carbon and to encourage producers and consumers to shift to carbon neutral or greener energy products.[7] A climate change legislation or a 'carbon equalization tax' that imposes an internal tax based on carbon intensity of production process could raise claims of incompatibility with the GATT even if the taxes apply to domestic and imported products. There is an argument that such border tax adjustments (BTA) are permitted under Article II:2(a) of the GATT. However, it is still doubtful whether a carbon tax which is not strictly a tax on the product is border adjustable (Pauwelyn 2010). Furthermore, if the impact of such a tax is heavier on the imported products as compared to the competing domestic product, there could still be claims under Article III:2 of the GATT. In any case, it is beyond doubt that Article III, Border Tax Adjustment and the "like product" determination will continue to influence the debate on energy security.

2.2.2 Technical Barriers to Trade

This section briefly touches upon the scope of the WTO's TBT Agreement in relation to energy products and how it could play a key role in the energy security

[5] Appellate Body report on *United States—Measures affecting the Production and Sale of Clove Cigarettes*, WT/DS 406/AB/R, at paragraph 104 (Hereinafter *US—Clove Cigarettes*).

[6] Panel Report on *Mexico—Tax Measures on Soft Drinks and Other Beverages*, WT/DS308/R, at paragraph 8.27–8.36 (Hereinafter *Mexico—Taxes on Soft Drinks).*

[7] Australia enacted the Clean Energy Act of 2011, which incorporates a carbon tax.

debate. Technical regulations and standards are widely used for energy products and materials as well as energy consuming end-use services. It has also become a common practice to use labels in the energy sector to promote energy efficient products. Performance standards and sustainability standards have also become common. An example could be a minimum energy performance standard (MEPS) for biofuels or low-carbon fuels.

The TBT Agreement establishes disciplines relating to technical regulations and product standards. The Agreement defines technical regulation as a "document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labeling requirements as they apply to a product, process or production method".[8]

One of the key provisions within the TBT Agreement is Article 2.1 which says that Members "must ensure that in respect of technical regulations, products imported from the territory of any Member shall be accorded treatment no less favorable than that accorded to like products of national origin and to like products originating in any other country". Furthermore, according to Article 2.2, technical regulations must not create "unnecessary obstacles to international trade" and must "not be more trade restrictive than necessary to fulfill a legitimate trade objective, taking into account of the risk, the non-fulfillment would create". The legitimate objectives that may be pursued through a technical regulation include: national security requirements; the prevention of deceptive practices; and the protection of human health or safety, animal or plant life or health, or the environment. Article 2.4 of the TBT Agreement expresses a preference for use of international standards as a basis for technical regulations where those standards exist or their completion is imminent. Article 2.5 of the TBT Agreement further provides that when technical regulation is in accordance with relevant international standards it shall be presumed not to create an unnecessary obstacle to international trade.

There is a growing trend among WTO members to use eco-labels and product and non-product-related standards with a view to managing certain negative externalities. For instance, in 2009, the European Union issued a Renewable Energy Directive that seeks to promote national renewable energy targets that result in an overall binding target of a 20 % share of renewable energy sources in energy consumption and a binding 10 % minimum target for biofuels in transport to be achieved by each Member State by 2020.[9] The EU Directive has established technical regulations which may have a trade restrictive effect on the products of

[8] WTO Legal Texts: Annex 1(1) of the TBT Agreement.

[9] See EC Press Release (2012) and Directive (2009/28/EC). As of October 2012, the Commission proposed that the use of food-based biofuels to meet the 10 % target be limited to 5 %.

other countries.[10] Some WTO Members have already joined issue while others may issue similar technical regulations that would need to comply with the requirements of the TBT Agreement.

2.2.3 Customs Tariffs and Tariff Commitments

Article II of the GATT 1994 prohibits WTO Members from applying ordinary customs duties on the importation of a product that are higher than the rates specified (or "bound") in the schedules of concessions and commitments (goods schedule). The goods schedule are an integral part of the GATT 1994.

WTO Members are also prohibited from applying any other duties or charges on the importation of the product, unless specified in the goods schedule.

However, an interesting issue is the extent to which export duties and tariff concessions are subject to WTO commitments since the focus during the previous trade rounds were predominantly on import duties. This is especially important in the light of measures taken by countries to increase export duties on natural resource commodities. Article II of the GATT 1994 which gives effect to the tariff concessions generally provides disciplines only with respect to import duties. The first sentences of Article II paragraphs 1(b) and 1(c) of the GATT 1994 which require WTO Members to exempt the products imported from other WTO Members from the imposition of ordinary customs duties in excess of those set forth in the schedule refer only to importation. However, other provisions of GATT 1994 including Article XXVIII *bis* and Note *Ad* Article XVII:3 indicate that reduction of export duties may become part of the schedule of concessions in the same manner as import duties are inscribed and bound. Importantly, Paragraph 1(a) of GATT Article II imposes a fairly broad obligation on WTO Members (Roessler 1975). Paragraph 1(a) of GATT Article II reads as follows:

> Each contracting party shall accord to the commerce of the other contracting parties treatment no less favourable than that provided for in the appropriate Part of the Schedule annexed to the Agreement.

Stated differently, nothing in the negotiating history or practice of the GATT suggests that export duties are not amenable to bound tariff commitments under the GATT. The tariff schedules of some WTO Members such as Australia contain certain export duty commitments. Moreover, recently acceded countries have bound some of their export taxes. Specifically, the recent accession of Russia binds export duties on certain energy products (see Chap. 3). An obligation to reduce

[10] Ibid. Argentina and Indonesia opposed this EC Directive. Argentina noted that the Directive was an unnecessary obstacle to trade due to its unjustified restrictions on imports of biofuels, by requiring, on one side, the compliance and certification of sustainability criteria and, on the other side, the fulfillment of emissions reduction requirements. See also Specific Trade Concerns Raised in WTO TBT Committee (2011).

export duties on certain products is tantamount to scheduling export duty bindings. In other words, it could be argued that an obligation not to impose export duties on certain natural resource products is equivalent to binding export duties at zero on such products (Crosby 2010).

2.2.4 Quantitative Restrictions

In addition to border measures as outlined above, countries can impose import or export measures in the nature of non-tariff measures to limit the quantity of imports and exports. The general approach of the GATT/WTO is to prohibit such quantitative restrictions. Article XI.1 of the GATT 1994 which prohibits quantitative restrictions provides as follows:

> No prohibitions or restrictions other than duties, taxes, or other charges, whether made effective through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale of any product destined for the territory of any other contracting party.

In light of the above, any permissible restriction should be through tariff (price measures) and not through measures directly affecting the volumes (quotas, licenses, etc.). Article XI:1 of the GATT 1994 explicitly excludes from its scope imposition of 'duties, taxes or other charges'. As the WTO panel in *India—Quantitative Restrictions* noted, "the text of Article XI:1 is very broad in scope, providing for a general ban on import or export restrictions or prohibitions 'other than duties, taxes or other charges'".[11]

In *Colombia—Ports of Entry*, a WTO panel found that a measure that limited the number of ports through which certain goods entered the WTO Member (albeit the quantities that could enter through the authorized ports was not restricted) was inconsistent with GATT Article XI because the measure has a "limiting effect" on imports.[12]

The WTO panel in *India—Autos* also stated that 'restriction' need not be a blanket prohibition or a precise numerical effect.[13] The WTO panel clarified the meaning of the term 'restriction' under Article XI:1 as follows:

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[11] Panel Report on *India—Quantitative Restrictions on Imports of Agricultural, Textiles and Industrial Products,* WT/DS90/R (Hereinafter *India—Quantitative Restrictions*) at paragraph 5.128.

[12] Panel Report on *Colombia—Indicative Prices and Restrictions on Ports of Entry,* WT/DS366/R, at paragraph 7.240 (Hereinafter *Colombia—Ports of Entry*).

[13] Panel Report on *India—Measures affecting the Automotive Sector,* WT/DS146/R, WT/DS175/R, at paragraph 7.270 (Hereinafter *India—Autos*).

Table 2.1 Categories of quantitative restrictions on energy products

Natural resource sector	WTO members	Measures (Number of entries)			
		Automatic licensing	Non-automatic licensing	Quota	Prohibition
Fuels	7	94	1,001	236	7
Minerals	10	94	1,385	746	60

Source WTO World Trade Report (2010)

> [M]easures which create uncertainties and affect investment plans, restrict market access for imports or make importation prohibitively costly, all of which have implications on the competitive situation of an importer.

Based on this definition, measures creating uncertainties and affecting investment plans, limiting market access for exports making exportation more costly, would have implications on the competitive situation of exporters and could amount to a violation of Article XI:1 of the GATT 1994.

2.2.4.1 Import and Export Restrictions

There is a propensity among most energy deficit nations to secure energy products required at relative ease rather than to create import restrictions or other such barriers. Energy-rich countries, on the other hand, may for conservation, fiscal, or other reasons, apply export restrictions in the form of export prohibitions, quotas, or automatic and non-automatic licensing requirements on energy products. There is a trend to impose either export prohibitions or quotas on natural resources and minerals. The WTO World Trade Report 2010 provides an indication of such export restrictions maintained on energy intensive products such as fuels and mineral products (Table 2.1).

One of the issues is whether Article XI:1 of the GATT 1994 is symmetrical in the matter of treating import and export restrictions. As the legal test is the same for import and export prohibitions or restrictions, it is safe to assume that the disciplines of Article XI:1 of the GATT which may be applicable to any prohibition or restriction on imports will apply with equal force when applied to exports. However, in practice, the WTO has no formal mechanism for reporting export restrictions and there is no comprehensive database of such restrictions. An effort has been recently taken at the behest of G-20 to compile an inventory of restrictions.

2.2.4.2 Non-Automatic Export Licensing System

The approval of applications under such a system would not be granted in all cases, and the exportation of products would be restricted. In *Japan—Semiconductors*, a GATT panel noted that the export licensing system implemented by

Japan resulted in delays up to three months in the issuing of licenses for semiconductors destined for contracting parties other than the United States and therefore constituted restrictions on the exportation of such products inconsistent with GATT Article XI.[14] Specifically in the context of energy, licensing requirements governing access to oil and gas pipelines and other export distribution networks have the effect of restricting the volume of oil and gas exported and could come under the disciplines of Article XI:1 of GATT 1994.

2.2.4.3 Minimum Export Prices

Minimum export prices can also fall within the coverage of Article XI of the GATT 1994.

In *Japan—Semiconductors* case, a GATT panel noted that the complexity of measures which constituted a coherent system restricting the sale for export of monitored semiconductors at prices below company specific cost to markets other than the United States was inconsistent with GATT Article XI:1.[15]

The prohibition of export or import restrictions is valid also for prohibitions to the import or export of energy materials or products below a certain price. Requirements of minimum export or import price are generally used to maintain certain level of supply in the domestic market and would limit the quantity of imports or exports. In most cases such requirements would fall foul of the requirements of GATT Article XI.

2.2.4.4 Production Controls

An important issue in the context of energy trade is whether production controls such as the limits on the quantity of production during a particular period of time could be covered by Article XI:1 of GATT 1994. Exploitable natural resources are generally found in a few geographical regions and their mining or exploitation is concentrated in a few countries. Countries holding reserves of valuable natural resources may control production or exploration for strategic reasons. For example, decisions on production limits implemented by OPEC countries can affect the amount of crude oil available in the world market. In general terms, the OPEC measures may have the same effect as that of any other quantitative restriction on export (see Chap. 5 and Yanovich 2011). It has been commented by Cottier et al. (2009), that the language of Article XI:1 and, in particular, the notion of 'other measures' provides ample scope for coverage of such production restrictions. However, there is no precedent at least in the GATT or WTO practice to commit

[14] Panel Report on *Japan—Trade in Semiconductors*, BISD 35S/116, at paragraph 118 (Hereinafter *Japan—Semiconductors).*

[15] Panel Report on *Japan—Semiconductors,* at paragraph 117.

another member to produce more of its natural resources to satisfy world demand. Perhaps, this issue could be addressed through a coherent set of rules on competition law.

2.2.5 Trade-Related Investment Measures

The renewable energy sector has witnessed government intervention in recent times. The Feed-in-Tariff (FiT) program introduced by some countries encourages the development of local manufacturing capability for equipment and components for renewable generation facilities and associated employment opportunities. The FiT program implemented by the Canadian Province of Ontario was challenged by the European Union and Japan[16] and raises issues with respect to consistency with Article III and XI of the GATT 1994 in addition to the concerned provisions of the TRIMs Agreement.

At first glance, it appears that domestic content requirements included in the FiT program are in a way related to trade and could be TRIMs. In *Canada—Renewable Energy*, the WTO panel also reached the same conclusion. The Ontario FiT program includes a provision that requires developers to have a certain percentage of their project costs come from Ontario goods and labor. This "Made-in-Ontario" provision mandates that most renewable energy suppliers use a minimum level of equipment produced in Ontario in order to qualify for price guarantees and grid access. For example, wind projects require a minimum of 25 % local content and solar projects require a minimum of 60 %. The WTO Appellate Body upheld the panel's finding that local content requirements violated Article III:4 of the GATT 1994 which required that WTO members accord foreign products treatment no less favorable than that provided to domestic products. The local content requirements were also found to violate Article 2.1 of the TRIMs Agreement.

It will be pertinent to recall the finding of the WTO panel in *Indonesia—Autos* that domestic content requirements are necessarily 'trade-related' since such requirements, by definition, "always favour the use of domestic products over imported products, and therefore could affect trade."[17]

An equally important provision is Article III:8(a) of GATT 1994 which reads as follows: "[t]he provisions of this Article [*GATT Article III on national treatment*] shall not apply to laws, regulations or requirements governing the procurement of governmental agencies of products purchased for governmental purposes and not with a view to commercial resale or with a use in the production of goods for commercial resale." (emphasis added).

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[16] Panel Report on *Canada—Certain Measures Affecting Renewable Energy,* WT/DS412/R, WT/DS426/R (Hereinafter *Canada—Renewable Energy*).

[17] Panel Report on *Indonesia—Certain Measures affecting the Automobile Industry,* WT/DS54/R, WT/DS55/R, WT/DS59/R, WT/DS64/R, at paragraph 14.82 (*Hereinafter Indonesia—Autos*).

This provision was raised in the *Canada—Renewable Energy* dispute where the panel and the Appellate Body ruled that Canada had not established that it was entitled to rely upon GATT Article III:8(a) and rejected the government procurement defense. Whereas the panel noted that Ontario's procurement for electricity under the FiT Program was undertaken "with a view to commercial resale", the Appellate Body found that the purchase of electricity under the FiT program was not government procurement and therefore was not subject to the Article III:8(a) exemption.

2.2.6 Freedom of Transit Under GATT

Energy transportation often takes place via pipelines or transmission networks (for gas or electricity). Sometimes transportation networks cross third countries in transit. For instance, if iron ore mined in Afghanistan has to be transported to India through Pakistan or a gas pipeline in a Central Asian country has to be transported through installations set up in multiple countries across India's bordering countries, freedom of transit could be extremely important.

Article V of the GATT sets out rules that apply to goods, vessels, and other means of transport that are "traffic in transit". Article V:2 of the GATT 1994 provides for:

> 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.

A plain reading of Article V indicates that energy products in transit through the territory of a WTO Member cannot be subject to customs duties or any other duties or charges. For instance, if the transit country happens to be a WTO Member it cannot impose customs duties it levies on imports or exports. It can, however, impose levy charges related to the cost of transportation, administrative expenses or other services.

The WTO panel in *Colombia—Ports of Entry*[18] had an occasion to interpret the provisions of Article V of the GATT. While interpreting Article V:2, the panel noted as follows:

> [T]he Panel concludes that the provisions of 'freedom of transit' pursuant to Article V:2, first sentence requires extending unrestricted access via the most convenient routes for the passage of goods in international transit whether or not the goods have been trans-shipped, ware-housed, break-bulked, or have changed modes of transport. Accordingly, goods in international transit from any Member must be allowed entry whenever destined for the territory of a third country. Reasonably, in the Panel's view, a Member is not required to guarantee transport on necessarily any or all routes in its territory, but only on the ones 'most convenient' for transport through its territory.

[18] Panel Report on *Colombia—Ports of Entry,* WT/DS366/R at paragraph 7.401.

Article V of the GATT also includes a non-discrimination provision. Article V:6 of GATT 1994 provides that WTO Members must treat products that have transited through the territory of any other WTO Member no less favorably than how the products would have been treated had they been transported from their place of origin to their destination without going through the country of transit. It means that there cannot be any discrimination in treatment based on the flags of the vessels, the place of origin, departure, entry, exit or destination, or any circumstances relating to the ownership of goods, vessels or other means of transport. In *Colombia—Ports of Entry*, the Panel had to determine whether the MFN obligation in Article V:6 has to be applied to the WTO Member which is the ultimate destination or whether it needs to be applied to the WTO Member through which the goods are transmitted. The Panel found that the obligation in Article V:6 does apply to the WTO Member which is the ultimate destination of the goods.[19]

Article V of the GATT 1994 is not free from ambiguities. There is a view that this provision applies to 'moving' modes of transport only and not with respect to permanent fixtures or infrastructure. One of the reasons for this view is that fixed infrastructures such as pipelines and power grids are not themselves in transit (Cossy 2010). On the other hand, it is clear from a plain reading of Article V, paragraph 7 that the only mode of transport excluded from the scope of the transit obligation is aircraft in transit. Furthermore, the goods that these fixtures carry are also in transit.

Transit issues have also been discussed in some of the recent accession negotiations (see also Chap. 3). Members have committed in their Accession Protocol that they "would apply [their] laws and regulations governing transit operations and would act in full conformity with the provisions of the WTO Agreement, in particular Article V of GATT 1994". Ukraine's Working Party Report includes a specific reference to energy: "Ukraine would apply all its laws, regulations and other measures governing transit of goods (including energy), such as those charges for transportation of goods in transit, in conformity with the provisions of the WTO Agreement."[20]

WTO Members have been discussing possible improvements and clarifications of the transit obligations contained in Article V of the GATT under the Trade Facilitation Agreement. The details of the proposals have been included in Sect. 2.3.

2.2.7 Energy Subsidies and SCM Agreement

The International Energy Agency (IEA) estimates that fossil fuel consumption subsidies—subsidies that benefit consumers of products—at US $557 billion. Subsidy estimates from year to year may vary due to fluctuations in world prices, domestic pricing policy changes, and shifts in demand and changes in world prices.

[19] Panel Report on *Colombia—Ports of Entry*, at paragraph 7.466.

[20] WTO Working Party Report on the Accession of Ukraine (2008), paragraph 367.

The Organization of Economic Cooperation and Development (OECD 2011) notes as follows:

> Eradicating subsidies to fossil fuel would enhance energy security, reduce emissions of greenhouse gases and air pollution, and bring economic benefits. They result in an economically inefficient allocation of resources and market distortion, while often failing to meet their intended objectives. Subsidies that artificially lower energy prices encourage wasteful consumption, exacerbate energy-price volatility by blurring market signals, incentivize fuel adulteration and smuggling, and undermine the competitiveness of renewable and more efficient energy technologies. For importing countries, subsidies often impose significant fiscal burden on state budgets, while for producers they quicken the depletion of resources and can thereby reduce export earnings over long term.

The 2012 G-20 statement includes the following text:

> To phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest. Inefficient fossil subsidies encourage wasteful consumption, reduce our energy sources and undermine efforts to deal with the threat of climate change.

With little traction to reform fossil fuel subsidies through diplomacy, environmentalists and other trade policy experts have looked to the WTO's SCM Agreement and dispute settlement as a possible mechanism for disciplining fuel subsidies.[21] The SCM Agreement seeks to minimize market distortions caused by subsidies. It does so by prohibiting certain subsidies that are particularly trade distorting and allowing WTO Members to seek trade remedies for actionable subsidies, i.e., those subsidies that cause material injury to domestic industry of a member or a serious prejudice to the interests of the members.

The subsidies for renewable energy have also seen a spurt in recent times. The renewable energy subsidies were about US$ 66 billion in 2010 alone. In the new policy scenario, subsidies to renewable energy are expected to reach US$ 250 billion in 2035. Some of the common forms of renewable energy support schemes include mandatory quotas, price support (e.g., FiTs), tax incentives such as Production Tax Credits (PTC), Renewable Portfolio Standards (RPS), loans, grants, and various types of incentive schemes. Many of the renewable energy subsidies are provided by developing and emerging economies. Large renewable energy industries exist in several developing countries, for instance, Argentina, Botswana, Brazil, China, India, Malaysia, Nepal, South Africa, and Thailand (Martinot et al. 2002). In so far as these subsidies are linked to the use of local content, they run the risk of being challenged as prohibited subsidies under the SCM Agreement. Of late, some of these renewable energy subsidies are targeted both under the SCM and TRIMs Agreements.[22]

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[21] In 2007, Canada challenged subsidies provided by the United States for corn and other agricultural products. See request for consultations by Canada, WT/DS 357/1 January 2007. Brazil had also challenged, inter alia, the gasoline and diesel tax exemptions for biofuels. See request for consultations by Brazil, WT/DS 365/1 July 2007.

[22] See Appellate Body Report in *Canada—Renewable Energy*.

Energy subsidies—both fossil fuel and renewable energy—may also encompass consumption and production subsidies. Consumption subsidies are intended to benefit consumers, whereas production subsidies are designed to assist producers increase production. Production subsidies include subsidized insurance, below-market credit, guaranteed loans, and below market payments for access to publicly owned energy resources. The area of concern from the perspective of international trade rules will be production subsidies.

The SCM Agreement disciplines the use of subsidies by WTO Members to prevent distortions of international trade. However, the SCM Agreement does not prevent Members from using all subsidies. The SCM Agreement establishes a three prong test for establishing a subsidy. The first two parts define "subsidy" and the third part asks whether the "subsidy" is specific or not.

First, the policy must be a "financial contribution" or "any form of income of price support" provided by the government or public body". The financial contribution must take forms, including the "direct transfer of funds, the provision of goods and services, and the foregoing of revenue that is otherwise due".

Second, the financial contribution or income support must confer a "benefit". The WTO Appellate Body has made it clear that the beneficiary must "in fact receive something" such as an advantage. In *Canada—Aircraft*, the Appellate Body stated that "benefit" is concerned with "benefit to the recipient" and not the "cost to the government."[23]

Third, while the first two elements describe the meaning of "benefit", the subsidy does not fall within the meaning of the SCM Agreement unless it is "specific to an enterprise or industry or group of enterprises or industries". In the absence of "specificity", the SCM Agreement could affect government funding for public infrastructure such as roads, bridges, and other essential component of a country's essential infrastructure. If such subsidies are generally available to the public at large, they are considered to be non-trade distorting and are not subject to the disciplines of SCM Agreement. Some of these aspects related to the determination of subsidy are examined in the following section on dual pricing.

2.2.7.1 Dual Pricing for Energy

Energy-endowed countries often control domestic prices for energy products with a view to keeping the domestic prices artificially low. Low priced energy products are typically used as inputs by domestic downstream companies. Dual pricing favors primarily the production of energy intensive products such as fertilizers, metals, chemicals, etc. (Pogoretskyy 2009). The price control leads to significant differential between the prices paid by the domestic companies and the prices paid by foreign companies in their markets (World Trade Report 2010). Since domestic industrial producers do not pay full market price for the energy inputs, this situation

[23] Appellate Body Report on *Canada—Measures Affecting the Export of Civilian Aircraft,* WT/DS70/AB/R, at paragraph 157 (Hereinafter *Canada—Aircraft).*

has adverse implications for the ability of imported goods to compete with products that benefit from low energy prices. Dual pricing can also exist if a country controls the prices of energy inputs artificially low in order to encourage exports of energy based products, although this scenario is less common (Luthra and Luthra).[24]

Dual pricing is widely considered as a 'hidden subsidy' (Pogoretskyy 2009 and 2011). Dual pricing is practiced in various economic sectors including energy. Dual pricing was subject to scrutiny in the WTO negotiations of Saudi Arabia and Russia, two major energy-producing countries, the details of which are provided in Box 1.1 (see also Chap. 3).

The analysis of dual pricing is important for a few reasons: one it is directly linked to the discussion on the definition of subsidy under the SCM Agreement per se. In most cases, the price fixed by the government may be available to all industrial users and the producers of the upstream input would have recovered cost and made certain profit on the sales. All these factors make the characterization of dual pricing as a 'subsidy' inherently difficult. Secondly, the dual pricing practice of some important energy-producing countries had raised some interesting issues in negotiations on the accession of these countries to the WTO, that not only question the adequacy of the WTO rules to deal with the energy sector but also shows where the interests of consuming and energy-producing countries really lie.

Box 1.1: Dual Pricing in the Energy Sector: Illustrative Cases of Saudi Arabia and Russia

Saudi Arabia faced intense pressure at the time of its WTO accession negotiations to undertake specific commitments on dual pricing. It was alleged that Saudi Arabia offered preferential pricing policy for natural gas liquids ("NGLs" or "feedstock") which were used in domestic production over those for export (WTO 2005; Milthorp and Christy 2011). It was alleged that NGLs such as ethane, propane and butane were sold at a preferential price to the domestic petrochemical industry of that country.

At the heart of the dual pricing allegation was Resolution No. 68 (now repealed) which granted "national industries in Saudi Arabia using liquid gases (butane-propane-natural gasoline) a 30 % discount of the lowest international price obtained by the exporting country in any quarterly period from any overseas consumer" (United States International Trade Commission 1999). A prototype of such preferential pricing is Methyl Tertiary-Butyl Ether (MTBE), which is manufactured from Methanol. In an anti-dumping petition filed by the US producers of ethanol (i.e. a product that competes with MTBE), it was claimed that the 'dual pricing' system subsidized MTBE through low-

[24] Draft Report: Luthra and Luthra, Study on Dual Pricing of Natural Resources.

cost provision of the raw material (i.e. natural gas and methanol) to refiners in Saudi Arabia and therefore, the US ethanol industry suffered material injury.

The European Union had raised concerns that this practice was indirectly affecting the EU petrochemical industry. For this reason, dual pricing was discussed in the EU-Saudi Arabia bilateral market access negotiations. The negotiations, however, failed in August 2005; the EU surprisingly abandoned its efforts, and Saudi Arabia's accession agreement was signed.

Likewise, dual pricing was a contentious issue during Russia's accession negotiations to join the WTO. The price of feedstock is determined by Russia at a level that could not be maintained if it was otherwise exposed to market forces. For example, in the case of Russia, the gas and electricity sectors are controlled by the state. Although these sectors are privatized, the majority of shares in energy companies such as Gazprom and RAO UES belong to the government. Prices for gas and electricity are set by Federal Tariff Service (FTS) and the Regional Energy Commission (REC). FTS is empowered to regulate the upper bounds for wholesale prices for electricity and gas. Several Members of WTO raised concerns of dual pricing since Russia charges lower prices for natural gas destined for domestic consumption than for export. According to reports differentiated wholesale prices are set by the Russian Federal Agency and this differentiation is controlled on the basis of numerous legislative and administrative acts. It is further reinforced with a special export tax on gas exports which is implemented alongside. During Russia's accession negotiations, EU maintained its position that the domestic energy prices in Russia were much lower than the world prices which prejudiced EU producers. EU also contended that the Russian government had a monopoly over the energy industries and that it imposed very high export taxes to support a domestic price of gas at a level below the market price. Russia on the other hand maintained that (i) this practice is not undertaken to support domestic markets and (ii) that it is impossible for Russia to move to world energy prices in a single day (Belyi 2012). Russia also stated that its energy pricing was not a subsidy as defined in the SCM Agreement or any other provisions of other covered WTO Agreements. Russia also relied upon a World Bank study that enlisted the merits of dual pricing of Russian natural gas. According to the World Bank study, Russia would lose an amount anywhere between $5 and 7 billion per year if it were to eliminate this practice and unify the price of feedstock.

Source ICTSD (2004)

A legal analysis of the WTO compatibility of dual pricing would be complex. It is argued that dual pricing has some effects similar to a subsidy. However, establishing that the dual pricing as practiced in Saudi Arabia or Russia would be tantamount to a subsidy would be a daunting task in the context of the SCM Agreement. There is no express provision in the WTO that prohibits this type of a pricing policy (Marceau 2010). Although dual pricing is referred to in the Agreement, it is defined differently from what occurs in the pricing of feedstock in Saudi Arabia or Russia or any other nation implementing such a policy.

As explained in the preceding paragraphs, a subsidy that is prohibited is either conditional upon export performance or the use of domestic over imported goods, known in popular parlance as 'export subsidies' or 'import substitution' subsidies. Moreover, Annex I of the SCM Agreement provides a list of prohibited subsidies. As the provision of cheaper feedstock is not conditional upon the two conditions mentioned, one should look at Annex I to determine its compatibility with its rules. Paragraph (d) of this Annex elaborates on one type of prohibited subsidy as:

> The provision by governments or their agencies either directly or indirectly through government-mandated schemes, of imported or domestic products or services for use in the production of exported goods, on terms or conditions more favorable than for provision of like or directly competitive products or services for use in the production of goods for domestic consumption, if (in the case of products) such terms or conditions are more favourable than those commercially available on world markets to their exporters.

This provision can be an illustration of dual pricing. As mentioned in this chapter, in order for this activity to constitute a prohibited subsidy under Annex I, several conditions should be met. In simple terms these conditions are: (i) the government or its agencies address domestic or imported products for use in the production of exported goods in more favorable terms; (ii) preference is given to these types of products only, and not to those like products or directly competitive products that are used for domestic consumption; (iii) in order to determine whether this discrimination exists, the terms and conditions based on which preference is given to goods for export should be more favorable than those commercially available on world markets to their exporters (Behn 2007).

The last condition means that there should be unrestricted access to both domestic and imported products, and the only way to prefer one product over another is based on commercial consideration. One commercial consideration can be the price of the product. For example, an exporter is attracted to export domestic products to a given country because that product is cheaper compared to similar products on world markets due to a preference given to that product. Here, the cheap price of the product makes it commercially available to the exporter. Hence, dual pricing has taken place because the government treats products for export more favorably than those destined for domestic consumption through cheaper prices. It should be highlighted here that this provision expressly deals with the favorable treatment of products that are destined for export and not those that are destined for domestic consumption (Behn 2007). The Saudi Arabian practice, for example, could fall within the ambit of this provision (Annex I (Item

d)) if the feedstock that is used in the production of petrochemicals for export is cheaper than the feedstock that is used for the production of petrochemicals for domestic consumption. As explained earlier, in the sale of feedstock in Saudi Arabia there is a difference in price between the feedstock itself, which is higher, and the feedstock that is domestically used in the Saudi petrochemical industry, which is lower (Goldar and Kumari 2009). It will be relevant to examine the extent to which the existing provisions of the SCM Agreement could be interpreted to outlaw such dual pricing practices. If this violation is found to exist, it should still be determined what exemptions are available to these countries to maintain this activity as an incentive to attract foreign investment.

Specifically in the context of energy inputs, specificity would exist if feedstock is only sold more cheaply to particular enterprises. Therefore, some kind of discrimination should exist between various enterprises in receiving this benefit. To determine whether a subsidy is specific, the limitation on the subsidy must be explicit.[25]

Article 2(b) of the SCM Agreement provides that when a granting authority establishes objective criteria or conditions governing eligibility for a subsidy, 'specificity' does not exist if eligibility is 'automatic'. Automatic eligibility means that the criteria and conditions governing eligibility are neutral and do not favor certain enterprises over others (e.g., based on nationality or when locating a new petrochemical plant close to available sources of feedstock of a given country is restricted to some enterprises). If cheaper feedstock is available to both domestic and foreign producers on equal terms, then such a pricing policy will not make it 'specific subsidy'.

The third condition is more challenging. Article 2(c) of the SCM Agreement provides that there are cases where, although an activity may not fall within the first two parts of Article 2 on specificity, there are reasons to believe that the subsidy is in fact specific (*de facto* specificity). The factors to determine specificity are[26]:

- Use of a subsidy program by a limited number of certain enterprises;
- Predominant use by certain enterprises;
- The granting of disproportionately large amounts of subsidy to certain enterprises;
- The manner in which discretion has been exercised by the granting authority in the decision to grant a subsidy.

In applying this subparagraph, account shall be taken of 'the extent of diversification of economic activities within the jurisdiction of the granting authority', as well as of the length of time during which the subsidy program has been in

[25] Appellate Body Report on *United States—Measures Affecting Trade in Large Civil Aircraft,* WT/DS353/AB/R, at paragraph 749 (Hereinafter *US—Civil Aircraft*).

[26] Appellate Body Report on *US—Civil Aircraft* at paragraph 796, 878. The Appellate Body noted at paragraph 796, "[i]f, notwithstanding any appearance of non-specificity resulting from the operation of the principles of laid down in sub paragraphs (a) and (b), there are reasons to believe that the subsidy may be specific, other factors may be considered."

operation.[27]It is not clear what exactly amounts to 'certain enterprise'. Whatever be the interpretation, it should be different from Article 2(1)(a) where specificity exists where there is an 'express limitation' on the use of subsidy for certain enterprises. Therefore, it can be opined that there should be an indirect limitation on certain enterprises and an indirect specificity should thus exist. In this respect, the only possibility that comes up for consideration is whether the subsidy could only be used by some enterprises due to the 'nature' of that enterprise. For example, the subsidy can only be provided for those enterprises that use feedstock due to the nature of those enterprises, as opposed to other enterprises engaged in activities for which no feedstock is needed. The WTO panel in *US—Softwood Lumber* held that if the inherent characteristics of the good provided by the government limit the possible use of the subsidy to a certain industry, the subsidy is all the more likely to be specific.[28] However, one should also link this result to the second sub-paragraph of Article 2(c), which deals with the "predominant use by certain enterprises". This could mean that since a subsidy can only be used by some enterprises, an indirect specificity is established. The *US—Softwood Lumber* panel made a passing remark that it did not consider that "any provision of a good in the form of a natural resource would be automatically be specific, precisely because in some cases, the goods provided (such as for example oil, gas, water, etc.) may be used by an indefinite number of industries".[29]

The SCM Agreement suggests that, in terming a subsidy specific, some factors should be taken into account, as mentioned above, and in applying them, the extent of economic diversification should be taken into consideration. This sentence would mean that the more diversified is the economy, the less likely would be the chances of a few industries or sectors receiving the benefit. To state differently, if the economic activities of a given country are not diversified, it would be impossible to favor one enterprise over another, since there will be only one or two major sectors in the country on which the economy is dependent. The energy producing countries are likely to argue that they have been attempting to diversify their economies from energy sector to other sectors.

As mentioned above, on the other hand, the rules on actionable subsidies (i.e., only when the requirements of specificity are satisfied) should also be analyzed to verify their applicability to the practice of dual pricing.[30] However, even if an activity falls outside the provisions of the WTO on prohibited subsidies, the affected state (whose enterprises have suffered "adverse effects") can counter that practice through the adoption of countervailing measures, which are also subject to various conditions as prescribed in the SCM Agreement. For example, a number of WTO Members argued that the pricing system of feedstock in Saudi Arabia created a preferential treatment for those that buy the cheaper feedstock, which

[27] Appellate Body Report on *US—Civil Aircraft*, at paragraph 878, 879.

[28] Panel Report on *US—Softwood Lumber,* at paragraph 7.116, 7.119.

[29] Panel Report on *US—Softwood Lumber,* at paragraph 7.116.

[30] Appellate Body Report on *US—Civil Aircraft* at paragraph 10.

indirectly damaged the petrochemical industry of those countries that do not have access to such cheap feedstock (Seznec 2006). India could be one such WTO member whose petrochemical industry could be facing or potentially facing competition on account of low-priced imports subject to dual pricing policies entering the market.

The SCM Agreement does not provide adequate information on how and against what benchmark the difference in prices should be compared. One could argue that the mere fact that the government, or the state-trading enterprise, is selling feedstock at a lower price to selected companies is adequate to determine preferential treatment.[31] However, for an actionable subsidy to be established, a "subsidy" should be identified and a resultant 'injury' should exist. Therefore, charging less should result in 'charging less than adequate', which in turn should lead to material injury to the industry of the importing WTO member.

As stated earlier, the existence of a market comparator is essential to identify the existence of a benefit. In *EC-DRAMS*, a WTO Panel noted, "…only in cases where the financial contribution provides the recipient with an advantage over and above what it could have obtained on the market will the government's financial contribution be considered to have conferred a benefit and will a subsidy thus be deemed to exist."[32] The relevant benchmark for the purpose of determining the existence of a benefit is the market. It is pertinent to recall the observation of the Appellate Body in *EC- Large Civil Aircraft.*

> The market place to which the Appellate Body referred to in *Canada—Aircraft* reflects the sphere in which goods and services are exchanged between willing buyers and sellers. A calculation of benefit in relation to prevailing market conditions thus demands an examination of behavior on both sides of a transaction, and in particular, in relation to the conditions of supply and demand as they apply to that market.[33]

Under the SCM Agreement, the "adequacy of remuneration" is determined "in relation to prevailing market conditions" in the country of provision. To revert to the Saudi Arabian example, the government had issued by way of a decree that that dedicated a 30 % discount (based on the lowest export price) to the feedstock used for domestic production (Leighton 2001). The Saudi government later on changed this practice and substituted it with a mechanism which tied the prices of products, such as LPG and other NGLs, to the price in the Far Eastern LPG markets. In the *US—Softwood Lumber* case, the Appellate Body stated as follows:

> Thus, while requiring investigating authorities to calculate benefit "in relation to" prevailing conditions in the market of the country of provision, Article 14(d) permits investigating authorities to use a benchmark other than private prices in that market. When private prices are distorted because the government's participation in the market as a

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[31] Appellate Body Report on *US—Civil Aircraft*, at paragraph at 10.

[32] Panel Report on EC—Countervailing Measures on Dynamic Random Access Memory Chips from Korea , WT/DS299/R, at paragraph 7.175 (Hereinafter *EC —DRAMS*).

[33] Appellate Body Report on *EC—Measures Affecting Trade in Large Civil Aircraft,* WT/DS 316/AB/R, at paragraph 981 (Hereinafter *EC—Large Civil Aircraft*).

> provider of the same or similar goods is so predominant that private suppliers will align their prices with those of the government-provided goods, it will not be possible to calculate benefit having regard exclusively to such prices.

The determination of the undistorted hypothetical market will often be a difficult decision. It is more than clear that most energy markets have been heavily distorted with government intervention that the determination of the adequate benchmark may be elusive. The complexities of the issue of dual pricing in Saudi Arabia or Russia demonstrate that this practice can neither be easily targeted as a prohibited subsidy nor necessarily as an actionable subsidy creating an injury to the petrochemical industries of the concerned producers. The issue has to be decided on a case-by-case basis (Marceau 2010). In the above context, when Saudi Arabia agreed to ensure that the providers of NGLs would operate within the framework of normal commercial considerations and full cost recovery, other WTO Members found it difficult to commit Saudi Arabia to greater commitments. As dual pricing issues under accession negotiations have been dealt with in Chap. 3 it is not addressed further in this chapter.

It is pertinent to note that the determination of benefit, when the government was the sole purchaser or provider of goods, was included in the early draft of the SCM Agreement during the Uruguay Round negotiations. The provision included in a 2 November 1990 draft of Article 14 read as follows:

> When the government is the sole provider or purchaser of the good or service in question, the provision or purchase of such good or service shall not be considered as conferring a benefit, unless the government discriminates among users or providers of goods or service. Discrimination shall not include differences in treatment between users. Discrimination shall not include differences in treatment between users or providers of such goods or services due to normal considerations.[34]

However, this draft article was not incorporated into the SCM Agreement. More recently, the panel and the Appellate Body in *Canada—Renewable Energy* had to address the determination of a subsidy in a public procurement of electricity. For the determination of the benefit, the Appellate Body relied heavily on the rule established under Article 14.1(d) of the SCM Agreement. The Appellate Body concluded that, "[a] benchmark in the case of subsidies derives from the market"[35] and that "in the absence of a market benchmark, it will not be possible to establish if a subsidy exists at all".[36] In other words, the unavailability of market benchmarks could only highlight the difficulties in targeting dual pricing of energy inputs as either prohibited or actionable subsidies under the SCM Agreement.

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[34] Draft Text of the Chairman of the Negotiating Group on Subsidies and Countervailing Measures, MTN/GNG/NG10/W/38/Rev.2 (2 November 1990).

[35] Appellate Body Report on *Canada—Renewable Energy*, at paragraph 5.163.

[36] Ibid, paragraph 5.163, third sentence. In the context of facts of the case, the Appellate body noted that the 'benefit should not be conducted within the competitive wholesale market as a whole, but within the competitive markets for wind and solar PV generated electricity.

2.2.7.2 Taxes Occultes (Occult Taxes)

The distinction between direct and indirect taxes could also be important in the context of energy trade or specifically in the context of measures such as a levy of carbon tax. The GATT permits border tax adjustments of indirect taxes at the border but does not permit such adjustments with respect to direct taxes. Direct taxes are imposed directly on the producers in the country of export, whereas indirect taxes are imposed on consumption which invariably happens in the country of import. Although the GATT does not provide for a language recommending one system over the other, there are various provisions in the GATT/WTO which distinguish a direct tax from an indirect tax. This implicit distinction between the direct and indirect tax specifically with respect to its border adjustability was carried over to the SCM Agreement as well. Footnote 1 of the SCM Agreement includes a language as follows, "the exemption of an exported product from duties or taxes borne by the like product when destined for consumption or the remission of such duties or taxes in amounts not in excess of those which have accrued shall not be deemed a subsidy".

The language of SCM Agreement Footnote 1 appears to limit the tax classifications to direct and indirect taxes, but commentators have argued that WTO has recognized a third category called "occult taxes". Although this term is defined nowhere in any of the WTO covered agreements, the Border Tax Adjustment Report of 1970[37] provides a reference to this. The OECD has provided a definition of "occult taxes" as follows:

> Consumption taxes on (1) auxillary materials used in the transportation or production of goods (e.g. energy, fuel, lubricants, packing, stationary); (2) durable capital equipment (e.g., machinery, buildings, vehicles); and (3) services (e.g., transportation, advertising, etc.).

The border tax adjustability of "occult taxes" remains central to the discussion on carbon taxes. For example, a tax can be imposed on high emission fuel or energy to discourage their use. It is still not very clear whether upstream carbon taxes (i.e., on inputs such as energy or fuel) can be rebated on exports whereas no such uncertainty exists with respect to downstream products.[38] To explain, whereas carbon taxes are attached to the raw materials used in the manufacture of the final products in the former, the carbon taxes are borne by the product per se in the latter. While the Working Party reached a consensus on the adjustability of taxes "directly levied on products" (i.e., indirect taxes), it could not reach a similar position with respect to "taxes occultes", noting that there was divergence of views with regard to the eligibility of adjustment of certain categories of taxes, including "taxes occultes".

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[37] GATT Working Party Report on Border Tax Adjustment (1970).

[38] The SCM Agreement clearly permits indirect taxes on exports to be rebated provided the amount of the rebate does not exceed the amount of tax. A number of commentators also opine that a downstream carbon taxes constitute an indirect tax.

In the *US—Superfund* dispute, a GATT panel, inter alia, examined the consistency of a tax imposed on certain selected imported goods made from certain designated feedstock chemicals by virtue of the Superfund Amendments and Reauthorization Act ("Superfund Act").[39] The intent of the legislation was to levy a tax that would be equivalent to what the foreign manufacturer would have paid had they been subject to the feedstock chemical tax. According to the United States, the substances of domestic origin bore a fiscal burden corresponding to the tax on chemicals used in their production. The GATT panel concluded that tax on certain chemicals being a tax directly imposed on the products was eligible for border tax adjustment. However, it is pertinent to note that the decision in *US—Superfund* was based on Article III:2 and not under the SCM Agreement or Article II:2(a) which was alluded to earlier in this chapter.

2.2.8 *Agreement on the Implementation of Article VI of the GATT 1994 (Antidumping Agreement)*

Dual pricing has been considered by some WTO Members as input dumping (Pogoretskyy 2011). In the case of a country that implements dual pricing, there is a view that energy inputs which are bought at a preferential price may be disregarded. However, the importance of input dumping is limited to the consideration of "normal value" (the home market price or the comparison price) in the context of an antidumping investigation.

Article 2.7 of the Antidumping Agreement provides that the provisions of Article 2 are without prejudice to the first paragraph of the Ad Note to the GATT Article VI. Ad Article 2.7 provides that, in the case of imports from a country that has a complete or substantially complete monopoly of its trade and where all domestic prices are fixed by the State, the importing Members in the determination of dumping may deviate from a strict comparison with domestic prices.

In practice, Ad Note to GATT Article VI has been regarded by many WTO Members as a legal permission to deviate from the normal rules set forth in GATT Article VI:1 and the Antidumping Agreement. In such cases, the importing Member taking an antidumping action may disregard the normal value reflected from the books of accounts of an exporter and constructs the normal value based on the cost information gathered from a 'surrogate' country. This is popularly known as the non-market economy (NME) methodology in antidumping investigations and several WTO Members including European Union, India and the United States have made practical use of this methodology in the case of energy intensive products. In investigations where the NME methodology is used, most jurisdictions use energy costs such as gas and electricity costs from surrogate/

[39] Panel Report on *United States—Tax on Petroleum and Certain Imported Substances,* BISD, 34S/136 (Hereinafter *US—Superfund).*

analog countries. The current flexibility to gather such costs from diverse regions has essentially led to exaggerating the dumping margin involving products of enterprises from NME countries.

Although the use of NME methodology is to deal with products whose cost structures have been highly distorted on account of state interference, it is often considered as a tool to deal with low-cost imports. Furthermore, the tenability of NME methodology to target dual pricing is highly suspect, as a vast majority of state-controlled economies have become market economies or are expected to receive market economy status in the near future as in the case of China. Most of such economies are Members of the WTO, and with Russia, the last among the major state-controlled economies joining the WTO, the NME methodology may well be an anachronism in antidumping investigations, at least within a few years.

Another issue is whether in event of Ad Note to GATT Article VI becoming disabled, will Article 2 of the Antidumping Agreement have sufficient teeth to tackle distortions engendered by government interference in the energy sector. In the case of anti-subsidy investigations, this remains a possibility with the Appellate Body ruling in *US—Softwood Lumber-IV* that it is possible to use benchmarks other than domestic prices for the determination of 'benefit' determination. The overwhelming view in the case of Antidumping Agreement is that such a possibility may never exist (Pogoretskyy 2009).

The use of constructed cost methodology in the case of NMEs is well known. However, in the recent past certain WTO members such as the EU have come up with innovative strategies to deal with dual energy pricing in the context of antidumping investigations.

For example, even before Russia joined the WTO, it was granted market economy status by the EU. However, it carried out energy cost adjustments in antidumping proceedings involving Russia. More specifically, after the amendment to the EU regulations and the insertion of a new Article, namely Article 2(5), the EU authorities resorted to the amended provision to justify an upward adjustment of the cost of production of the Russian exporters. According to Article 2(5), adjustments should be made where the cost of production, energy costs included, "are not reasonably reflected in the records of the party concerned".

A very good illustration is the antidumping investigation on potassium chloride.[40] In this case, the EU Commission maintained that the price of gas supplied by Gazprom, a state-owned enterprise in Russia, to the Russian producers were below recovery levels and decided to adjust upwards the cost of gas borne by the Russia exporter by relying on the price charged by the Russian gas provider Gazprom for its gas exports. This approach resulted in an upward revision of normal value which is the comparison price used for dumping margin calculations. No WTO Member has questioned the EU practice before the WTO dispute settlement body.

[40] Potassium chloride originating in Belarus, Russia and Ukraine.

Elimination of dual pricing will be of significant interest to India. According to a study by Goldar and Kumari (2009) in the field of petrochemicals, the elimination of natural gas subsidy in Oman, Qatar, Russia, Saudi Arabia, and United Arab Emirates (UAE) could lead to higher prices of petrochemical products imports into India and could result in an increase in the domestic production of petrochemicals in India by about 2.2 %.

2.2.9 State Trading Enterprises

The energy sector being a strategic sector for national security has traditionally been dominated by state owned companies, or has been under the control of the national governments or other quasi-governmental bodies.

Article XVII:1(a) of the GATT 1994 states:

> Each contracting party undertakes that if it establishes or maintains a State enterprise, wherever located, or grants to any enterprise, formally or in effect, exclusive or special privileges, such enterprise, shall in its purchase or sales involving either imports or exports, act in a manner consistent with the general principles of non-discriminatory treatment prescribed in this Agreement for governmental measures affecting imports or exports by private traders.

The coverage of GATT Article XVII is not limited to state enterprises and state ownership is not the major criteria. Article XVII applies to any enterprise that possesses exclusive or special privileges granted by the state, "including statutory or constitutional powers, in the exercise of which they influence through their purchases or sales the level of direction of imports or exports". Therefore, a private corporation or enterprise could be considered to be a state trading enterprise (STE) if it receives some special right or privilege from the state, as a result of which, it is in a position to influence the direction of trade.

An important issue is whether energy companies can be regarded as STEs. Additional guidance is provided in the GATT 1994 supplementary notes for Article XVII, paragraph 1(a) wherein[41]: "privileges granted for the exploitation of national natural resources but which do not empower the government to exercise control over trading activities of the enterprise in question, do not constitute exclusive or special privileges". The access to energy resources alone would not make an energy company an STE.

STEs are obliged through Article XVII to make their purchases or sales on the basis of commercial consideration, including price, quality, availability, marketability, transport and other conditions of purchase or sale. STEs are also obliged to afford the enterprises of the other WTO members adequate opportunity, in accordance with customary business practice, to compete for participation in such purchases or sales. The requirement to act in accordance with commercial

[41] GATT 1994, Annex I, Notes and Supplementary Provisions, Ad Article XVII, paragraph 1(a).

consideration is not a separate obligation, but is, rather an express clarification of the obligation contained in GATT Article XVII paragraph 1(a) to "act in a manner consistent with the general principles of non-discriminatory treatment".

2.2.10 GATS and Energy Services

The General Agreement on Trade in Services (GATS) is one area which may require a relook in any discussion on energy security. Energy trade requires investment in permanent infrastructure and may also involve natural monopolies.

Products such as natural gas are traded across borders via pipelines and can also be stored in gaseous form. While the extant approach is to treat some of the products such as electricity as industrial goods, some argue that it should be defined as a service since it forms part of a network industry (Lakatos 2004). Some believe that more than the energy product, it is the associated infrastructure and the enabling investment environment that require further liberalization (Cottier et al. 2009).

Under GATS, obligations of market access (Article XVI) and national treatment (Article XVII) apply through the inscription of specific commitments. Since many of the energy-related activities are covered by the disciplines of GATS, obligations are reflected in several sectors. Energy services encompass services related to all stages of the energy production chain: exploration, development, drilling, extraction, construction, engineering, production, processing, refining, generation, transportation, transmission, distribution, storage, marketing, etc.

Two classification documents are commonly used by WTO Members to establish their schedule of specific commitments: (i) the 1991 Services Sectoral Classification List which was developed during the Uruguay Round popularly known as "W/120",[42] and (ii) the 1991 United Nations Central Product Classification (CPC). W/120 which provides reference to CPC has been specifically incorporated in the 1993 and 2001 WTO Scheduling Guidelines and has been used in disputes as an interpretative tool. However, neither of these instruments contain a distinct chapter for energy services. A possible reason is that energy services were predominantly in public hands and private sector participation was limited.

In the above backdrop, reference to W/120 may be helpful to understand the scope of energy and related services. W/120 does not include a special section on energy services as such. However, the classification list under W/120 contains three sub-sectors, which are exclusively related to energy activities:

- *Services incidental to mining*, covers: (i) services rendered on a fee or contract basis at oil and gas fields, e.g. drillers services, derrick building, repair and dismantling services, oil and gas well casings cementing services (CPC 883), and (ii) site preparation work for mining (CPC 5115), covering tunneling,

[42] GATT (1991), Services Sectoral Classification List, MTN.GNG/W/120.

overburden removal, and other development and preparation work of mineral properties and sites, except for mining of oil and gas.

- *Services incidental to energy distribution* (CPC 887) covers transmission and distribution services on a fee or contract basis of electricity, gaseous fuels and steam and hot water to household, industrial, commercial, and other users.
- *Transportation of fuels* (CPC 7131) is one of the two sub-sectors in the *Pipeline transport* category and is defined as transportation via pipeline of crude or refined petroleum and petroleum products and of natural gas.

In addition to the sub-sectors mentioned above, CPC definitions explicitly refer to energy-related services, such as: engineering design services for oil and gas recovery procedure; construction, installation and/or maintenance of drilling equipment, pumping stations, treating and storage facilities, and other oil field facilities; advisory and consultative engineering services, such as preparatory technical feasibility studies and project impact studies for the construction of a pipeline, to name a few. According to Cossy (2011) the WTO classification instruments cover the entire chain of energy services. Some energy services have emerged in recent times that appear not to have found an entry in W/120 or the CPC Provisional Classification of 1991. A few such examples include the wholesale trade in services of electricity and retailing services of electricity, town gas, steam, and hot water. However, it will be incorrect to assume that such services are outside the GATS, because the classification instruments do not determine the scope of the Agreement (Cossy 2011). As such, there is no obligation for a WTO member to follow either W/120 or the CPC definitions.

Carbon capture and storage (CCS) is a climate change mitigation option which is gaining interest. CCS is the process of capturing waste carbon dioxide from large point sources, such as fossil fuel power plants, transporting it to a storage site, and depositing it where it will not enter the atmosphere, normally an underground geological formation (IPCC 2005). Some of the services covered under CCS can arguably fall under existing CPC definitions, for instance, CPC 8675 (related scientific and technical consulting services), CPC 7139 (transportation of other goods), CPC 72122 (transportation by sea going vessels of bulk liquids or gases in special tanker, etc. These services do not fall outside the GATS as the Agreement applies to all services, except those provided "in the exercise of governmental authority". However, in the absence of separate classification, GATS obligations with respect to some of the new energy services could be limited.

However, WTO judicial bodies (panels and the Appellate Body) have tended to give a broad interpretation of specific commitments. For example, in *China—Audiovisuals*,[43] one of the issues was whether China's commitments on audiovisual services encompassed distribution of music by electronic means or whether it

[43] Appellate Body Report on *China—Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisuals,* WT/DS363/AB/R (Hereinafter *China—Audiovisuals).*

was confined to the distribution in the physical format. The Appellate Body made the following observations:

> We note that in interpreting the terms of GATS specific commitments based on the ordinary meaning to be attributed to those terms can only be the meaning that they had at the time the schedule was concluded would mean that very similar or identically worded commitments could be given different meanings, content and coverage depending on the date of their adoption or the date of a Member's accession to the treaty. Such interpretation would undermine the predictability, security and clarity of GATS specific commitments.[44]

Market access liberalization alone is not considered as sufficient. Trade in energy is often impeded by difficulties in getting access to transportation and distribution networks. Access on reasonable terms to storage, transport, and distribution networks is necessary for liberalization of cross-border energy trade (Cossy 2010). Again, non-transparency of regulation could be another barrier (Kutas 2010). Third party access to transportation is controlled by private companies, and not by governments. GATS contains very limited provisions that deal with the conduct of private entities such as monopolies and exclusive service suppliers.

In order to address these issues, the United States and Norway[45] proposed to devise a Reference Paper on Energy Services modeled on the Reference Paper on Basic Telecommunication Services under the GATS. The objective of the Reference Paper was to ensure transparency in the formulation and implementation of rules as well as non-discriminatory third party access to the interconnection with energy networks and grids, non-discriminatory objective and timely procedures for the transportation and transmission of energy, and requirements preventing certain anti-competitive practices for energy services in general (ICTSD 2007).

2.2.11 Government Procurement Agreement

The WTO Agreement on Government Procurement (GPA) applies only to the signatories of the Agreement. GPA applies the principles of national treatment and non-discrimination with respect to government purchases. GPA also contains disciplines on technical specifications, which aim at avoiding creating unnecessary obstacles to international trade and ensuring that, to the greatest extent possible, specifications are prescribed in performance terms and in keeping with international standards. The GPA also allows Members to impose justifiable conditions that can include energy-related criteria. Considering the limited participation in GPA (with only 28 members), it has attracted less attention.

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[44] Appellate Body Report on *China—Audiovisuals,* paragraph 397.

[45] Communication by the US and by Norway to the Council for Trade in Services in Special Session (S/CSS/W/24 and S/CSS/W/59, respectively).

2.3 Exemptions and Exceptions

Section 2.3 of this chapter will examine some of the key exceptions and exemptions available under the WTO covered agreements relating to the discussion on energy security.

2.3.1 Exceptions Under Article XI of GATT 1994

Article XI:2 of the GATT 1994 provides a 'safe harbour' for WTO members that apply export prohibitions and restrictions for certain public policy purposes that would otherwise violate Article XI:1. The most relevant for the energy sector is the provision that allows members to temporarily invoke export prohibitions in order to relieve critical shortages of products essential to the exporting country. The question is whether a member country can impose an export ban or quota on exports of products on the ground that such energy product or materials are in critical short supply.

Article XI:2(a) provides an exception to the general prohibition under Article XI, and permits WTO Members to impose export prohibitions or restrictions temporarily "to prevent or relieve critical shortages of foodstuffs or other products" essential to the exporting Member. Article XI:2 refers to general obligation to eliminate quantitative restrictions set out in Article XI:1 and stipulates that the provisions of Article XI:1 "shall not extend" to the items listed in Article XI:2. The Appellate Body in *China—Raw Materials*, made the following observation:

> [W]e note that the words "prohibition" and "restriction" in that subparagraph are both qualified by the word "export". Thus, Article XI:2(a) covers any measure prohibiting or restricting the exportation of certain goods. Accordingly, we understand the words "prohibitions or restrictions" to refer to the same types of measures in both paragraph 1 and subparagraph 2(a), with the difference that subparagraph 2(a) is limited to prohibitions or restrictions on exportation, while paragraph 1 also covers measures relating to importation. We further note that "duties, taxes or other charges" are excluded from the scope of Article XI:1. Thus, by virtue of the link between Article XI:1 and Article XI:2, the term "restrictions" in Article XI:2(a) also excludes "duties, taxes, or other charges.[46]

Interestingly, the Appellate Body notes that Article XI:2(a) does not really function as an exception to Article XI obligations, because it in fact defines the scope of Article XI obligations in the first place. The Appellate Body agreed with the panel that a restriction or prohibition in the sense of Article XI:2(a) of the GATT must be of limited duration and not for indefinite period of time. According to the Appellate Body, which reads the expressions "critical" and "temporarily" in light of one another, Article XI:2 (a) has a quite narrow function, which is to

[46] Appellate Body Report on *China—Raw Materials,* WT/DS 394/AB/R, WT/DS 395/AB/R, WT/DS 398/AB/R.

respond "extraordinary conditions" or "bridging passing needs".[47] Therefore, the safe harbor of Article XI:2(a) need not be available in the case of long-term regulatory or conservation measures of natural resources.

2.3.2 General Exceptions Under Article XX of GATT 1994

Article XX of the GATT 1994 provides exceptions for measures "necessary to protect human, animal or plant life or health" or "relating to the conservation of exhaustible natural resources". The WTO Appellate Body in several cases have found that in order for such conduct to be protected by Article XX, a member must show first that the measure at issue is of the type that is covered by one of the sub-paragraphs of Article XX. Secondly, the measure must be applied in a manner that is consistent with the chapeau of Article XX. The chapeau of Article XX requires that the measures must not be applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.[48]

In recent times, especially in the light of the panel and Appellate Body findings in *China—Raw Materials*, the interface between WTO rules and the permanent sovereignty of countries over natural resources is developing into an uneasy relationship. In *China—Raw Materials*, China argued that it had the right "freely to use and exploit its natural wealth and resources… for their own progress and economic development".[49] In the dispute WTO rules trumped over the public international law norms of permanent sovereignty, but the dispute was resolved especially in the context of China's WTO Accession Protocol. In future disputes involving trade restrictions on strategic inputs or natural resources, this tension is likely to come into sharper focus.

A two-tiered examination of any trade measure under the general exceptions will start with the sub-paragraphs of Article XX of the GATT. Within the context of energy security, more relevant sub-paragraphs are XX(b), (d), (g), and (j). Article XX(b) permits the adoption of measures that are necessary to protect human, animal or plant life or health. When invoking Article XX(b), a Member must first show that the policy underpinning the measure falls within the range of policies designed to protect human, animal or plant life or health. Next, it must prove that the inconsistent measure was necessary to fulfill the policy objective. If the parties to a dispute disagree as to whether the policy in question is designed to protect human, animal or plant life or health, a panel will undertake an assessment

[47] Ibid, paragraphs 327–328.

[48] Appellate Body Report on *United States—Standards for Reformulated and Conventional Gasoline,* WT/DS2/AB/R at paragraph 20 (Hereinafter *US-Gasoline*).

[49] Panel Report on *China—Raw Materials*, paragraphs. 7.377–7.381.

of the purported risk, and determine whether the policy in question is designed to protect the aforesaid objectives.

In *Brazil—Retreaded Tyres*, the Appellate Body stated that a determination of whether a measure is "necessary" for the purposes of Article XX(b) involves an assessment of "all the relevant factors, particularly the extent of the contribution to the achievement of a measure's objectives and its trade restrictiveness, in the light of the importance of the interests or values at stake."[50] The Appellate Body further stated that a measure will be "necessary" if it is "apt to bring about a material contribution to the achievement of the objective." If such an analysis yields a preliminary conclusion that the measure is necessary, the result must be confirmed by comparing the measure with its possible alternatives which may be less trade restrictive while providing an equivalent contribution to the achievement of the objective pursued.[51] As the Appellate Body pointed out in *US—Gambling*, while the responding Member has the burden to establish that a measure is necessary, it does not have the obligation to show that there are no reasonably available alternatives.[52] There is a view that the test applied by the Appellate Body in the aforementioned cases is less stringent in terms of what relationship it requires between the adopted and the policy objective it pursued—thus producing more policy space for, among others, environmental protection measures (Table 2.2).

Article XX(g) of the GATT 1994 permits the adoption of measures that are related to the conservation of exhaustible natural resources, provided that such measures are made effective in conjunction with restrictions on domestic production or consumption. In WTO dispute settlement, this provision was first invoked in *US—Gasoline,* where it was determined that a policy to reduce the depletion of an exhaustible natural resource was within the meaning of Article XX(g).[53] In *US—Shrimp*, the issue was whether the term "exhaustible natural resource" refers exclusively to mineral or non-living resources or could also encompass living and renewable sources.[54] In addition to showing that the natural resource at issue is "exhaustible", a WTO member relying on Article XX(g) must also ensure that its measure relates to the conservation of this resource. In *China—Raw Materials*, one of the issues was whether measure can be considered to be "made effective in conjunction with restrictions on domestic production" only if it is primarily aimed at rendering effective these restrictions. In an important finding, the Appellate Body categorically held that there is no suggestion in Article XX(g) to the effect that a trade restriction must be aimed at ensuring the effectiveness of

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[50] Appellate Body Report on *Brazil—Measures Affecting Imports of Retreaded Tyres,* WT/DS332/AB/R at paragraph 151 (Hereinafter *Brazil—Retreaded Tyres).*

[51] Appellate Body Report on *Brazil—Retreaded Tyres,* at paragraph 156.

[52] Appellate Body Report on *United States—Measures Affecting Cross Border Supply of Gambling and Betting Services,* WT/DS285/AB/R at paragraph 309 (Hereinafter *US—Gambling).*

[53] Appellate Body Report on *US—Gasoline,* at paragraph 14.

[54] Appellate Body Report on *United States—Shrimp,* WT/DS58/AB/R.

Table 2.2 Application of general exceptions in WTO disputes

WTO dispute	GATT Article XX/ GATS Article XIV provisions	Outcome of establishing "necessity"
US—Gasoline	Article XX(b) & (d)	Exception not allowed
Korea—Beef	Article XX(d)	Exception not allowed
EC—Asbestos	Article XX(b)	Justified at the panel stage (AB report did not examine Article XX)
US—Gambling	GATS Article XIV	Provisionally justified, but failed the chapeau test
Brazil—Retreaded Tyres	Article XX(b)	Provisionally justified, but failed the chapeau test
China—Audiovisual	Article XX(a)	Rejected; failed to rebut least trade alternative measure proposed by the US Article XX can be invoked even in respect of Protocol of Accession
China—Raw Materials	Article XX(b) & (g)	Express language having reference to GATT Article XX would be required to justify a violation under Protocol of Accession Exception not allowed (AB, however, reversed the finding of the panel that under Article XX(g) that the purpose of the export restriction should be to ensure the effectiveness of domestic production and consumption
EC—Seal Products	Artticle XX(a)	Exception allowed EU Seal Regime could be justified under the "public morals" exception in GATT Article XX(a). However, IC and MRM exceptions to the EU ban did not meet the requirements of the chapeau

domestic restrictions.[55] Finally, the requirement that the measures be "made effective in conjunction with restrictions on domestic production or consumption" has been described as a requirement of even-handedness in the imposition of restrictions, in the name of conservation.[56] Therefore any conservation policy on energy resources will have to incorporate the element of 'even-handedness'.

One of the issues is the possible overlapping or the mutually exclusive application of Article XX(g) of the GATT and Article XI:2(a). The Appellate Body clarified in *China—Raw Materials* that Articles XI:2(a) and XX(g) have different functions and different obligations. The Appellate Body noted:

[55] Appellate Body Report on *Panel Report on China—Raw Materials*, at paragraph 360.

[56] Appellate Body Report on *US—Gasoline,* at paragraphs 20–21.

> Article XI:2(a) addresses measures taken to prevent or relieve "critical shortages" of foodstuffs or other essential products. Article XX(g), on the other hand, addresses measures relating to the conservation of exhaustible natural resources. …Moreover, because the reach of Article XI:2(a) is different from that of Article XX(g), an Article XI:2(a) measure might operate simultaneously with a conservation measure complying with the requirements of Article XX(g). [57]

Article XX(j) allows WTO Members to take measures that are essential to the acquisition or distribution of products in general or local short supply. However, any such measures must be consistent with the principle that all members are entitled to an equitable share of the international supply of such products. This provision, in its original form, was adopted for a limited period of time to "take care of temporary situations arising out of the war", before being accepted as a permanent provision in 1970. The phrase "general or local short supply" provided WTO members with some flexibility to take trade-restrictive action when a particular resource becomes temporarily scarce. This flexibility is constrained by the requirement imposed by sub-paragraph (j) to respect the principle of equitable shares for members and the requirements of the chapeau of Article XX.

One interesting issue is the applicability of GATT Article XX exception with respect to various violations of Accession Protocols and possibly violation with respect to the so-called green subsidies discussed under Article 8 of the SCM Agreement. The WTO Appellate Body in *China—Audiovisuals* ruled that the applicability of Article XX beyond the GATT framework could not be excluded altogether. This particular reasoning was rejected by the Appellate Body in *China—Raw Material* case. In any case this will be an issue which has to be examined case-by-case, agreement-by-agreement or accession protocol-by-accession protocol especially in the context of the newly acceded energy abundant members of the WTO.

2.3.3 National Security Exceptions

National security exceptions are incorporated in Article XXI of the GATT 1994 and Article XIV *bis* of GATS.

GATT Article XXI reads as follows:

> Nothing in this Agreement shall be construed
>
> (a) to require any contracting party to furnish any information the disclosure of which it considers contrary to its essential security interests; or
> (b) to prevent any contracting party from taking any action which it considers necessary for the protection of its essential security interests
>
> (i) relating to fissionable materials or the materials from which they are derived;

[57] *Panel Report on China—Raw Materials*, at paragraph 337.

(ii) relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment;
(iii) taken in time of war or other emergency in international relations; or

(c) To prevent any contracting party from taking any action in pursuance of such obligations under United Nations Charter for the maintenance of international peace and security.

GATS XIV *bis* has similar language. Although the national security exceptions are of significant importance, there is very little jurisprudence on this provision. The only WTO case in recent times was the EU challenge to the US Helms Burton Act of 1996, the parties resolved the dispute through a memorandum of understanding before the panel process was completed. However, past jurisprudence suggests that a measure could be justified under Article XIV *bis* of the GATS if it contributes to securing essential security interests. The WTO panels are likely to apply the balancing test. [58] The more essential a security interest is and the greater such a measure is likely to contribute to its achievement, the probability of successfully invoking such an exception is higher.

In the Doha Development Agenda (DDA) services negotiations, several Members have expressed the view that nuclear energy should not be associated with energy trade in general. It is not clear, however, whether this implies that nuclear trade should be subject to specific provisions or whether Members consider that GATS Articles XIV and especially XIV *bis* provide sufficient scope for action. Article XIV *bis* of the GATS includes, among the security exceptions, actions that Members consider necessary to protect essential security interests "relating to fissionable and fusionable materials or the materials from which they are derived." One question here is whether "essential" security interests could be at stake in the international trade of nuclear energy services for peaceful purposes, also considering the potential spillover in the military field.

2.3.4 Exceptions Under WTO Annex 1(A) Agreements

One of the WTO Agreements that has gained significance in recent times is the TBT Agreement. While the TBT Agreement establishes non-discrimination as an obligation, it does not have an exception for health, environment, natural resources, etc. Instead, it establishes a separate obligation related to measures used for these purposes. In this regard, TBT provisions are different from the GATT framework. The TBT Agreement seems to set out two separate rules: one rule requiring MFN/national treatment obligation and the other requiring that the measures be no more trade restrictive than necessary. While the GATT permits a

[58] Appellate Body Report on *US—Gasoline,* at paragraph 13.

violation to be defended under Article XX, no such defense exists under the TBT. However, it may be worth noting the preambular language in the TBT Agreement:

> Recognizing that no country could be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would be a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade, and are otherwise in accordance with the provisions of this Agreement

In *US—Clove Cigarettes*, the Appellate Body acknowledged that Article 2.1 of the TBT like Article III:4 of the GATT prohibits both *de jure* and *de facto* discrimination against imported products, while at the same time exempts a measure from a possible WTO violation if the detrimental impact on competitive opportunities for imports stems exclusively from legitimate regulatory distinctions.[59] Furthermore, the design, architecture, revealing structure, operation, and application of the measure is examined to find out whether the detrimental impact on competitive opportunities for imported products reflects discrimination. Stated differently, the new approach of the Appellate Body reflected in the cases such as US—*Tuna (II)*[60] and *US—COOL*[61] highlights the role of creative interpretation when the original Agreement has omitted a general exception clause.

2.3.5 Green Subsidies

Green subsidies, i.e., government measures that deemed certain governmental assistance non-actionable under the SCM Agreement expired at the end of 1999 in the absence of consensus among Members to extend them.[62] Similarly, the Agreement on Agriculture (AoA) had a "due restraint" clause (commonly referred to as the "Peace Clause") in Article 13, which exempted green box measures from countervailing duties and multilateral challenge under the SCM Agreement, as also other domestic support measures and export subsidies in conformity with the AOA from multilateral challenge. The peace clause under the AoA has expired. Although there is a clamour for reinstating such a safe haven for the purpose of

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[59] Appellate Body Report on Report on *US—Clove Cigarettes*.

[60] Appellate Body Report on *United States*—Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, WT/DS381/AB/R (Hereinafter *US—Tuna II (Mexico)*).

[61] Appellate Body Report on *United States*—Certain Country of Origin Labeling (COOL) Requirements, WT/DS384/AB/R / WT/DS386/AB/R (Hereinafter *US—COOL*).

[62] Article 31, SCM Agreement. The SCM Agreement as it originally entered into force contained a third category—non-actionable subsidies. This category applied provisionally for five years ending 31 December 1999, and pursuant to Article 31 of the Agreement, could be extended by consensus of the SCM Committee. As of 31 December 1999, no such consensus had been reached.

promoting renewable energy or for climate change mitigation or adaptation, for all practical purposes, no subsidy is immune from challenge for the time being. Even if such a safe haven is not reinstated, an interesting issue is whether such green subsidies could be justified under Article XX of the GATT. This issue has been examined under the discussions on GATT general exceptions in Sect. 2.3.2.

2.3.6 GATS

Article XIV(b) of the GATS allows Members to take measures necessary to protect human, animal, or plant life and health. Article XIV *bis* encompasses actions that a Member considers necessary to protect its essential security interests. These two categories of exceptions mirror closely the provisions of Article XX and XXI of the GATT 1994 discussed in the previous Sections and are not addressed again.

2.4 Energy Security and Key Negotiating Proposals Under Doha: Reference to Chairman's Text

The chairpersons of the various negotiating groups under the Doha Round negotiations have submitted several negotiating texts and reports which provide an update on the progress made in the negotiations. The Chairman's texts and other reports reflect the state of play in the negotiations. Although the negotiating texts of the chair are drafts and not decisions, they demonstrate the progress achieved so far and could form the basis for any renewed negotiations.

This part of the chapter will provide a short analysis of the Chairman's texts and other reports with specific reference to energy security.

2.4.1 Antidumping Agreement

Energy costs, such as electricity and gas, represent a major proportion of the manufacturing cost and a significant proportion of the total cost of production for most products. While carrying out the ordinary course of trade test in the antidumping investigations, antidumping agencies examine whether the costs associated with the production and sale of the product under consideration are reasonably reflected in the records of the parties concerned. In relation to the category of production costs, which includes energy and utility costs, Article 2.2.1.1 of the Antidumping Agreement provides that costs shall normally be calculated on the basis of records kept by the exporter or producer under investigation. However, if these costs are not reasonably reflected in the exporter's records, they must be adjusted.

The existing WTO Antidumping Agreement provides in Article 2.2.1.1 that: "[a]uthorities shall consider all available evidence on the proper allocation of

costs, including that which is made available by the exporter or producer in the course of the investigation *provided that such allocations have been* historically utilized by the exporter or producer, in particular in relation to establishing appropriate amortization and depreciation periods and allowances for capital expenditures and other development costs." (emphasis added).

A proposal amending the highlighted italics part of Article 2.2.1.1 has been included in the 2011 Communication from the Chairman (WTO Negotiating Group on Rules 2011) as follows: "…provided that such allocations do not differ from any allocations that have been… ".

In terms of the suggested change, there is a view that the investigating agencies have no obligation as such to take into account the historically utilized allocation of costs. Especially in the context of energy costs, if the costs associated with the production of a product is not reasonably reflected in the books of the company due to certain market distortion, the investigating agencies have arguably the freedom to depart from the records of the producer/exporter.

2.4.2 Agreement on Subsidies and Countervailing Measures

Natural resource pricing has been a significant topic under the SCM Agreement. At the early stages of the Doha negotiations, the United States in 2003, made a proposal which had a bearing on the energy sector (see WTO Negotiating Group on Rules 2003). The proposal stated the following:

> While the principle that trade flows should be determined by comparative advantage is broadly accepted, it must also be accepted that preferential natural resource pricing has been and, if not addressed, will continue to be the source of considerable trade distortion and friction. Simply put, there is no difference between the government provision of a natural resource at less than fair market value and the government provision of a cash grant allowing the purchase of a natural resource at less than fair market value. The advantage provided to domestic producers in this situation unfairly magnifies the comparative that would otherwise be determined by market forces and production facilities.

The Chairman of the Negotiating Group on Rules circulated a draft consolidated text for the Antidumping and SCM Agreement in 2008 (WTO Negotiating Group on Rules 2008). The Chairman's text included some key changes in the SCM Agreement which may have an impact on natural resource pricing.

2.4.2.1 Chairman's Text in the SCM Agreement

The following sections from the 2008 Chairman's text[63] reflect proposed changes in three areas, i.e. "specificity", "determination of benefit" and "input dumping":

[63] WTO Negotiating Group on Rules (2008), Draft Consolidated Chair Texts of the Anti Dumping and SCM Agreement, TN/RL/W/236.

Specificity of Subsidy

The 2008 Chairman's text included a specific amendment with respect to the term "specificity". The text proposed an insertion to Article 2.1(c) as follows:

> In the case of subsidies conferred through the provision of goods or services at regulated prices, factors that may be considered include the exclusion of firms within the country in provision from access to the goods or services at the regulated prices.

A number of natural resources are sold at regulated prices and are in principle, "generally available"—a standard used by agencies for determining countervailing duties. However, if some firms are excluded in obtaining such products at regulated prices, such criterion or factual situation could also be determinative in deciding the specificity of such subsidies.

Determination of Benefit

WTO Members have sought to provide a benchmark for the calculation of 'benefit' under Article 14.1(d). The Chairman's 2008 text suggested that Article 14.1(d) of the SCM Agreement contain the following amendment:

> Where the price level of goods or services provided by a government is regulated, the adequacy of remuneration shall be determined in relation to prevailing market conditions for the goods or services in the country of provision when sold at unregulated prices, adjusting for quality, availability, marketability, transportation and other conditions of sale; provided that, when there is no unregulated price, or such unregulated price is distorted because of the predominant role of the government in the market as a provider of the same or similar goods or services, the adequacy of remuneration may be determined by reference to the export price for these goods or services, or to a market determined price outside the country of provision, adjusting for quality, availability, marketability, transportation, and other conditions of sale.

One of the underlying objectives of the proposed amendment is to address dual pricing and to extend the WTO subsidies disciplines to trade in natural resources and energy. However, as the Chairman of the Negotiating Group on Rules has reported (WTO Negotiating Group on Rules 2011), disciplines with respect to these issues have been controversial and no further progress has been reported since the submission of the 2008 Chairman's text.

Input Dumping

With respect to input dumping, the following amendment was suggested in the 2008 Chairman's text:

> 14.2. For the purpose of Part V, where a subsidy granted in respect of an input used to produce the product under consideration, and the producer of the product under consideration is unrelated to the producer of the input, no benefit from the subsidy in respect of the subsidy shall be attributed to the product under consideration unless a determination has been made that the producer of the product under consideration obtained the input on terms more favorable than otherwise would have been available to the producer in the market.

On Article 14.2 of the Chairman's text, there is a near convergence among WTO members that the inclusion pass-through in the Agreement could be useful. Incorporation of new disciplines on input dumping under Part V of the SCM Agreement will infer that input subsidies can be addressed in countervailing duty investigations as opposed to the currently prevailing approach of tackling such issues under the Antidumping Agreement.

2.4.3 Agreement on Agriculture

The Report by the Chairman of the Committee on Agriculture in Special Session in 2011[64] provides an in-depth assessment of the issues that are bracketed or otherwise and to be settled in the 2008 Revised Draft Modalities Text.[65]

The 2008 modalities text, in Part V(C) provides for Members to undertake obligations with respect to export prohibitions and export restrictions. These provisions mostly seek strengthening of the notification and transparency obligations. The text is reproduced below:

2.4.3.1 Revised Draft Modalities for Agriculture (2008)

Export Prohibitions and Restrictions

171. In order to strengthen the existing disciplines on export prohibitions and restrictions of Article XI.2(a) of GATT 1994 Article 12 of the Agreement on Agriculture shall be modified to include the following elements.

172. Prohibitions or restrictions under Article XI.2(a) of GATT 1994 in Members' shall be notified to the Committee on Agriculture within 90 days of the coming into force of these provisions.

173. A Member instituting export prohibitions and restrictions under that provision shall give notice of the reasons for introducing and maintaining such measures.

174. A Member which intends to institute export prohibitions and restrictions shall consult upon request, with any other Member having a substantial interest as an importer with respect to any matter related to the proposed measure. The Member instituting such export prohibitions and restrictions shall provide, upon request, the interested importing Member with necessary information, including relevant economic indicators.

175. The Member instituting the measure shall report the progress made in the consultations to the Committee on Agriculture.

176. The Committee on Agriculture shall provide for annual notification update and surveillance of these obligations.

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[64] WTO Committee on Agriculture, Special Session (2011), Report by the Chairman to the Trade Negotiations Committee, TN/AG/26.

[65] WTO Committee on Agriculture, Special Session (2008), Revised Draft Modalities for Agriculture, TN/AG/W/4/Rev.4.

> 177. As provided in paragraph 7 of Article 18 of the Agreement on Agriculture any Member may bring to the attention of the Committee on Agriculture such measures under that provision which it considers ought to have been notified by another Member.
>
> 178. Existing export prohibitions and restrictions in foodstuffs and feeds under Article XI.2(a) of GATT 1994 shall be eliminated by the end of the first year of implementation.
>
> 179. Any new export prohibitions or restrictions under Article XI.2(a) of GATT 1994 should not normally be longer than 12 months, and shall only be longer than 18 months with the agreement of the affected importing Members.
>
> 180. The above provisions apply consistently with Article 12.2 of the Agreement on Agriculture. To the extent that the above provisions on consultations apply any obligations additional to Article 12 of the Agreement on Agriculture, they shall not apply to least-developed and net food-importing developing countries.

The provisions in the 2008 draft modalities text on export prohibitions and export restrictions are likely to be of some significance for energy-related agricultural products.

2.4.4 Non-Agricultural Market Access

As discussed in other sections and sections of this chapter, export restrictions and duties are considered by several countries to have a bearing on energy security. In this context, any new disciplines and commitments on export restrictions and duties on industrial goods could also have implications for energy security.

In 2011, the Chairman of the Negotiating Group on Market Access submitted a report on the state-of-play of the non-agricultural market access (NAMA) negotiations.[66] The state-of-play provided an overview of the negotiations based on the 2008 Revised Draft Modalities Text.[67]

As the Chairman of the Negotiating Group on Market Access indicates, there are very few proposals for the regulation of export taxes, export prohibitions and export restrictions.

Concerning proposals on export restrictions in the NAMA negotiations, the *Revised Submission on Export Taxes* from the European Communities (EC) is of relevance. This EC proposal has been included as an annex to the 2008 draft modalities text.[68] The 2008 modalities text and the state-of-play report made clear that inclusion of the EC proposal did not denote that there is consensus on the proposal.

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[66] WTO Negotiating Group on Market Access (2011), Report by the Chairman on the State of Play of the NAMA Negotiations, TN/MA/W/103/Rev.3/Add.1.

[67] WTO Negotiating Group on Market Access (2008), Revised Draft Modalities for Non-Agricultural Market Access, TN/MA/W/103/Rev.3.

[68] Annex 5 of the 2008 Revised Draft Modalities for NAMA (TN/MA/W/103/Rev.3), includes the EC submission on export taxes.

2.4.4.1 Proposals on Export Restrictions Under the Doha Negotiations

The European Communities has made three submissions on regulating export duties. The European Communities made the first submission in 2003 and later submitted a legal draft entitled *WTO Agreement on Export Taxes* in 2007, and a revised submission in 2008 which has been included as an annex to the 2008 draft modalities text.

The revised EC proposal (WTO Negotiating Group on Market Access 2008, TN/MA/W/101) has three main characteristics:

- Basic GATT disciplines on tariff liberalization to apply to export taxes.
- Additional flexibility for small developing country Members and least-developed country Members to maintain or introduce export taxes in other situations.
- Exclusion of agricultural products from GATT disciplines on export taxes (in keeping with the NAMA mandate).

The EC proposal suggested export taxes should be first reduced and subsequently eliminated. This proposal has not yet received critical support from WTO members so far.

2.4.5 Environmental Goods and Services

Paragraph 31(iii) of the Doha Ministerial Declaration called for negotiations regarding "the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services". The negotiations have given rise to a number of proposals on the definition of environmental goods and services (EGS). The proposals suggest that wind turbines, solar panels, geothermal energy sensors and fuel cells can be included within the coverage of EGS.

Some WTO Members have identified certain key goods as a starting point for discussion in the Committee on Trade and Environment, Special Session on a core list of environmental goods, without prejudice to the final outcome (see also the annexed Table A.1 for an indicative core list of EGS).

In an effort to combine various elements of proposals under negotiation, a *hybrid* approach which includes the following components has been suggested: (i) an agreed core list[69]; (ii) a complementary self-selected list: developed countries would individually select a number of environmental products for tariff elimination and developing countries are encouraged to participate; (iii) as a complement to the common core list and complementary lists, products would be identified

[69] The core list drawn from JOB/TE/3/Rev.1 is listed in the annexed Table A.1. A group of Members identified, on an illustrative and starting-point basis, 26 tariff lines in the core list. Preliminary discussions showed that some of the goods included in this set could be considered by the membership as environmental goods, as long as they can be specifically identified in the HS classification by an ex-out or otherwise.

through a request/offer process, the outcome of which would be multilateralized on the basis of the MFN principle; and (iv) environmental projects that could be used to identify lines for inclusion in the EGS lists mentioned above.

2.4.6 Trade in Services

As noted in Sect. 2.2.10, the United States and Norway[70] proposed a Reference Paper on Energy Services modeled on the Reference Paper on Basic Telecommunication Services under the GATS.

In 2011, the Chairman of the Council on Trade in Services in Special Session (CTS-SS) submitted his report to the Trade Negotiations Committee on the state-of-play in the services negotiations. Based on the statements submitted by coordinators of the plurilateral request/offer groups at the CTS-SS, paragraphs 26 and 27 of the Chairman's report covered Energy Services and noted as follows:

Energy Services

> 26. The co-sponsors considered that the overall response to the plurilateral request had thus far been disappointing. Although some indications of new commitments and important improvements in some areas covered by the request had been provided, major gaps still existed. Few Members other than co-sponsors currently came close to satisfying the entire request. All modes of supply were important for this sector, but the co-sponsors were in particular seeking improvements with regard to the removal of restrictions on mode 3, notably foreign equity limitations.
>
> 27. In general, while the positive indications received from recipients were appreciated, this limited progress still needed to be translated into firm commitments. Much work therefore remained to be done in order to meet the request.[71]

2.4.7 Trade Facilitation

Trade facilitation assumes significance in light of the need for providing security for transit energy infrastructure. Proposals that pertain or which are of relevance to the energy sector were made by WTO members in 2009 and in 2012.

In 2009, the former Yugoslav Republic of Macedonia, Mongolia, Switzerland and Swaziland, together proposed concrete obligations with respect to transit in goods (including energy goods). The obligation of national treatment, MFN treatment, disciplines on STEs and document review were covered in the proposal (WTO Negotiating Group on Trade Facilitation 2009).

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[70] Communication by the US and by Norway to the Council for Trade in Services in Special Session (S/CSS/W/24 and S/CSS/W/59, respectively).

[71] WTO CTS-SS (2011), Report by the Chairman of the CTS-SS, TN/S/26, paragraphs 26 and 27.

In early 2012, the Negotiating Group received a communiqué jointly issued by Egypt and Turkey (WTO Negotiating Group on Trade Facilitation 2012). This communication opposed the idea of GATT Article V disciplines being read so as to govern the transit of energy products via fixed infrastructure. Instead, they proposed that the issue be dealt with under a separate provision altogether. This proposal was based on the peculiarities of energy and trade in energy products with respect to GATT and trade in goods and was against the inclusion of goods moved via fixed infrastructure in the definition of "traffic in transit" in the draft negotiating text on trade facilitation.

In the 2012 consolidated draft negotiating text,[72] there was inclusion of bracketed text and some of the provisions therein directly concern transit of energy goods. For instance, Article 11 of the negotiating text reads as follows:

Article 11: Freedom of Transit (December 2012 Text)

1. [Goods subject to the provisions on Freedom of Transit of GATT 1994 and of this Agreement include those *moved [*via *fixed infrastructure], [, inter alia pipelines and electricity grids].]*

[1bis For greater certainty, nothing in Article V of the GATT 1994 or this Agreement shall be construed to require a Member:

(a) to build infrastructure of any kind in its territory, or to permit the building of infrastructure by others, in order to facilitate the transit of goods;

(b) [to provide access to any infrastructure for transit unless such infrastructure is open to general use by third parties. For the purpose of this Agreement, the term "general use by third parties" does not include access to infrastructure granted on a contractual basis.]]

2. [Each Member undertakes that if it establishes or maintains a State enterprise or if an enterprise has, formally or in effect, exclusive or special privileges, such enterprise shall, in its regulations, formalities [fees] and charges—including transportation charges—, on or in connection with traffic in transit, comply with the provisions on traffic in transit of this Agreement [and otherwise act solely in accordance with commercial considerations.]]" (emphasis added)

The WTO Agreement on Trade Facilitation (TF)[73] which was adopted at the Ninth WTO Ministerial Conference in Bali dropped the bracketed text and did not expressly include energy transit infrastructure. Under the TF Agreement reached in Bali the only reference to transit infrastructure is provided in paragraph 5 of Article 11 which provides as follows:

Article 11: Freedom of Transit (Trade Facilitation Agreement, December 2013) Paragraph 5

Members are encouraged to make available, where practicable, separate physical infrastructure (such as lanes, berths, and similar) for traffic in transit.

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[72] WTO Negotiating Group on Trade Facilitation (2012), Draft Consolidated Negotiating Text: Revision, TN/TF/W/165/Rev.14.

[73] WTO Agreement on Trade Facilitation (2013), WT/MIN(13)/36 and WT/L/911 (available online at https://docs.wto.org/).

It is evident, especially in the light of negotiating history, that energy transit issues and energy infrastructure such as pipelines and electricity grids were discussed but not explicitly included in the new TF Agreement. Energy transit would be covered under GATT Article V and the TF Agreement just as other goods in transit are covered.

2.5 Conclusion

All categories of Members in the WTO—developed or developing, industrial, or agricultural—have different conceptions and understanding of the meaning of energy security. At the heart of this topic is the need to ensure security of energy supply and mitigate the consequences of climate change. In the above context, this chapter sought to map the legal framework currently available at the WTO in regulating energy trade as well as the initiatives taken under the Doha Development Agenda in creating additional or improved framework and rules to tackle some of the persisting and emerging issues relating to the energy sector. A review of current WTO provisions establishes that the existing regime do not appropriately address all the needs and challenges of energy trade. The existing WTO disciplines on energy products or services are scattered across several agreements and the inter-linkages are remote, at best. Lack of appropriate disciplines in the WTO in areas such as renewable energy constrain the development of this sector and impair energy security. Furthermore, the GATT disciplines on national treatment are not well developed to accommodate the challenges of climate change and global warning. Again, the sectoral coverage for energy-related services under the GATS is inadequate and it remains doubtful whether GATS can be an appropriate framework. The problems related to dual pricing and input subsidies remain unaddressed under the rules framework. The Doha negotiations provide only a partial solution to some of the challenges for energy security as identified in this chapter.

Annex

Table A.1 Core list of environmental goods and services

	HS 2002 Code	HS code description	Category (IES)
	4601	**Plaits and similar products of plaiting materials, whether or not assembled into strips; plaiting materials, plaits, and similar products of plaiting materials, bound together in parallel strands or woven, in sheet form, whether or not being finished attic**	
1	460120	Mats, matting, and screens of vegetable materials	**Waste Management and Water Treatment**, Waste Management, Recycling and Remediation
	7308	**Structures (excluding prefabricated buildings of heading 94.06) and parts of structures (for example, bridges and bridge sections, lock gates, towers, lattice masts, roofs, roofing frameworks, doors and windows and their frames and thresholds for doors, shutters, balustrades, pillars and columns), of iron or steel; plates, rods, angles, shapes, sections, tubes and the like, prepared for use in structures, of iron or steel**	
2	730820	-Towers & lattice masts	**Renewable energy** Renewable Products and Energy Source
	7321	**Stoves, ranges, grates, cookers (including those with subsidiary boilers for central heating), barbecues, braziers, gas-rings, plate warmers and similar non-electric domestic appliances, and parts thereof, of iron or steel**	
3	732111	-Cooking appliances and plate warmers: For gas fuel or for both gas and other fuels	**Environmental Technologies**, Cleaner or More Resource Efficient Technologies and Products
	7324	**Sanitary ware and parts thereof, of iron or steel**	

(continued)

Table A.1 (continued)

	HS 2002 Code	HS code description	Category (IES)
4	732490	-Other, including parts	**Waste Management and Water Treatment**, Waste Water Management and Potable Water Treatment **Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies
	8402	**Steam or other vapor generating boilers (other than central heating hot water boilers capable also of producing low pressure steam); super-heated water boilers**	
5	840290	-Parts	**Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies **Waste Management and Water Treatment**, Management of Solid and Hazardous Waste and Recycling Systems **Waste Management and Water Treatment**, Waste Management, Recycling and Remediation
	8404	**Auxiliary plant for use with boilers of heading 84.02 or 84.03 (for example, economisers, super-heaters, soot removers, gas recoverers); condensers for steam, or other vapor power units**	
6	840410	-Auxiliary plant for use with boilers of 84.02 or 84.03	**Waste Management and Water** *Treatment*, Waste Management, Recycling and Remediation **Waste Management and Water Treatment**, Management of Solid and Hazardous Waste and Recycling Systems **Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies

(continued)

Table A.1 (continued)

	HS 2002 Code	HS code description	Category (IES)
	8405	**Producer gas or water gas generators, with or without their purifiers; acetylene gas generators and similar water process gas generators, with or without their purifiers**	
7	840510	-Producer gas or water gas generators, with or without their purifiers; acetylene gas generators and similar water process gas generators, with or without their purifiers	**Air Pollution Control** **Renewable Energy** **Waste Management and Water Treatment**, Waste Water Management and Potable Water Treatment **Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies
	8406	**Steam turbines and other vapor turbines**	
8	840681	-Turbines for marine propulsion: Of an output exceeding 40 MW	**Renewable Energy**
	8409	**Parts suitable for use solely or principally with the engines of heading 84.07 or 84.08**	
9	840999	-Other: other	**Air Pollution Control** **Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies **Environmental Technologies, Carbon Capture and Storage**, Noise and Vibration Abatement
	8410	**Hydraulic turbines, water wheels, and regulators therefor**	
10	841011	-Hydraulic turbines and water wheels of a power not exceeding 1,000 kW .	**Renewable Energy** **Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies
11	841012	-Hydraulic Turbines and Water Wheels, Power 1, 000–10, 000 kw	**Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies

(continued)

Table A.1 (continued)

	HS 2002 Code	HS code description	Category (IES)
12	841090	-Hydraulic turbines, water wheels, and regulators; parts, including regulators	**RenewableEnergy** **Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies
	8411	**Turbo-jets, turbo-propellers and other gas turbines**	
13	841181	-Other gas turbines of a power not exceeding 5,000 kW	**Renewable Energy** **Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies **Others,** Environmentally Preferable Products based on End-Use or Disposal Characteristics
14	841182	-Other gas turbines of a power exceeding 5,000 kW	**Renewable Energy** **Environmental Technologies**, **Carbon Capture and Storage**, Efficient Consumption of Energy Technologies **Others**, Environmentally Preferable Products based on End-Use or Disposal Characteristics
	8418	**Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps other than air conditioning machines of heading 84.15**	
15	841861	-Other refrigerating or freezing equipment; heat pumps: Compression-type units whose condensers are heat exchangers	**Renewable Energy**
	8419	**Machinery, plant or laboratory equipment, whether or not electrically heated (excluding furnaces, ovens and other equipment of heading 85.14), for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting**	

(continued)

Table A.1 (continued)

	HS 2002 Code	HS code description	Category (IES)
16	841919	-Instantaneous or storage water heaters, non-electric: Other	**Renewable Energy**
17	841950	-Heat exchange units	**Renewable Energy** **Environmental Technologies, Carbon Capture and Storage**, Gas Flaring Emission Reduction, Efficient Consumption of Energy Technologies *Environmental Technologies*, Heat and Energy Management
	8479	**Machines and mechanical appliances having individual functions, not specified or included elsewhere in this Chapter**	
18	847989	-Other machines and mechanical appliances: Other	**Air Pollution Control** **Waste Management and Water Treatment,** Management of Solid and Hazardous Waste and Recycling Systems **Renewable Energy**, Renewable Products and Energy Source
	8502	**Electric generating sets and rotary converters**	
19	850231	-Other generating sets: Wind-powered	**Renewable Energy** Renewable Products and Energy Source
	8504	**Electrical transformers, static converters (for example, rectifiers) and inductors**	
20	850410	-Ballasts for discharge lamps or tubes	**Environmental Technologies, Carbon Capture and Storage**, Efficient Consumption of Energy Technologies
	8537	**Boards, panels, consoles, desks, cabinets and other bases, equipped with two or more apparatus of heading 85.35 or 85.36, for electric control or the distribution of electricity, including those incorporating instruments or apparatus of Chapter 90, and numerical control apparatus, other than switching apparatus of heading 85.17**	

(continued)

Table A.1 (continued)

	HS 2002 Code	HS code description	Category (IES)
21	853710	-For a voltage not exceeding 1,000 V	**Renewable Energy**
	8541	**Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes; mounted piezo-electric crystals**	
22	854140	-Photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes.	**Renewable Energy** Renewable Products and Energy Source
	9001	**Optical fibers and optical fiber bundles; optical fiber cables other than those of heading 85.44; sheets and plates of polarizing material; lenses (including contact lenses), prisms, mirrors and other optical elements, of any material, unmounted, other than such elements of glass not optically worked**	
23	900190	-Other	**Renewable Energy**
	9002	**Lenses, prisms, mirrors and other optical elements, of any material, mounted, being parts of or fittings for instruments or apparatus, other than such elements of glass not optically worked**	
24	900290	-Other	**Renewable Energy**
	9027	**Instruments and apparatus for physical or chemical analysis (for example, polarimeters, refractometers, spectrometers, gas or smoke analysis apparatus); instruments and apparatus for measuring or checking viscosity, porosity, expansion, surface tension or the like; instruments and apparatus for measuring or checking quantities of heat, sound or light (including exposure meters); microtomes**	

(continued)

Table A.1 (continued)

	HS 2002 Code	HS code description	Category (IES)
25	902730	-Spectrometers, spectrophotometers and spectrographs using optical radiations (UV, visible, IR)	**Environmental Technologies**, Environmental Monitoring, Analysis and Assessment Equipment
	9032	**Automatic regulating or controlling instruments and apparatus**	
26	903210	-Thermostats	**Environmental Technologies**, Environmental Monitoring, Analysis and Assessment Equipment **Environmental Technologies, Carbon Capture and Storage**, Gas Flaring Emission Reduction, Efficient Consumption of Energy Technologies

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Chapter 3
GATT/WTO Accessions and Energy Security

Sajal Mathur and Preeti Mann

Abstract With the recent WTO entry of a number of energy majors and transit economies, energy issues are increasingly being discussed and negotiated in WTO membership packages. The accession negotiations are therefore proving to be an interesting testing ground for rule making on the energy sector from different and often competing perspectives. This chapter examines the GATT/WTO membership packages and protocol commitments of the Russian Federation, Saudi Arabia, Mexico, Oman, Venezuela, and Ukraine, and delves on the extent to which the commitments of recently acceded members can serve as a precedent and a basis to guide future discussions on energy security at the WTO.

Contents

Views expressed are personal.

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S. Mathur (ed.), *Trade, the WTO and Energy Security*,
DOI: 10.1007/978-81-322-1955-2_3,

3.1 Introduction

The WTO is often referred to as a member-driven organization. Till recently, very few energy-majors were members of the WTO. Energy issues, therefore, did not get much prominence or attention at the WTO. The landscape has, however, been changing. Mexico and Venezuela joined the GATT/WTO during the Uruguay Round. Over the last decade and a half, energy majors such as Oman, Saudi Arabia, and most recently the Russian Federation have negotiated their WTO accession pursuant to Article XII of the Marrakesh Agreement.[1] A number of other energy producers are negotiating entry into the WTO. This list includes: Algeria, Azerbaijan, Iran, Iraq, Kazakhstan, Libya, and Sudan. In addition to the energy producing countries, the entry of important energy transit economies such as Ukraine with its pipeline network for energy supply to Europe have added additional elements for discussion on energy issues at the WTO. From an Indian perspective, these and other acceding governments—from Afghanistan to Uzbekistan—may be critical for future pipeline networks linking the Middle East and Central Asia to South Asia. The membership terms of energy consumers such as China could also have been instructive—but China's accession package does not specifically tackle energy issues and has been kept out of the scope of this chapter.

The accession negotiations have, therefore, been an interesting testing ground for rule making on the energy sector from different and often competing perspectives. Some have made the case that the energy sector should be viewed as outside the scope of the GATT/WTO. They view energy security issues to be treated as a general exception relating to the "conservation of exhaustible natural resources" under GATT Article XX(g) or the national security exception pursuant to GATT Article XXI.[2]

Others have reasoned that there is no special exemption for energy trade and that WTO disciplines apply to trade in energy-related goods and services (Pauwelyn 2010; Yanovich 2011). Indeed, energy-related activities are covered under the GATT/WTO. On the goods side, members have bound tariffs for energy products.[3] According to the WTO's World Trade Report 2010, the average bound tariff for fuels is 25.3 %. For developed countries, the average bound rate is 1.5 % and the binding is 25.7 % for developing countries. On the services side, the GATS covers all services sectors except those "supplied in the exercise of governmental authority".[4] Services sub-sectors covering the energy sector, include

[1] Yemen's membership package was adopted at the WTO Bali Ministerial Conference in December 2013. Pending domestic ratification, Yemen is set to become the 160th WTO Member.

[2] For example, see GATT accession of Mexico (paragraphs 73 and 80 of L/6010 and paragraph 5 of L/6036) and WTO accession of the Russian Federation (paragraph 123 of WT/ACC/RUS/70 & WT/MIN (11)/2).

[3] However, not all tariff lines have been bound by all members. The US, for example, has not bound two lines pertaining to crude petroleum HS 27090010 and 27090020 (US TPR 2012 WT/TPR/S/275 page 41, Footnote 49). India too has unbound rates (see Chap.4).

"pipeline transportation of fuel"; "services incidental to mining", and "services incidental to energy distribution".

Although the WTO does not have an agreement specifically dealing with the energy sector, all tradable goods and services, including energy products such as oil, gas, and their derivatives are covered by the GATT 1994 and other multilateral agreements of the WTO. The WTO accession negotiations also do not systematically or specifically deal with energy issues. Only a few recently acceded members (RAMs) have taken on energy-related commitments and the issues raised thereof are the subject of attention in the subsequent sections of this chapter. It is of interest for India and other WTO members to see the extent to which these energy-related commitments of RAMs can serve as a precedent and a basis to guide future discussions on energy security at the WTO.

3.2 Issues of Relevance for Energy Security in GATT/WTO Accessions

The concept of energy security is broad and can encompass a wide range of issues covered in the accession discussions. The main sections or sub-sections of the WTO accession working party reports/protocols that cover energy-related issues are: pricing policies; state trading and state-owned enterprises; investment regime and competition policies; import restrictions, including prohibitions, quotas, and licensing requirements; export restrictions; export duties; subsidies; transit trade; and trade in services.

3.2.1 Pricing Policies

GATT/WTO disciplines that apply with regard to pricing policies are the basic principles of MFN and national treatment. Governments may apply floors or ceilings (maximum or minimum prices) to regulate the price of certain goods and services. The issue of differential or 'dual pricing' also comes up in accession negotiations. Discussions on 'dual pricing' have been examined in this sub-section but are also covered and related to subsidies (see Sect. 3.2.7).

GATT Article III (National Treatment) obliges members to accord "no less favorable treatment" than that given to "like" products of national origin. In addition, Article III:9 recognizes that domestic maximum price controls, even if applied on a national treatment basis, can adversely impact imported products and the interests of exporting contracting parties. Accordingly, contracting parties applying such measures "shall take account of the interests of exporting

[4] GATS Article 1.3(b) and (c).

contracting parties with a view to avoiding to the fullest practicable extent such prejudicial effects".[5]

There are provisions specifically dealing with price controls in the services area. With regard to domestic regulations affecting trade in services (GATS Article VIII), members only have an obligation to accord national treatment in sectors where they have undertaken specific commitments and subject to any conditions or qualifications included in the GATS schedule.

In the accession negotiations, members have shown an interest in all forms of price controls including formal and informal forms such as administrative guidance on pricing. Detailed information has been sought on price controls and its effect on conditions of competition. The standard protocol commitment on pricing policies includes the following elements:

> The representative of [….] confirmed that in the application of price controls now or in the future [….] would apply such measures in a WTO-consistent fashion, taking into account the interests of others WTO members as provided for in Article III:9 of GATT 1994 and in Article VIII of the General Agreement on Trade in Services (GATS). [….] would publish a list of the goods and services subject to state controls and any that are introduced or re-introduced in the future in its official journal, including any changes in the list provided of current requirements in place[6] (WTO 2008).

The standard protocol commitment mentioned above applies to all products. With regard to energy pricing policies there has been considerable discussion on applicability of WTO rules on energy products and the practice of 'dual pricing'. Dual pricing has been referred to as "the maintenance of prices for energy consumed domestically at a level below the global market price or the price at which the energy is sold for export" (Milthorp and Christy 2011). Some RAMs and acceding governments have defended the practice of keeping domestic energy prices below world prices on grounds of preserving their "competitive advantage" for their industries. For some energy products such as natural gas, it has been argued that a world market price does not exist.

In the context of Saudi Arabia's accession negotiations,[7] the Saudis were pressed to eliminate a system of dual pricing in which Natural Gas Liquids (NGLs) were sold to domestic industry at a price lower than the export price. NGLs is a by-product of crude oil and differs from Liquefied Natural Gas (LNG) which is more commonly available. Some members expressed concern that the lower domestic price of the NGLs used as inputs in the petrochemical industry created a subsidy for Saudi-based producers.

The Saudis counter-argued that the domestic sale price of NGLs was based on long-term contracts negotiated between producers and consumers and set in

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[5] GATT 1994 Article III:9.

[6] For variants of this standard protocol commitment, see Oman (paragraph 25 of WT/ACC/OMN/26), Saudi Arabia (paragraph 35 of WT/ACC/SAU/61) or Russian Federation (paragraph 133 of WT/ACC/RUS/70).

[7] See paragraphs 26–33 of the Report of the Working Party on the Accession of Saudi Arabia (WT/ACC/SAU/61).

accordance with international market prices adjusted downwards for commercial and cost-based considerations. The domestic price of NGLs, while lower than the export price, ensured full recovery of production costs and a reasonable profit even after the downward adjustment. NGL prices for export markets reflected higher export costs on transportation, infrastructure, marketing, etc. The Saudis also provided assurances that NGLs were available on a non-discriminatory basis to all users in Saudi Arabia, whether Saudi or foreigners.

The commitment paragraph undertaken on 'dual pricing' is contained in paragraph 33 of the Report of the Working Party on the Accession of Saudi Arabia (WT/ACC/SAU/61):

> In response to concerns expressed by a member of the Working Party, the representative of Saudi Arabia stated that producers/distributors of NGLs in Saudi Arabia would operate, within the relevant regulatory framework, on the basis of normal commercial considerations, based on the full recovery of costs and a reasonable profit. He confirmed that his Government's policy was to ensure that these economic operators, in respect of their supplies of NGLs to industrial users, would fully recover their production and investment costs (fractionation, overheads, financing charges, transportation, maintenance and upgrade of fractionation and distribution infrastructure) and make a profit in the ordinary course of business. The Working Party took note of these commitments.

The commitment paragraph contains two elements that set precedents in other accessions where dual pricing is an issue. First, is the emphasis on "cost recovery" with regard to the pricing of energy products. Second, is with regard to availability of products on a "non-discriminatory" basis to all users established domestically (i.e., regardless of nationality).

These elements and others were discussed in the accession negotiations of Russia.[8] The Federal Service of Tariffs in Russia is responsible for price regulation in sectors such as electricity, heating, oil, and gas. In a sense, 'triad pricing' (and not just dual pricing) exists for energy products in Russia with differential energy prices for individual households, domestic industrial users, and overseas customers. Electricity and gas prices were regulated with individual households paying a fixed charge for reasons of "social protection". Russia intends to maintain price controls for domestic household consumption of energy. However, members raised concerns on the energy prices for domestic industrial users. A wide differential exists between energy prices for domestic industrial users vis-à-vis the world market price or the price charged to overseas customers. Some members noted that the price for natural gas was below the full cost of production, including a reasonable profit and was therefore not consistent with commercial considerations.

Russia indicated that its energy and mineral resources were the property of the State and Russia intended to exercise its sovereign rights over these resources. Price regulation of energy and natural gas was to prevent abuse of monopoly power and to protect consumers' interests. The basic principle of price setting was to ensure "economically viable production and recovery of cost" and "reasonable

[8] See paragraphs 101–133 of the Report of the Working Party on the Accession of Russian Federation (WT/ACC/RUS/70 & WT/MIN(11)/2).

profits". Regarding disparity in the price of gas sold domestically to industrial consumers and the world price, Russia stated that there was "no world market price for gas" and prices were established on "the basis of supply and demand in the importing country". The cost of shipment and transportation also accounted for a substantial part of the landed price. Without taking on a specific commitment, Russia declared its intent to modify state regulation of gas prices, develop market pricing principles, and a "formula to ensure equal return on gas supply in international and domestic markets".

Russia's specific protocol commitment on energy pricing is contained in paragraph 132 of the Report of the Working Party on the Accession of the Russian Federation (WT/ACC/RUS/70 & WT/MIN (11)/2):

> In response to the concerns expressed, the representative of the Russian Federation stated that upon accession, producers/distributors of natural gas in the Russian Federation would operate, within the relevant regulatory framework, on the basis of normal commercial considerations, based on recovery of costs and profit. He confirmed that the policy of his Government was to ensure, upon accession, that these economic operators, in respect of their supplies to industrial users, would recover their costs (including the cost of production, overheads, financing charges, transportation, maintenance and upgrade of extraction and distribution infrastructure, investment in the exploration and development of new fields) and would be able to make a profit, in the ordinary course of their business. He added that his Government would continue to regulate price supplies to households and other non-commercial users, based on considerations of domestic social policy. The Working Party took note of these commitments.

Oman's accession package is unique and tells a different story.[9] Despite being an energy major, the government set maximum prices for petroleum and electricity. Prices for petroleum were set above world market price levels while electricity was subsidized. Local petroleum prices had been increased for "fiscal reasons" and "to encourage more rational use of petroleum products". Electricity tariff were differentiated for "social reasons" and "to encourage the development of infant industries".

In Mexico's GATT accession package, Mexico "had agreed not to maintain any price practices in the energy sector which would constitute an export subsidy".[10]

India's pricing policies, and ongoing reforms to the system of administrative prices in the energy sector, may draw lessons from the experience and accession commitments of the RAMs.

[9] See paragraphs 22–23 of the Report of the Working Party on the Accession of Oman (WT/ACC/OMN/26).

[10] Paragraph 54 of the Report of the Working Party on the Accession of Mexico (L/6010).

3.2.2 State Trading and State-Owned Enterprises

State trading practices have been examined in accession Working Parties in a systematic manner. Attention has been given to this topic as a number of RAMs and acceding governments are transition economies in the process of transformation from a central planned to a market economy.

WTO disciplines are focused on purchases or sales of State Trading Enterprises (STEs) involving either exports or imports. Pursuant to GATT 1994 Article XVII and the Understanding on this Article, STEs are governmental or non-governmental enterprises that have been granted "formally or in effect, exclusive or special privileges". STEs are obliged to "act in a manner consistent with the general principles of non-discriminatory treatment". Furthermore, STEs are to make any "purchases or sales solely in accordance with commercial considerations, including price, quality, availability, marketability, transportation and other conditions of purchase or sale". The Understanding on the Interpretation of Article XVII of the GATT 1994 requires that members notify their STEs to the WTO in order to ensure transparency of the activities of such enterprises (WTO 1995; Yanovich 2011).

In accession discussions, focus has also been on State ownership and privatization programs especially in the centrally planned or transition economies where the State has a predominant role in economic activities. Standard protocol commitments in this area relate to transparency measures, standstill, or no rollback in existing or planned privatization programs. State trading practices have increasingly been immersed into discussions on State ownership and privatization (WTO 2008).

The standard protocol commitment used in Saudi Arabia's accession was to ensure that all enterprises identified by the Working Party as State-owned or controlled, or enterprises with special or exclusive privileges "would make purchases of goods and services, which are not for government use, and sales in international trade in accordance with commercial considerations, including price, quality, availability, marketability and transportation, and would afford enterprises of WTO members adequate opportunity in conformity with customary practice, to compete for such purchases or sales".[11]

In Saudi Arabia's accession negotiations, the state-owned enterprises which are of relevance to the energy sector as identified in Working Party Report were:

- Saudi Arabian Basic Industries Corporation (SABIC), the main petrochemical producer in Saudi Arabia with 70 % government holding;
- Saudi Electricity Company (SEC), whose objectives include electric power services in Saudi Arabia, investment in electric power projects within and outside Saudi Arabia, import and export of electric power across Saudi

[11] See Saudi Arabia (paragraph 52 of WT/ACC/SAU/61). For variants of this standard protocol commitment, see Oman (paragraph 114 of WT/ACC/OMN/26), Russian Federation (paragraph 99 of WT/ACC/RUS/70) and Ukraine (paragraph 53 of WT/ACC/UKR/152).

Arabia's borders, investment in projects for supply of fuel to its wholly or partially owned subsidiaries and carrying out and support of research for service enhancement, power conservation, performance upgrade, environment protection and cost reduction, with 74 % government holding; and

- Saudi Arabian Oil Company (Saudi Aramco), a wholly government-owned enterprise engaged in exploitation of crude oil and natural gas, including their derivative products.

The Saudi Working Party Report clarifies that although the government appoints a majority of Board of Directors in all of the above-mentioned enterprises, it does not play any role in setting company policy or in making operational decisions. All these enterprises conduct their business based on commercial considerations. However, while SABIC and SEC do not enjoy any special or exclusive privileges and there are no legal impediments to competition with them, Saudi Aramco does enjoy special and exclusive privileges in production of crude oil and gas sector.[12]

In the case of the Russian Federation, only the enterprises of the Gazprom Group (natural gas) enjoyed special or exclusive privileges with respect to export. Gazprom, with 84 % share in the total gas production in Russia and 100 % share of gas exports from the Russian Federation, was 51 % owned by the State. The Russians clarified to the Working Party that although Gazprom enjoyed exclusive rights to export natural gas, it applied the principle of non-discrimination while making purchases and sales involving exports or imports and, in particular, they were guided solely by commercial considerations in their purchases and sale decisions. The Russian Federation confirmed that Gazprom will be notified as an STE in accordance with Article XVII of the GATT 1994.[13]

Ukraine notified eight companies as STEs in accordance with Article XVII of the GATT 1994. Of these, the one of relevance to the energy sector is "UkrGasEnergo"—a 50–50 joint venture between "Naftogas" of Ukraine and "RosUkrEnergo". UkrGasEnergo enjoyed a monopoly on natural gas imports from the Russian Federation and Central Asia for distribution to private industrial users in Ukraine. Other enterprises mentioned in the context of the energy sector are "Ukrspetzexport", "Naftogas of Ukraine", and "Energorynok", which fulfill international contracts between the State and other foreign entities and were so considered as enterprises trading on behalf of the State. In response to requests for additional information, Ukraine added that "Energorynok" performed the function of managing the wholesale electrical energy market and was involved in purchase, transmission, and supply of electricity in the wholesale market. It was noted that "Energorynok" did not enjoy any exclusive or special rights or privileges.[14]

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[12] See paragraphs 44 and 52 of Report of the Working Party on the Accession of Saudi Arabia (WT/ACC/SAU/61).

[13] See paragraphs 76, 85, 88, 90 and 99 of Report of the Working Party on the Accession of the Russian Federation (WT/ACC/RUS/70).

[14] See paragraphs 43 and 44 of the Report of the Working Party on the Accession of Ukraine (WT/ACC/UKR/152).

Venezuela, during its GATT accession negotiations, highlighted the State's role in development of various sectors, especially the petroleum industry as it was noted that "if the figures concerning the petroleum industry were subtracted, the share of the State in the country's economy would be significantly lower". It was clarified that GATT principles would be adhered to with respect to STEs.[15]

Some WTO members that have State-owned enterprises in the energy sector have notified them as STEs under Article XVII of GATT 1994. For example, Venezuela has notified Petroleos de Venezuela S.A. (PDVSA).[16] There are other members with State-owned enterprises in the energy sector that have not notified them, presumably because they consider that such enterprises are not STEs within the meaning of GATT Article XVII and the Understanding on the Interpretation of Article XVII. For example, Saudi Arabia has indicated that it "does not maintain any STEs within the meaning of Article XVII of the GATT 1994, read with Paragraph 1 of the Understanding on the Interpretation of Article XVII".[17]

As has been discussed in the RAMs, India's energy sector is also dominated by public sector undertakings (PSU) where the state is a large if not the majority shareholder. However, public ownership does not necessarily imply that these enterprises operate as STEs.

3.2.3 Investment Regime and Competition Policies

Negotiations on the "relationship between trade and investment" and "interaction between trade and competition policy" were among the Singapore issues that were dropped from the agenda at the 2003 WTO Ministerial Conference.

However, there are some GATT/WTO provisions that do relate to investment policies. The WTO Agreement on Trade-Related Investment Measures (TRIMs) prohibits the use of local content and trade balancing requirements that are contrary to GATT rules (GATT 1994 Article III & XI). Investment incentives may fall under the purview of the WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement). Finally, the GATS under Mode 3 "commercial presence" may require investment as part of service delivery. These aspects of investment policies are addressed in the TRIMs, SCM Agreement, and GATS contexts.

In the accession negotiations, applicants are expected to furnish information about their investment policies, the legal framework, and administrative machinery and requirements, conditions imposed on investment, including any bans or

[15] See paragraph 68 of the Report of the Working Party on the Accession of Venezuela, GATT (L/6696).

[16] See WTO Notification pursuant to Article XVII:4(a) of GATT 1994 and Paragraph 1 of the Understanding on the Interpretation of Article XVII-Venezuela, G/STR/N/7/VEN (2001).

[17] See Notification pursuant to Article XVII:4(a) of the GATT 1994 and paragraph 1 of the Interpretation of Article XVII—Saudi Arabia, G/STR/N/12/SAU (2009).

restrictions on foreign investments, investment incentives, etc. There is no standard protocol commitment on investment or competition policies.

During the accession negotiations of Saudi Arabia, the Working Party was informed that foreign investment was permissible in all activities, except a short "Negative List" (which included oil exploration, drilling, and production). The "Negative List" would be revised and shortened periodically. It was also clarified that the "Negative List" applied to certain industrial and services sectors and did not target specific companies. Regarding restrictions on foreign investment in exploration and extraction of hydrocarbons, the Saudis noted that "for reasons of important national policies, restrictions on foreign investment in the upstream sector, though relaxed, could not be completely removed".[18]

The exploration and extraction of oil and gas is also often subject to restrictions and special production sharing agreements. For example, in Russia,[19] the legal framework provides for production sharing agreements in search, exploration, and mining of minerals. In Russia, these production sharing agreements required that the parties must include an obligation to buy Russian technical equipment (at least 70 %). Another obligation was to employ citizens of the Russian Federation (not less than 80 % of total employed personnel). No special tax regime was established regarding production sharing agreements. Production sharing agreements for oil and natural gas had previously been concluded for Sakhalin-1, Sakhalin-2, and Kharyaguinskoe oil fields. The Russian Federation committed that it would not conclude any new agreements with investors that contained provisions contrary to the WTO Agreement, including the WTO TRIMs Agreement.

Ukraine was the only accession negotiation wherein energy issues were discussed in the context of competition policy. Ukraine defined a natural monopoly as "a market characterized by the absence of competition due to proprietary technology and/or economies of scale in the production of a good or service with no close substitutes". An exhaustive list of activities considered as natural monopoly under their law was provided. Among them the ones relevant for energy sector were: pipeline transportation of oil and oil products, natural gas and petroleum gases, and other substances; the distribution of natural gas and petroleum gases and the transmission and distribution of electric energy. National Commissions for Regulation of Natural Monopolies Entities were responsible for the regulation of natural monopolies.[20]

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[18] See paragraphs 57 and 64 of Report of the Working Party on the Accession of Saudi Arabia (WT/ACC/SAU/61).

[19] See paragraphs 1064–1070 of Report of the Working Party on the Accession of the Russian Federation (WT/ACC/RUS/70). In Russia, a production sharing agreement was "an agreement in which the investor, in consideration for value received and for a limited term, was granted exclusive rights to perform search, exploration, and mining of minerals".

[20] See paragraphs 76 and 77 of Report of the Working Party on the Accession of Ukraine (WT/ACC/UKR/152).

3.2.4 Import Restrictions, Including Prohibitions, Quotas, and Licensing Requirements

Article XI of the GATT 1994 provides that no prohibitions or restrictions, other than duties, taxes, or other charges, shall be applied by any WTO members on the importation of any product or on the exportation or sale for export of any product. There are, however, exceptions that permit and govern the application of quantitative restrictions, including prohibitions, quotas, and licenses. The exceptions that could stand out in the context of the energy sector are GATT 1994 Article XX (d), (g), (h), (i), (j), and Article XXI.[21] These general or national security exceptions have been invoked to exclude the energy sector in GATT accessions (e.g., Mexico) and in WTO accessions (e.g., Russian Federation).[22]

The standard protocol commitment on quantitative import restrictions in accession negotiations contains the following elements:

> The representative of [….] confirmed that [it] would, from the date of accession, eliminate and shall not introduce, re-introduce or apply quantitative restrictions on imports, or other non-tariff measures such as licensing, quotas, bans, permits, prior authorization requirements, licensing requirements and other restrictions having equivalent effect that cannot be justified under the provisions of the WTO Agreement. The representative of [….] further confirmed that the legal authority of the government of [….] to suspend imports and exports or to apply licensing requirements that could be used to suspend, ban, or otherwise restrict the quantity of trade will be applied from the date of accession in conformity with the requirements of the WTO, in particular Articles XI, XII, XIII, XVIII, XIX, XX and XXI of the GATT 1994, and the multilateral trade agreements on Agriculture, Application of Sanitary and Phytosanitary Measures, Import Licensing Procedures, Safeguards and Technical Barriers to Trade[23] (WTO 2008).

During the accession negotiations, the Russian Federation[24] indicated that there were no licensing requirements for the import or export of electricity and the import of natural gas. There were also no licensing requirements for the operation of oil and gas production facilities; the sale, processing, transportation, and storage of oil, gas, and their derivatives; and in operating the gas networks. Concerns were, however, raised by members on licensing requirements governing access to oil and gas pipeline networks and distribution systems as well as the consistency of the restrictions with GATT Article XI. In response, the Russian Federation confirmed

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[21] Relevant provisions in the context of quantitative restrictions are: GATT 1994 Basic prohibition: Article XI.I; Exceptions: Articles XII, XVIII, XIX, XX, XXI; Administration of Restrictions: Articles VII, X, XIII, XIV, XV. WTO Multilateral Agreements on Agriculture, Safeguards, SPS, TBT and the Agreement on Import Licensing Procedures.

[22] See Mexico (paragraphs 73, 80 of L/6010 and paragraph 5 of L/6036) and the Russian Federation (paragraph 123 of WT/ACC/RUS/70).

[23] For variants of this standard protocol commitment, see Oman (paragraph 57 of WT/ACC/OMN/26) and Russian Federation (paragraph 275 of WT/ACC/RUS/70).

[24] See paragraphs 270–272 and 275 of Report of the Working Party on the Accession of The Russian Federation (WT/ACC/RUS/70).

its commitment to conform with the relevant provisions of GATT/WTO with regard to measures affecting importation or exportation of goods.

In the case of Oman, petroleum products which could be supplied by the Oman Oil Refinery in quantities sufficient to satisfy domestic requirements were prohibited to import. However, Oman confirmed that it would eliminate the prohibition on importation of petroleum products upon accession.[25]

The use of import restrictions in the energy sector have not usually been with the intent of protecting domestic industry from imports. Governments appear to have been more concerned with energy security issues and securing supplies to energy products rather than restricting imports through import restrictions. Export restrictions on the other hand have been a different matter and are covered separately under export regulations (see Sect. 3.2.5).

3.2.5 Export Restrictions

GATT Article XI generally prohibits quantitative restriction on exports (and imports) including bans, quotas, and restrictive licenses. There are, however, exceptions which permit, *inter alia*, export prohibitions, or restrictions temporarily applied to prevent or relieve critical shortages of foodstuff or other products essential to the exporting party. As mentioned under import restrictions, export restrictions have also been permitted to conserve exhaustible natural resources or to protect essential national security interests.[26] For example Mexico, in its protocol of accession had maintained certain export restrictions in the energy sector on the grounds of conservation of natural resources.[27]

There has been some debate on whether GATT Article XI covers production quotas used in particular by members of OPEC. GATT Article XX (h) provides an exception for measures taken pursuant to international commodity agreements. It is generally understood that this exception covers agreements involving both consumer and producer countries (see WTO 2010a and Yanovich 2011 for more elaboration on this issue).

In the accession negotiations, information on all export restrictions and justifications for the continued application of such restrictions is routinely sought. Prohibitions, quotas, or licensing requirements that cannot be justified or are more onerous than necessary are expected to be removed or simplified, as necessary. The standard protocol commitment is:

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[25] See paragraphs 52 and 57 of Report of the Working Party on the Accession of Oman (WT/ACC/OMN/26).

[26] GATT 1994 Articles XI:2(a), XX and XXI are of particular relevance in the context of the energy sector.

[27] See paragraph 5 of the Protocol of Accession of Mexico (L/6036).

> The representative of [….] confirmed that, from the date of its accession, [….] would apply any export licensing requirements or other export restrictions in conformity with WTO provisions, including those contained in Articles XI, XVII, XX and XXI of the GATT 1994 (WTO 2008).

One effect of requests for transparency has been the inclusion of commitments concerning publication of information on a regular basis (Milthorp and Christy 2011). The Saudis have undertaken such commitments on export restrictions in their accession negotiations. [28]

Accession negotiations and the protocol commitment on export restrictions for the Russian Federation contain additional elements.[29] The Russians confirmed that they would eliminate all export restrictions that could not be justified under the provisions of the WTO Agreement. If Russia took recourse and used Article XX (i) of the GATT 1994, it would not undertake any export restrictions aimed at ensuring supply of essential materials to domestic industry so as to protect or gain competitive advantage. Despite such commitments, members raised concerns during Russia's accession negotiations regarding the export licensing requirements in the energy sector and the *de facto* export restraint on natural gas with the exclusive right to export natural gas availed by Gazprom.

Unlike other sectors where import restrictions affect market access conditions, the energy sector is unique because it is export restrictions that are more damaging or potentially damaging from a trade and energy security perspective. As an energy deficit country, India too may be more concerned with export restrictions that may impinge on its energy imports or security.

3.2.6 Export Duties

Article XI of GATT 1994 covers quantity-based restrictions but not price-based measures such as export duties, taxes, or other charges. Tariff or custom duties are typically applied on imports. Tariffs or duties apply less frequently on exports and are levied for different reasons such as fiscal purposes or to provide incentives to process resources domestically or to send a price signal to dampen the demand of the product in international markets or to increase the world price of that product. The incidence of export taxes in the natural resources sector is higher than in other sectors. The World Trade Report 2010 estimates that between 5 and 10 % of world trade in fuels is subject to export taxes. An export tax increases the export price of a good in comparison to the domestic price of that same good and thus may distort trade (see Yanovich 2011; WTO 2010a).

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[28] For variants of the standard protocol commitment on export restrictions and the emphasis on transparency, see Saudi Arabia (paragraphs 179, 182–183 of WT/ACC/SAU/61).

[29] See paragraph 668 of Report of the Working Party on the Accession of The Russian Federation (WT/ACC/RUS/70).

Some acceding governments and RAMs have been requested to bind their export taxes or duties at zero even though tariff bindings or export duties are extremely rare in the history of GATT/WTO. There are very few GATT/WTO disciplines with regard to export duties or taxes. The only obligations are to apply these duties on an MFN basis, to provide transparency, and to be prepared to engage in negotiations for their reduction.[30] In the accession negotiations, members have sought information on any export duties levied and expressed a strong interest in the elimination of any tariff that reduces their access to the supply of raw materials. The EU has been very active in this area both in the accessions and in the Doha negotiations.[31]

There are only a few protocol commitments on export tariffs or duties in the accession negotiations. One example:

> The representative of [….] confirmed that [….] would apply export duties only in accordance with the provisions of the WTO and any such duties would be published in [its] official journal. Changes in the application of such measures would also be published in the official journal (WTO 2008).[32]

There was considerable discussion on export duties in the accession negotiations of Russia.[33] Concerns were expressed by members on the export duties levied on a large number of products, including several energy products such as crude oil, natural gas, and petrochemicals.

While the Russians had justified the levy of export duties for "fiscal purposes", several members were of the view that "export duties acted as indirect subsidies to domestic downstream users and, thus, could distort international trade". This was especially a concern with regard to export duties on minerals, petrochemicals, and natural gas. Members urged Russia to phase out export duties and to commit that duties, once eliminated, would not be reintroduced.

Apart from the 'incidence' of export duties on a large number of products, there were reservations on the 'application' of the export duties and their conformity with basic principles such as Article I (MFN) of the GATT 1994. Russia had applied different rates of export duties based on bilateral agreements and FTAs. The Russian Federation also applied different export duties to oil produced in different oil fields. This, as noted by members of the Working Party, could result in a *de facto* discrimination between oil exports on the basis of the country of destination as the oil with a lower export duty was not equally available to all WTO members.

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[30] GATT 1994 Articles I.1, X:1, XXVIII *bis*.

[31] See also negotiating proposal submitted by the EU to the Negotiating Group on Market Access (TN/MA/W/1).

[32] For a variant of this standard protocol commitment, see Russian Federation (paragraph 638 of WT/ACC/RUS/70).

[33] See paragraphs 623–638 of the Report of the Working Party on the Accession of The Russian Federation (WT/ACC/RUS/70).

In addition to the standard protocol commitment, Russia committed to putting an end to its differential practices in the application of export duties. Accordingly, "export duties and charges of any kind imposed on, or in connection with exportation, any advantage, favour, privilege or immunity granted by the Russian Federation to any product destined for any other country shall be accorded immediately and unconditionally to the like product destined for the territories of all other WTO Members". In other words, the Russians confirmed that they would apply export duties in conformity with the WTO Agreement, in particular with Article I (MFN treatment) of the GATT 1994.

Furthermore, Part V of Russia's Goods Schedule[34] provides the bound rates of export duties on over 700 tariff lines, which include a number of energy products such as oil, gas and their derivatives. The Russian Federation has further confirmed that it would not apply any other measures having an equivalent effect to export duties on these products. The export duty binding for natural gas is a flat 30 % (replacing differential rates of duty applied previously). For crude oil, the Russians have introduced a tiered formula that is based on world prices and a coefficient as detailed in the Goods Schedule.[35] The Russians have committed not to increase export duties or to reduce or eliminate these duties in accordance with the bindings and the timetable inscribed in Part V of its Goods Schedule.

3.2.7 Subsidies

The WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement) defines a subsidy as "a financial contribution by a government that confers a benefit". The subsidy must be "specific" to an enterprise or an industry or group of enterprises/industries in order to fall within the scope of the SCM Agreement. Export subsidies or subsidies that are conditional on use of domestic goods over imported products are deemed to be "specific".[36] Subsidies may be 'prohibited', 'actionable', or 'non-actionable' based on their level of distortion of international trade. Export and local content-based subsidies are prohibited. Other specific subsidies are actionable in so far as other members can take action against them (e.g., countervailing duties) for any adverse affects. Non-actionable subsidies such as assistance to adapt to new environmental requirements have lapsed since 1999.

In the accession negotiations, members have sought transparency with full information about existing subsidy programs and their compatibility with the SCM

[34] Accession of the Russian Federation: Schedule of Concessions and Commitments on Goods (WT/ACC/RUS/70/Add. 1).

[35] As per the formula, the export duty levied by Russia for crude oil is directly proportional to the world price. No export duty would be levied if the world prices of crude oil are less than or equal to US$ 109.5/t. The highest rate of duty would apply if the world price is greater than US$182.5/t and the duty would amount to US$29.2/t + 0.65 (World Price—US$182.5)/t.

[36] SCM Agreement Article 1.1 and 2.

Agreement. Prohibited subsidies have been phased out by the date of accession with some exceptions for LDCs. The standard protocol commitments are:

> The representative of [….] confirmed that [….] any subsidy programmes would be administered in conformity with the Agreement on Subsidies and Countervailing Measures and that all necessary information on programmes would be notified to the Committee on Subsidies an Countervailing Measures in accordance with Article 25 of the Agreement upon entry into force of [….'s] Protocol of Accession.
> The representative of [….] confirmed that [….] did not/would not maintain subsidies, including export subsidies, that met the definition of a prohibited subsidy, within the meaning of Article 3 of the Agreement on Subsidies and Countervailing Measures and that it would not introduce such prohibited subsidies in the future (WTO 2008).[37]

In the context of the energy sector, the treatment of the subsidy on oil or gas products would depend on the particular characteristics of the subsidy. As noted by Yanovich (2011), a fuel subsidy available only to exporters could be considered a prohibited export subsidy under Article 3 of the SCM Agreement. Whereas a fuel subsidy available to all consumers may not be considered to be specific and covered by the disciplines of the SCM Agreement.

In the GATT accessions, Mexico "had agreed not to maintain any practices in the energy sector which would constitute an export subsidy".[38] In Venezuela's accession package, domestic legislation provided for a tax exemption for investment in the petrochemical and coal industries. These tax breaks were not contingent on export requirements and were for promoting investment in these sectors.[39]

Ukraine and Russia provided subsidies to the coal industry. For Russia, state support was being provided for social security of employees, to improve working conditions and to liquidate loss making units.[40] The purpose of these subsidies in Ukraine was to modernize the mining industry and to reduce production costs.

The SCM Agreement has been referred to extensively in evaluating the WTO compliance of 'dual pricing' policies (see also Sects. 2.2.7.1 and 3.2.1). Pricing policies of RAMs and acceding governments have been examined to determine whether energy inputs such as fuel, gas, and their derivatives have been provided to exporting industries at prices lower than to domestic industries catering to the domestic market (constituting a prohibited export subsidy). Furthermore, 'dual pricing' policies have been examined on whether they, in effect, are provided to energy and energy-intensive industries at a lower price to support these industries (constituting an actionable subsidy).

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[37] For variants of these standard protocol commitments, see Oman (paragraph 88 of WT/ACC/OMN/26); Russian Federation (paragraph 698 of WT/ACC/RUS/70); and Ukraine (paragraphs 275–276 of WT/ACC/UKR/152).

[38] See paragraph 54 of the Report of the Working Party on the Accession of Mexico (L/6010).

[39] See paragraph 64 of the Report of the Working Party on the Accession of Venezuela (L/6696).

[40] See paragraph 679 of the Report of the Working Party on the Accession of Russian Federation (WT/ACC/RUS/70).

In the context of dual pricing and the subsidy element attached to it, concerns have been raised in Russia's accession negotiations. Members contended that domestic industrial users did not pay the full market price for energy inputs, especially energy-intensive industries that used gas as an input, and this constituted an "unfair competitive advantage". In addition, exports of downstream products that were energy intensive such as fertilizers could be undertaken at prices below their normal value. These subsidies could, in the view of these members, be subject to antidumping or countervailing duties in light of injury.

In response, Russia stated that the pricing system for gas did not create an unfair competitive advantage nor a countervailable specific subsidy. The pricing regime was equally applicable to all sectors and did not grant benefit to any specific industry or groups thereof. Russia also rejected the notion of export subsidies for downstream products as the government stated that it did not provide any prohibited subsidy under Article 3 of the SCM Agreement.[41]

3.2.8 Transit

Transit-related issues are covered by Article V of GATT 1994. Transit can be of critical importance to landlocked countries and for the transportation of energy products to non-neighboring countries. Article V covers goods in transit as well as "vessels and other means of transport". Paragraph 2 of Article V provides for "freedom of transit through the territory of each [WTO member], via the routes most convenient for international transit, for traffic in transit to or from the territory of other contracting parties". Furthermore, it prohibits any distinctions "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". Under Article V:6, "WTO members must treat products that have transited through the territory of any other WTO member no less favorably than how the products would have been treated had they been transported from their place of origin to their destination without going through the country of transit".[42]

In the accession negotiations, only about one-third of all completed WTO accessions contain commitments on transit. Standard commitment language is:

> The representative of [….] confirmed that his government would apply its laws and regulations governing transit operations and would act in fully conformity with the provisions of the WTO agreement, in particular Article V of GATT 1994 (WTO 2008).

[41] See paragraphs 120–124 of the Report of the Working Party on the Accession of the Russian Federation (WT/ACC/RUS/70).

[42] See also Sect. 2.2.6.2 and Yanovich (2011) for a discussion on GATT Article V provisions and the WTO jurisprudence in this area with the *Colombia—Ports of Entry* ruling.

The energy sector finds specific mention in the case of Ukraine and the Russian Federation. This is not altogether surprising given their geographical location. Transit of oil and gas from Russia through Ukraine to Europe was the focus of intense discussions and negotiations. This issue is not just of relevance to the EU with respect to Ukraine and Russia but is also of importance for India as there are proposals to link the Middle East, Central Asia, and South Asia as new avenues for energy security and transit through pipelines of oil and gas are explored.

The commitment paragraphs for Ukraine and Russia are as follows:

> The representative of Ukraine confirmed that Ukraine would apply all its laws, regulations and other measures governing transit of goods (including energy), such as those governing charges for transportation of goods in transit, in conformity with the provisions of Article V of the GATT 1994 and other relevant provisions of the WTO Agreement. The Working Party took note of this commitment.[43]
>
> The representative of the Russian Federation confirmed that the Russian Federation would apply all its laws, regulations and other measures governing transit of goods (including energy), such as those governing charges for transportation of goods in transit by road, rail and air, as well as other charges and customs fees imposed in connection with transit [.....] in conformity with the provisions of Article V of the GATT 1994 and other relevant provisions of the WTO Agreement. [.....] The Working Party took note of this commitment.[44]

The inclusion of the words "including energy" in these commitment paragraphs is significant as the text of GATT 1994 Article V is of general application and makes no mention of any specific products such as energy. It also illustrates that accession negotiations can serve as a precedent. The commitment paragraph of Ukraine deviated from earlier accessions with the specific mention of energy in the commitment paragraph. This perhaps served as a precedent in the accession negotiations of the Russian Federation.

3.2.9 Trade in Services

The GATS provides a framework for liberalization of energy services. Under the GATS, all members are bound by some general obligations and disciplines among which the MFN (GATS Article II) is most important as it requires each member to treat the services and service suppliers of other members in a non-discriminatory manner. The GATS rules on monopolies and exclusive service suppliers (Article VIII) are of particular relevance to energy services where natural monopolies and vertically integrated public utilities are common. GATS Article VI establishes disciplines on domestic regulation which are also relevant for energy services.

Market access and national treatment limitations (GATS Article XVI and XVII) are as inscribed in the member's schedule of specific commitments. The GATS

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[43] See Ukraine (paragraph 367 of WT/ACC/UKR/152).

[44] See Russian Federation (paragraph 1161 of WT/ACC/RUS/70).

schedule applies to all internationally traded services (except those provided in the "exercise of governmental authority" and air traffic rights). A member's specific commitments by mode of supply in any given sector represent the level of market access that has been granted for that sector. The actual level of market access may be more liberal as each member is free to grant better treatment than what has been committed.

The sectoral classification of services (GATT document MTN/GNS/W/120) or W/120 is based on the UN Central Product Classification (CPC). Neither W/120 nor CPC covers 'energy' as a separate service sector. There are, however, three sub-sectors that are explicitly related to energy services:

- Services incidental to mining (CPC 883 + 5115)[45];
- Services incidental to energy distribution (CPC 887)[46]; and
- Transportation of fuels (CPC 7131).[47]

In addition to these three sub-sectors, other service sectors or sub-sectors listed in W/120 such as management consulting services; engineering and integrated engineering services; technical testing and analysis services; construction; distribution services, etc., may also be relevant to energy-related activities (Cossy 2011; WTO 2010b).

The modes of supply most relevant to energy services are modes 1, 3, and 4. Mode 1 covers services related to cross-border transmission of electricity and gas through pipelines and inter-connected grids. Mode 1 is also of relevance for online trading and brokering services, construction services, etc., related to the energy sector. Mode 3 is critical for the supply of energy services through the establishment of commercial presence by foreign service energy suppliers. Mode 4 would include the movement of natural persons (e.g., engineers, oil rig workers, etc.) for the purpose of supplying energy services.

With respect to WTO members' specific commitments on energy services there is difficulty in providing a complete assessment given the absence of a separate sector heading on energy services in W/120. A further difficulty arises, due to the challenges in distinguishing between energy 'goods' and 'services'. Traditionally, the energy sector is dominated by vertically integrated public utilities or naturally monopolies engaged in a wide spectrum of energy activities including exploration, extraction, production, transportation, transmission, marketing, and distribution. Energy 'services' in this context may be included as value added in the 'goods' produced by the same entity (Yanovich 2011).

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[45] The CPC defines this sub-sector as: "services rendered on a fee or contract basis at oil and gas fields, e.g. drilling services, derrick building, repair and dismantling services, oil and gas well casings cementing services"(CPC 883), and "site preparation work for mining" (CPC 5115).

[46] The CPC defines this sub-sector as "transmission and distribution services on a fee or contract basis of electricity, gaseous fuels and steam and hot water to household, industrial, commercial and other users" (CPC 887).

[47] This sub-sector is defined as "transportation via pipeline of crude or refined petroleum products and of natural gas" (CPC 7131).

Table 3.1 Specific commitments on energy services

Sector	Number of commitments
Services incidental to mining	45 (18)
Services incidental to energy distribution	18 (10)
Pipeline transportation of fuels	12 (9)

Figures in () indicate the number of commitments undertaken by members which have acceded to the WTO between 1995 and August 2009. *Source* Cossy (2011) and WTO (2010b)

Despite these challenges, there has been some analysis of the specific commitments in the energy sector. Table 3.1 highlights the number and pattern of commitments in the three principal sub-sectors related to the energy sector. It is interesting to note that the bulk of commitments in these sub-sectors have been undertaken by recently acceded members (RAMs). India has not made specific commitments in these service sub-sectors.

Members' commitments in other energy-related sectors are even higher. The WTO Secretariat provides the following count with the number of members with specific commitments indicated in (): engineering services (79), integrated engineering services (51), management consulting services (72), services related to management consulting (48), technical testing and analysis services (54), services incidental to manufacturing (34), related scientific and technical consulting services (47), maintenance and repair of equipment (50), site preparation work for mining (58), general construction work for civil engineering (70), renting services related to equipment for construction or demolition of buildings or civil engineering works, with operator (53), commission agents' services (40), wholesale trade services (55), retailing services (54), retail sales of motor fuel (3), storage and warehousing (46) (Cossy 2011; WTO 2010b).

In the context of accession negotiations, members have concentrated on the bilateral market access negotiations and have sought specific commitments on services through this channel. Standard protocol commitments and discussion in the rules area have been limited. As Marceau (2010) has highlighted, with regard to the energy sector, Ukraine's additional commitment on pipeline transportation is relevant:

> Ukraine commits itself to provide full transparency in the formulation, adoption, and application of measures affecting access to and trade in services of pipeline transportation. Ukraine undertakes to ensure adherence to the principles of non-discriminatory treatment in access to and use of pipeline networks under its jurisdiction, within the technical capacities of these networks, with regard to the origin, destination, or ownership of product transported, without imposing any unjustified delays, restrictions or charges, as well as without discriminatory pricing based on the differences in origin, destination, or ownership.[48]

[48] Accession of Ukraine: Schedule of Specific Commitments on Services—Additional Commitment on "XI. Transport services: 7. Pipeline Transport" (WT/ACC/UKR/152/Add. 2).

3.3 Conclusion

"Big or small, developed or developing, all modern economies consume and depend on energy. Some economies are producers and consumers, some are transit and consumer economies, and some just consume. But all seek energy security" (Milthrop and Christy 2011).

All WTO members and observers in the process of accession have energy security concerns. However, the perspective of the energy-deficit nations may differ from those of energy-surplus countries. There are, of course, areas where there is a possible confluence of interests, such as on freedom of transit which could be of importance to both energy producers and consumers.

With each completed accession, the WTO is taking a step closer to universality in membership. Major energy players previously out of the GATT/WTO system are now stakeholders in the rules-based multilateral trading system. Their entry further enriches the discussions on energy and energy security. WTO entry comes with a seat on the negotiating table and with protocol commitments that are legally binding and enforceable through dispute settlement.

Accession commitments of these RAMs may send signals on the interpretation of existing WTO disciplines and provide pointers to the issues raised in future discussions or rule making on any subject, including energy security. However, these signals are indicative and not definitive. The membership terms will still continue to be based on the "terms to be agreed"[49] by the applicant and the WTO. Accession commitments of the recently acceded members are likely to guide but not necessarily bind the commitments of those still negotiating WTO entry. The experience with accession negotiations to date has demonstrated that the situation of each applicant is unique. For instance, issues raised in Ukraine's negotiations, key for transit of energy supplies, were different from those raised in Saudi Arabia's accession. On the one hand, WTO membership commitments may set precedents for future accessions or WTO negotiations. However, on the other hand, the membership terms are country specific and the result of the particular dynamics and complexity of each accession negotiation.

For India, WTO accessions of energy majors can be of relevance. India's trade with most of the energy majors would now fall under the umbrella of the rules-based WTO system. India, highly dependent on imports for the bulk of its energy needs, can benefit from non-discriminatory access to energy products and protocol commitments on export restrictions and duties. Export restrictions can and do matter when it comes to energy products. Even if there are valid justifications for prohibitions, bans, licensing requirements, or other restrictions, as provided for in the GATT/WTO general or natural security exceptions, there is an impact of such measures or policies. The GATT/WTO has historically focused more on the import side with little or no disciplines on subjects like export licensing or export duties. The accession negotiations and commitments of energy majors in these

[49] Article XII.1 of the Marrakesh Agreement Establishing the WTO.

areas, therefore, do set some benchmarks and precedents that may be of relevance for energy importers like India. Moreover, the accession negotiations and commitments may also provide a template in other areas where the existing rules are either non-existent or not comprehensive from an energy security perspective. India and others would be well served to keep in view the energy-related accession discussions in areas such as (dual) pricing, competition and investment policies, subsidies, quantitative restrictions, export duties, state trading enterprises, and trade in transit that can have implications on energy security.

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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

Views expressed are personal. The authors are grateful to Ishupal Singh Kang for his valuable research assistance. The findings of this chapter were presented at a workshop organized by the Centre for WTO Studies on 31 January 2013. The authors are grateful for the detailed discussions at the workshop and valuable comments from Abhijit Das, Atul Kaushik, Sajal Mathur, and James Nedumpara, which were instrumental in fine-tuning and refining this chapter.

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S. Mathur (ed.), *Trade, the WTO and Energy Security*,
DOI: 10.1007/978-81-322-1955-2_4,

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.

Contents

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.

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[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 that[7]:

- 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 cogeneration 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

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[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.

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[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 enterprises[21] and competition concerns[22] 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 impacts[23] 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 optimalization 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, microcrystalline 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	1.5
			Free Trade Agreement duty rate for Sri Lanka	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)	3
			Free Trade Agreement duty rate for Korea, Rep. of	3.75
			Free Trade Agreement duty rate for Singapore; Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	2
270112—bituminous coal, whether or not pulverised, non-agglomerated		5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand underthe Association of Southeast Asian Nations (ASEAN)	3
			Free Trade Agreement duty rate for Korea, Rep. of	4.5
			Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	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)	2
			Free Trade Agreement duty rate for Korea, Rep. of	2.5
			Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	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)	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
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		
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)	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

(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
			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
270820—pitch coke 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
			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
2709—petroleum oils and oils obtained from bituminous minerals, crude		5.0		

(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	3.75
			Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	2
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" distil 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)	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

(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
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
			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
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 >=95 % of *N*-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 >=95 % and propylene, butylene and butadiene of a purity of >=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)	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
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		
271210—petroleum jelly		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
271220—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)	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	
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)	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
2713—petroleum coke, petroleum bitumen, and other residues of petroleum oils or of oils obtained from bituminous minerals		7.5		
271311—petroleum coke, non-calcined		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	0
			Least Developed Countries (LDC) duties	2
271312—petroleum coke, calcined		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	
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)	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; Free Trade Agreement duty rate for Singapore	0
			Least Developed Countries (LDC) duties	4
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		
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)	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	
2716—electrical energy. (optional heading)		0.0		
271600—electric energy		0.0		
284410—natural uranium and its compounds; alloys, dispersions, incl. cermets, 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. cermets, 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. cermets, 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. cermets, 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)	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
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)	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
284510—heavy water (deuterium oxide)	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	
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)	3
			Free Trade Agreement duty rate for Korea, Rep. of	3.75
			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	0
			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)	4.25
			Least Developed Countries (LDC) duties	2
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)	3
			Free Trade Agreement duty rate for Korea, Rep. of	3.75
			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	0
			Least Developed Countries (LDC) duties	2
4402—wood charcoal (including shell or nut charcoal), whether or not agglomerated	40.0	5.0		
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)	3
			Free Trade Agreement duty rate for Korea, Rep. of	3.75
			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	
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)	3
			Free Trade Agreement duty rate for Korea, Rep. of	3.75
			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

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Chapter 5
India, OPEC, and an Agenda for Energy Security

Atul Kaushik

Abstract Energy is a necessary prerequisite to growth and development of emerging India. India has an Integrated Energy Policy to ensure that energy needs of its citizens are met. It has a Hydrocarbon Vision 2025 to guide its oil and gas exploration and production, supply and trade, and consumption and conservation. Securing adequate imports of oil and gas to meet its burgeoning needs is a major policy objective of the Government of India, driving the mission of its Ministry of Petroleum and Gas. Economic and trade ties of India with OPEC members and other oil and gas producers have prospered. Many of these suppliers are members of various coalitions of India in the WTO. In the event that negotiations commence on trade and energy security, such cooperation will be mutually rewarding. This chapter analyzes the composition and India's energy policy and trade, functioning of trade regimes of OPEC members, and some other main suppliers of oil and gas to India with a view to offer a positive agenda for such negotiations. It concludes *inter alia* that India has much in common with members of the WTO from the Middle East to develop a common agenda on energy security and tariffs for primary oil and gas and petroleum products.

Contents

Views expressed are personal.

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S. Mathur (ed.), *Trade, the WTO and Energy Security*,
DOI: 10.1007/978-81-322-1955-2_5,

5.1 Introduction

Energy runs economies. It is the backbone of trade in goods as well as services. Fossil fuels remain the biggest source of energy worldwide after decades of recognition of their finiteness and a relentless search for alternatives. Petroleum[1] and natural gas, along with coal, constitute the predominant fossil fuel energy source in the world.

Petroleum is the largest primary commodity of international trade both in terms of volume and value. The political security and economic survival of both producers and consumers of oil depends to a large extent on the availability and affordability of oil in the international market place. High oil prices have been responsible for several global economic recessions as well as many global security crises Desta (2003). Secure, predictable, and long-term supply of oil in the international market is, therefore, a prime concern of all countries, including India.

OPEC is the key oil suppliers' organization. Although its members account for less than half of the total oil production and supply in the world (OPEC Annual Report 2012), it is the most relevant organization to understand the suppliers' perspective of the energy market.

Due to the strategic importance of oil trade in the world economy, it has been treated as a special case, in a largely political context and not within the framework of multilateral trade rules. While developed country oil exporters appear to have had a gentlemen's agreement not to apply GATT disciplines to oil trade, most of the developing country exporters were not GATT Contracting Parties[2] until the 1980s (UNCTAD 2000).

[1] Petroleum, oil, and hydrocarbons are terms used interchangeably in this chapter, and include natural gas, except where separated specifically or through context.

[2] With the exception of Gabon, Indonesia, and Kuwait.

GATT was a driver of market opening for exporters of manufactured products.[3] None of them had an interest in opening up the oil market. The economic theory of comparative advantage, the *raison d'être* of GATT drove negotiators to open markets, not supply sources. It is no surprise, therefore, that the trade liberalization negotiations under GATT and WTO have focused on import tariff bindings, tariff reduction, and removal of quantitative restrictions and tariff quotas, and not on export duty binding and reduction, or removal of export quotas. Access to markets, rather than access to supplies, was the focus of negotiations. Oil is a suppliers market. Liberalization of trade in natural resources including oil was not on the minds of negotiators.

In treaty terms, GATT/WTO agreements, unlike in the case of agriculture or textiles, did not and do not have any special discipline for oil in particular or energy in general. The negotiations leading to coming into force of the GATT protocol had included commodities, and hence oil, but did not result in any specific treaty provisions. Hence, oil is a 'good' which is subject to the general disciplines for goods under GATT/WTO.

Whether energy is a good has at times been questioned in the context of electricity, but not in the context of oil. The literature does include various discussions on whether oil which has not yet been extracted from the earth can be considered as a 'good' or a 'product' under GATT. The prevailing view is that only extracted oil is a good, even though jurisprudence exists for another natural resource—standing timber—being classified as a good even when it has not yet been felled, or extracted, from earth (Selivanova 2011).

Before and during the Uruguay Round negotiations, some developing countries became members and some of them added specific clauses in their accession protocols expressing their absolute sovereignty over their natural resources including petroleum. Post WTO, particularly after accession of Saudi Arabia and Russia, most major oil exporters are WTO members.[4] It is a coincidence that many of the major oil suppliers acceded to the WTO during the life of the Doha Round of negotiations. This coupled with the sustainable development issues in general and climate change in particular, has given rise to intermittent demands for negotiations on trade in energy.

In the backdrop of the history of trade in energy, lack of specific international treaty disciplines on it and the possibility of negotiations commencing on the subject in the WTO, this chapter examines the oil sector from India's perspective. It focuses on OPEC as the representative organization of oil suppliers, studies its objectives and functions, and examines its role in possible cartelization of the oil market. It then studies the Indian market for export and import of oil and its

[3] Note that agriculture was also largely out of the purview of GATT disciplines.

[4] None of the OPEC members were founding fathers of GATT. US became a net exporter of oil in 1948, and UK and Norway, two other founding fathers, discovered oil only in 1969. Of the OPEC members, all except Algeria, Iran, and Iraq are now members, and these three are observers with continuing or static accession negotiations. All non-OPEC major suppliers are now WTO members.

products with a view to delineate its interests as a trader, and based on that examines the interests of its major exporters and importing countries with a view to determine key negotiating interests of each of them. Finally, it develops a possible agenda for future negotiations on trade and energy for India.

This chapter is organized as follows: Sect. 5.2 examines the composition and functioning of OPEC, followed by Sect. 5.3 on the cartel behavior of OPEC members and its possible legal implications under trade rules. Section 5.4 examines India's energy security in terms of security of supply of oil, and provides select trade and pricing policy details of some of its main suppliers. Finally, Sect. 5.5 draws some conclusions for a possible positive agenda of India in possible negotiations. These conclusions include some remarks on transit and transportation issues.

5.2 Composition and Functioning of OPEC

5.2.1 Composition

Organization of the Petroleum Exporting Countries (OPEC) was founded in 1960 by Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. The five founding members were later joined by nine other members: Qatar (1961); Indonesia (1962)—suspended its membership from January 2009; Libya (1962); United Arab Emirates (1967); Algeria (1969); Nigeria (1971); Ecuador (1973)—suspended its membership from December 1992 to October 2007; Angola (2007) and Gabon (1975–1994).

The OPEC membership can be of three kinds: founder members, full members, and associate members. Founder members are Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela, which were represented at the First Conference held in Baghdad in September 1960, and which signed the original agreement of the establishment of OPEC. Full members include these founder members as well as those countries whose application for membership has been accepted by the Conference, i.e., Qatar, Libya, United Arab Emirates, Algeria, Nigeria, Ecuador, and Angola. Indonesia and Gabon have been members in the past, while Ecuador suspended its membership between 1992 and 2007. Any other country with a substantial net export of crude petroleum, which has fundamentally similar interests to those of member countries, may become a full member of the Organization, if accepted by a majority of three-fourths of full members, including the concurrent vote of all founder members.[5]

A net petroleum exporting country, which does not qualify for membership as mentioned above, may nevertheless be admitted as an associate member by the

[5] OPEC webpage: http://www.opec.org/opec_web/en/about_us/25.htm (accessed in October 2012).

Conference under such special conditions as may be prescribed by the Conference, if accepted by a majority of three-fourths, including the concurrent vote of all founder members. No country may be admitted to associate membership which does not fundamentally have interests and aims similar to those of member countries.

As of 1 January 2013, OPEC has 12 full members, and no associate members. Of these, 8 are members of the WTO, while the WTO accession of Algeria, Iran, Iraq, and Libya is in progress.

5.2.2 Functioning

The principal aim of the Organization is the coordination and unification of the petroleum policies of member countries and the determination of the best means for safeguarding their interests, individually and collectively. The Statute of OPEC mandates the organization to devise ways and means of ensuring the stabilization of prices in international oil markets with a view to eliminating harmful and unnecessary fluctuations. It also states that due regard shall be given at all times to the interests of the producing nations and to the necessity of securing a steady income to the producing countries; an efficient, economic, and regular supply of petroleum to consuming nations; and a fair return on their capital to those investing in the petroleum industry (OPEC Statute 2008).

The primary way devised by OPEC members to ensure stabilization of prices in international oil markets is the setting of production quotas for its members. As per OPEC, world demand of oil was 87.89 million barrels per day (mb/d) in 2011, 89.92 mb/d in the third quarter of 2012, and is forecast at 88.7 mb/d in 2012 and 89.55 mb/d in 2013. Non-OPEC supply of crude is forecast at 58.82 mb/d and OPEC supply at 29.92 mb/d. Again, in 2013, against the world oil demand of 89.55 mb/d, non-OPEC supply is forecast at 60.00 mb/d. Thus, OPEC crude has less than 35 % share of global supply. Clearly, production regulation by OPEC alone is not the only factor affecting oil prices. Nevertheless, OPEC is the only organization in the world that explicitly purports to protect the interests of oil producers. OPEC has been setting production targets for its members, and at times (particularly in times when prices plunge) also urging others to set similar targets.[6] Therefore, activities of OPEC and its members have been the main source of information about the oil producer's perspective on global issues.

Various studies conducted to adjudge whether OPEC production targets affect prices have given varying results. Further, it has been noticed that OPEC members do not necessarily abide by the production quotas set for them (Broome 2006). IEA's OIL Market Report issued on 12 September 2012 shows that crude oil supply of members exceeded production targets by huge margins during the

[6] http://www.opec.org/opec_web/en/data_graphs/335.htm (accessed in November 2012).

2 years beginning August 2010. Nevertheless, production targets continue to be fixed.

Faced with strong concerns about high oil prices from consuming countries and the adverse implications of such high prices on the global economy, OPEC adopted a price band mechanism in March 2000. The lower limit of the band was US$ 22/bbl and the upper limit was US$ 28/bbl. The price band was based on OPEC Reference Basket (ORB) price. This was based on the average price of seven selected crude qualities: Arabian Light, Saharan Blend, Dubai, Bonny Light, Tia Juana Light, Minas, and Isthmus. As per this mechanism, OPEC production was to be cut by 500,000 barrels/day if the basket price was below the lower limit for 10 consecutive days. Similarly, production was to be increased by 500,000 barrels/day if prices remained higher than the upper limit for 20 consecutive days. Production adjustment based on OPEC Reference Price was first made in October 2000.[7]

However, when price stayed above US$ 28/bbl for a prolonged period in 2004, OPEC reviewed the mechanism in a Conference in 2005. After reviewing the evolution of the OPEC Reference Price since its inception in 2000, the OPEC noted that prices had remained outside the Band for over a year due to market changes that rendered the Band unrealistic and, therefore, decided to temporarily suspend the current Price Band, pending completion of further studies on the subject. Notwithstanding this temporary suspension, the Conference stressed that the Organization remains firm in its commitment to maintaining a stable market with prices at reasonable levels conducive to expansion of production capacity and supply growth to meet rising demand, as well as to ensuring that there is enough oil to fuel global economic growth in the twenty-first century, in particular in the developing countries.

OPEC also changed the composition of the ORB, until then made up of 7 crudes, to a composition of 11 crude streams representing the main export crudes of all member countries, weighted according to production and exports to the main markets. The Secretariat was to calculate the new proposed Basket on a trial, daily basis, in parallel with the current ORB, reporting back on the results to the next Meeting of the Conference, in light of which the Conference was to announce the effective date of implementation. The new ORB is made of the following crudes: Saharan Blend (Algeria), Minas (Indonesia), Iran Heavy (Iran), Basra Light (Iraq), Kuwait Export (Kuwait), Es Sider (Libya), Bonny Light (Nigeria), Qatar Marine (Qatar), Arab Light (Saudi Arabia), Murban (UAE), and BCF-17 (Venezuela). The API gravity for this new Basket is heavier, at 34.6° compared to 32.7° for the previous Basket of seven crudes. In addition, the sulfur content of the new ORB is more sour at 1.77 %, compared to the previous Basket of 1.44 %. The new ORB better reflects the average quality of crude oil in OPEC member countries (OPEC Monthly Oil Market Report September 2012).

[7] http://www.opec.org/opec_web/en/data_graphs/40.htm (accessed in November 2012).

5.2.3 OPEC Long-Term Strategy

The OPEC has now devised a Long-Term Strategy, endorsed in the 137th Meeting of the OPEC Conference on 19–20 September 2012. The strategy sets objectives in relation to the long-term petroleum revenues of OPEC member countries (MCs), fair and stable prices, the role of oil in meeting future energy demand, the stability of the world oil market, and the security of regular supplies to consumers, as well as the security of world oil demand. The objectives also relate to the legitimate interests of OPEC MCs in multilateral agreements. The strategy identifies the key challenges that may constitute constraints for OPEC in the attainment of the objectives. These include uncertainties surrounding future oil demand, stemming from, inter alia, the prospects for the world economy, consuming countries' energy and environmental policies, and technological developments. They also concern the supply side, taking into account the resources, potential non-OPEC production, and the extent and timing of required investment, together with the associated uncertainties.

While considering the wide range of possible futures and the need to be effective across these plausible circumstances, the strategy covers various elements, such as the oil price, upstream and downstream investment, technology, the role of OPEC National Oil Companies, multilateral negotiations, in particular those related to trade and the environment, the important relationships with both producers and consumers, as well as with international organizations and institutions, OPEC's public information and the strengthening of the OPEC Secretariat. In addition, it also includes elements that are pertinent to specific situations, given the need to be flexible and adaptive.

Regarding oil prices, the strategy builds upon the fundamental recognition that extreme price levels, either too high or too low, are damaging for both producers and consumers, and points to the need to be proactive under all market conditions. The strategy also re-emphasizes OPEC's commitment to support market stability and, in achieving this, stresses the role of other producers, as well as, especially with regard to the downstream sector, consuming countries.

The strategy recommends that OPEC MCs strive to strengthen cooperation in upstream and downstream scientific research and technological development among themselves and with international institutions. It also recommends supporting research in the production and use of cleaner petroleum-based fuels, and taking an active role in the development of technologies that address climate change concerns, while improving and expanding the role of oil in meeting future world energy demand, such as CO_2 sequestration. The strategy also addresses the role of OPEC National Oil Companies and encourages enhancing their competitive performance, as well as developing close cooperation among them in various areas such as technology, industrial networking, knowledge- and experience-sharing, etc.

The strategy maintains that it is important for OPEC MCs to continue to have an active role in climate change-related multilateral negotiations, recalling the principle of common but differentiated responsibilities, as well as the obligations of

industrialized countries with regard to developing country parties. The strategy also calls for an active and more coordinated role of OPEC in trade-related negotiations, as well as increased cooperation with other developing countries, reinforcing the principle of permanent national sovereignty over natural resources, and recognizing the exhaustible and non-renewable character of oil. It also stresses that it is important for OPEC MCs to continue enhancing their economic and social development by using the comparative advantage offered by their natural resources.

Dialogue among producers and between producers and consumers constitutes a crucial element of the strategy. It is recommended that such dialogue should be widened and deepened to cover more issues of mutual concern, such as security of demand and supply, market stability, investment, technology, and the downstream. Communication is also recognized as a key element of the strategy and this calls for, inter alia, a strengthening of the Organization's public information capabilities. Finally, the strategy recognizes the importance of an enabling environment, and recommends the strengthening of the OPEC Secretariat to broaden its research activities and cope with the growing challenges.[8]

5.3 OPEC as a Cartel

5.3.1 Definition of a Cartel

Competition in business and trade is the effort of two or more parties acting independently to secure the business of a third party by offering the most favorable terms. In economic terms, it is the allocation of productive resources to their most highly valued uses and, thus, encourages efficiency. Perfect competition results in most efficient allocation of resources. However, given the imperfections in real-life markets, distortions in competition may be caused by formal or informal arrangements amongst competing firms aiming to maximize profits at the cost of efficient resource allocation.

At the broadest level, a cartel is a formal agreement among competing firms. It is a formal organization where there are a few sellers who may agree on such matters as price fixing, total industry output, market shares, etc. In a public cartel, a government is involved to enforce the cartel agreement, and the government's sovereignty shields such cartels from legal actions. Public cartels, in theory, work to pass on benefits to the populace as a whole.

Competition laws enforced in national jurisdictions, and in some regional treaties like the EU, often forbid private cartels. International law on public cartels has not yet fully developed. A WTO Working Group on Trade and Competition Policy started examining the subject in 1996, and the subject was included in the

[8] http://www.opec.org/opec_web/static_files_project/media/downloads/publications/OPECLTS.pdf (accessed in December 2012).

original Doha Development Agenda, but the work was suspended in 2004.[9] Thus, though competition policy or anti-trust rules exist in national jurisdictions and some regional treaties such as the EU and adjudicates on private cartels, there is no international agreement on the treatment of public cartels. In the event of commencement of negotiations in the WTO on trade and energy, revival of the negotiations on trade and competition may become a key element aimed at reducing market distortions, including through disciplining cartels.

5.3.2 Is OPEC a Functional Cartel?

OPEC is often referred to as a cartel.[10] The unexpected four-fold increase in crude oil prices in the years 1973–1974 has been widely considered as a result of collusive behavior of OPEC members. After 1982, OPEC started to act more like a textbook cartel when it adopted output quotas. However, some members often do not stick to their quota, and the production ceiling set for collective OPEC output is often violated. The failure of OPEC to prevent prices from falling often raises the question whether it is capable of regulating production among its members in its effort to stabilize the market price of oil. On the other hand, there is often an increase in non-OPEC supply along with the decline in OPEC production, as happened in the early 1980s, indicating that OPEC is not able to act as an effective cartel. Therefore, it is difficult to distinguish between collusive action on the part of OPEC countries or supply disruptions independent of any cartel behavior by OPEC members (Gulen 1996).

A 1996 study by Gülen concludes that although there are some members who coordinate their production with that of OPEC (most apparently the UAE, Venezuela and Libya), the organization does not seem to act as a cohesive whole. Also, he found the causality from OPEC production to the market price of oil to be statistically significant during 1982–1993.

Since OPEC supplies constitute only half the total oil supplies in the world, price fluctuations happen due to reasons other than possible cartel behavior amongst OPEC members. Irrespective of whether OPEC, or oil producers in general, act as a cartel or not, the history of price fluctuations and government response shows that rather than acting against the cartelization of this commodity, governments have focused more in the short term on fiscal measures to support consumer prices in the wake of increasing oil prices, and in the long term at energy conservation and search for alternative sources of energy. In short, no concerted international action against market failures in the oil sector is seen either during price rise or price collapse, even though it is widely believed that high oil prices were responsible for several global economic recessions in history.

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[9] WTO General Council Decision of 1 August 2004, available at: http://wto.org/english/tratop_e/dda_e/draft_text_gc_dg_31july04_e.htm#invest_comp_gpa.

[10] http://en.wikipedia.org/wiki/OPEC.

5.3.3 OPEC and the WTO Rules

Given the lack of a proper forum to contest OPEC production quotas as a cartel practice requiring legal restraint, the next question would be to examine whether there is a legal recourse available in GATT/WTO.

The strategic importance of petroleum trade has been treated as a special case in the largely political context and not within the GATT multilateral framework of trade rules, even though there is no GATT provision that exempts petroleum from its coverage. Specifically in the context of OPEC, it is pertinent to note that none of the five founding members of OPEC were WTO members when it was formed in 1960; two of them have still not finalized their accession to the WTO as of 2013.

Further, the driving force behind the GATT/WTO has been market interest of its members for their surplus products; none of the founding members of GATT had any surplus oil. The United States turned a net importer in 1948, the year that GATT came into force, and Norway and UK became oil surplus only in the 1960s. Consequently, most GATT/WTO members have not bound their tariffs for crude petroleum, even though the applied tariffs are zero or very low. This can provide members of the WTO a legal cover to restrict imports from countries for strategic or security reasons by raising tariffs, as has been attempted by the United States at occasions. Conversely, exporters could restrict supplies for similar strategic or security reasons through export restrictions.

Interestingly, Article II of GATT does not mention export duties at all, leading to a lack of clarity on whether export duties are to be bound or reduced through negotiations. Of course, in negotiations including accession negotiations, such bindings have been accepted at times. Further, even though quantitative restrictions are in principle prohibited both in the case of imports and exports, there are several examples of an asymmetrical approach to their application in GATT/WTO provisions. Nevertheless, members of the WTO use export duties to inter alia protect their processing industries, even though there are hardly any bindings or reductions in export duties in schedules of members. As John Jackson puts it, the exceptions to the obligation on prohibition of export restrictions in GATT are so broad as to render it meaningless (Jackson et al. 1995). This gives WTO members, including OPEC members amongst those, freedom of choice.

Non-OPEC members have also used export restrictions to influence prices, including actions in collaboration with OPEC. In its protocol of accession, Mexico specifically inserted a special treatment provision to the effect that it may impose certain export restrictions related to conservation of natural resources, particularly in the energy sector, on the basis of social and development needs, if the export restrictions are made effective in conjunction with restrictions on domestic production and consumption. Similarly, Norway routinely uses legislation to reduce oil prices (See Desta 2003).

GATT jurisprudence equates import and export restrictions as equally subject to prohibition under Article XI of GATT. A conclusion in a 1978 case that an EC system of minimum export prices as a condition for the importation of tomato

concentrates violated Article XI was considered equally applicable to export restrictions effected through minimum export prices on semiconductors by Japan in 1988 (Desta 2003). Thus, export restrictions by OPEC members to control international prices could arguably be challenged for violation of GATT Article XI. But the GATT/WTO law provides sufficient legal recourse to save the OPEC measure.

The foremost question to be resolved is whether a production restriction can be equated with an export restriction. GATT Article XI does not mention production restrictions at all. The reason appears to lie in the objective of the Article, which is to prevent restrictions on international commerce in products. Now, OPEC could argue that oil which has not yet been extracted from the ground is not available for commerce at all; hence it is not a product. In sum, oil in its natural state is not covered by GATT/WTO at all.

Further, there are two exceptions in GATT that may come to the rescue of the OPEC measure. First, even though OPEC members impose production quotas with the objective of stabilizing international oil prices and not with the objective of conservation of oil, an exhaustible natural resource, they could argue that market stability is an essential element in their effort to manage and ensure conservation of their oil resources, in order that they remain a viable and dependable source of oil for current and future generations. Given that international law is clear on sovereignty of nations over their natural resources, and OPEC members apply their production quotas to both domestic and foreign consumers, it is quite likely they will pass muster the test of GATT Article XX(g). Secondly, OPEC members could invoke Article XXI, the security exception. They could argue that stable and reasonable prices of oil are essential to their economic security, which is as serious as their sovereignty as they are totally dependent on oil for their existence. Given the jurisprudence of GATT Article XXI so far, that is not a high threshold of evidence for OPEC members to cross.

5.4 Overall Energy Security Policy of India

The Integrated Energy Policy of the Planning Commission of the Government of India (GOI) defines Energy Security as under:

"We are energy secure when we can supply lifeline energy to all our citizens irrespective of their ability to pay for it as well as meet the effective demand for safe and convenient energy to satisfy their various needs for energy at competitive prices, at all times and with a prescribed confidence level considering shocks and disturbances that can reasonably be expected".

India is the fourth largest importer and consumer of crude oil in the world. India's import dependence is 80 % and growing. As a consequence, securing adequate imports is a major policy objective of the Government of India. In any future negotiation on trade and energy, therefore, the primary interest of India will be to ensure that supply of crude and gas for fuelling its growing economy is in no

way obstructed by results of such negotiations (Ministry of Petroleum and Natural Gas (MoPNG), GOI, Annual Reports).

The Government pursues many other policy objectives to fuel the desired growth in the economy, while at the same time protecting targeted consumers from the vicissitudes of oil prices in the world market. A major objective of policy of the Government is to have an efficient and competitive oil economy that promotes efficient use by consumers, appropriate choice of fuels among substitutes, and a proper choice of technique. This is best ensured by a competitive energy sector. However, it is feared that complete pass-through of increase in world oil prices may cause inflation which may persist even when oil price comes down. There is no clear evidence that in an increasingly open and competitive economy, price movements triggered by changes in the prices of oil products would persist over the medium-run. In addition, attempts to insulate the domestic economy against volatility requires discriminating between a secular price rise due to demand-supply forces and a price rise due to transient causes such as speculation in the world market. As a result, the Government resorts to intervention to stabilize domestic prices (MoPNG, GOI, Strategic Plan 2011-17).

The first reason for intervention is to ensure that poor consumers may afford kerosene for lighting, which is a necessity for those who do not have access to electricity. Another objective is to provide merit goods to consumers such as clean cooking fuels like natural gas, LPG, and kerosene to replace use of biomass-based fuels such as firewood and dung. The use of clean cooking fuels has many social and environmental externalities, and as merit goods the government may promote them through subsidies. To the extent the level of self-sufficiency in domestic oil production increases, the impact of international oil prices on domestic economy would be reduced. Thus, keeping domestic oil firms viable and in good financial health and providing an environment in which they can grow are also important policy objectives. Yet another reason for Government's intervention is to insulate the domestic economy from the volatility of petroleum prices on the world market.

Taking into account the estimated energy supply mix in India for a period up to 2025 the India Hydrocarbon Vision estimates that oil and gas will continue to play a pre-eminent role in meeting the energy requirements of the country as 45 % of the total energy needs would be met by the oil and gas sector, though some amount of inter-change between oil and gas is foreseen.

The vision of the Ministry of Petroleum and Natural Gas is to address India's energy security needs in the hydrocarbons sector and to ensure availability of petroleum products at reasonable prices. Its Mission is to:

- accelerate domestic Exploration & Production (E&P) of hydrocarbons as well as equity oil and gas abroad;
- develop the hydrocarbon sector through technology upgradation and capacity building in production, refining, transportation, and marketing sectors;
- develop supply and distribution infrastructure for petroleum products, to serve the needs of the economy, including households;
- enhance service standards and to maximize customer satisfaction; and

Table 5.1 India's imports of crude oil (commodity: HS 2709 petroleum oils and oils obtained from bituminous minerals, crude) (2011–2012)

Country	Value (Rs. millions)
Saudi Arabia	1248931.36
Iraq	901922.11
Kuwait	687731.84
Nigeria	650115.72
UAE	577637.45
Iran	551088.91
Venezuela	319877.76
Angola	314863.40
Qatar	247494.68
Brazil	137018.66
Egypt	106241.21
Algeria	93811.52
Malaysia	93003.29
Oman	85214.81
Mexico	82573.76
Others	339358.96
Total	6436885.43

Source Foreign Trade Performance Analysis (2012) Ministry of Commerce and Industry, Government of India (Data for the quantity of crude oil imported not provided)

- promote fuel conservation, clean and green fuels and development of alternative sources of energy.

India's prognosticated oil and gas resources are estimated at 28 billion tons. The balance recoverable reserves position of India for oil and oil equivalent gas as on 1 April 2011 is 2,041 million tons. Its proven and indicated reserves of crude oil are estimated at 757 million metric tons (mmt) and those of natural gas at 1,241 billion cubic meters (bcm). Crude oil production in 2010–2011 was 37.71 mmt and natural gas production was 52.22 bcm. Crude oil production in April–December 2011 was 28.699 mmt and natural gas was 36.197 bcm. India imported 163.594 mmt of crude, 8.949 mmt of Liquefied Natural Gas (LNG), and 17.364 mmt of petroleum products in 2010–2011, collectively valued at Rs. 524,440 crore (MoPNG, GOI, Basic Statistics).

Tables 5.1, 5.2 and 5.3 give details of the top 15 sources of import of crude oil, light oils (motor spirit or petrol), and heavy oils (diesel, fuel oils, etc.) into India.

Two key objectives motivate the government's policy in India's downstream petroleum sector: (i) ensuring India's growing refined product demand is met at affordable prices over time; and (ii) establishing India as a major global refined product exporter.

Unlike many other oil-dependent developing countries, India has a significant network of refineries, the newer amongst them being state of the art. Its refinery throughput in 2010–2011 was 206.154 mmt, of which 90.693 mmt was from private sector refineries. Due to the price control and subsidization by the

Table 5.2 India's imports of motor spirit (commodity: HS 271011 light oils and preparations) (2011–2012)

Country	Value (Rs. millions)	Quantity (thousands of tons)
Kuwait	35545.61	788.90
UAE	29698.40	638.13
Singapore	14361.54	353.80
Qatar	13627.27	275.81
Bahrain	6709.40	136.33
Belgium	5553.28	84.35
Oman	3400.38	67.18
Netherland	2001.86	48.01
Saudi Arabia	1232.97	23.96
China	1216.90	31.01
South Korea	1212.53	33.31
Taiwan	1098.71	27.94
Bangladesh	822.87	18.49
Pakistan	613.84	16.70
Brazil	433.95	9.85
Others	394.69	
Total	117924.18	

Source Foreign Trade Performance Analysis (2012) Ministry of Commerce and Industry, Government of India

Table 5.3 India's imports of kerosene, HSD, and ATF (commodity: HS 271019 other petroleum oils and oils obtained from bituminous minerals etc.) (2011–2012)

Country	Value (Rs. millions)	Quantity (thousands of tons)
Singapore	89537.60	2017.10
South Korea	37537.81	625.47
UAE	21904.73	579.75
Malaysia	8522.56	169.41
Saudi Arabia	8410.92	178.70
Bahrain	7770.54	185.80
USA	6538.14	105.38
Taiwan	6148.47	98.19
Japan	4366.15	99.72
China	3729.75	80.40
Iran	3333.21	72.45
Algeria	3296.23	83.83
Netherland	3046.81	74.04
Libya	1916.30	45.03
Sweden	1590.44	34.87
Others	13683.68	
Total	221333.33	

Source Foreign Trade Performance Analysis (2012) Ministry of Commerce and Industry, Government of India

Table 5.4 India's exports of motor spirit (commodity: HS 271011 light oils and preparations) (2011–2012)

Country	Value (Rs. millions)	Quantity (thousands of tons)
Singapore	204 440.58	4488.59
UAE	156829.28	3404.90
Indonesia	103879.06	2177.32
Japan	99237.24	1880.21
Bahamas	86109.50	1793.57
Taiwan	69473.55	1547.30
South Korea	61204.10	1364.60
USA	54298.97	1097.75
South Africa	41505.80	884.35
China	17699.11	447.66
Others	143354.08	
Total	1038031.27	

Source Foreign Trade Performance Analysis (2012) Ministry of Commerce and Industry, Government of India

government of diesel, LPG, and kerosene (and to a large extent of motor spirit or petrol) marketed by public sector marketing companies, which renders them uncompetitive in the domestic market, private sector refiners in India have largely exported their production. Some public sector companies also have surplus production capacity from certain petroleum products.

India's production of petroleum products from crude oil in 2010–2011 was 190.364 mmt, and from natural gas (LPG) 2.168 mmt. India exported 59.133 mmt of petroleum products in 2010–2011, valued at Rs. 1,961,120 million. Most of the exports are of light oils (e.g., petrol or motor spirit) and heavy oils (diesel, fuel oils, etc.). Exports of petroleum products are not at the cost of the national demand, but surplus is exported. For example, in the period April–December 2011, production of petroleum products was 147.204 mmt, while consumption was only 109.530 mmt (MoPNG, GOI, Basic Statistics).

As a combined result of public sector and private sector refinery investments in the recent past, India will emerge by 2012 as one of Asia's two largest refined product exporters, the other being Singapore. India's emergence as a global petroleum producing hub is likely to have far-reaching implications for regional product markets, increasing the depth of product flows and strengthening supply chains, especially for high-end industrial product and clean transport fuels. The establishment of India's large-scale export-oriented refining sector marks the acceleration of a fundamental shift in the configuration of global refining in which mature economies increasingly look to production hubs in Asia and the Middle East to supply incremental refined product demand (OECD/IEA 2010).

Therefore, India's interests in a future negotiation on trade and energy may not be limited to that of a buyer of crude oil and gas, but extend to those of a supplier of petroleum products also. The top ten destinations where India's light oil was exported are given in Table 5.4.

Table 5.5 India's exports of kerosene, HSD and ATF (commodity: HS 271019 other petroleum oils and oils obtained from bituminous minerals etc.) (2011–2012)

Country	Value (Rs. millions)	Quantity (thousands of tons)
Singapore	242970.84	6129.47
Netherland	219638.86	4641.41
Brazil	151591.95	3192.73
UAE	118754.77	3532.12
Israel	81081.40	1700.15
Saudi Arabia	63671.21	1413.07
France	50651.33	1231.97
South Africa	47445.94	1140.71
Mauritius	47401.44	1176.14
Malta	36643.77	816.11
Others	529588.31	
Total	1589439.81	

Source Foreign Trade Performance Analysis (2012) Ministry of Commerce and Industry, Government of India

The top 10 countries where India's heavy oil was exported may be seen in Table 5.5.

From a negotiating point of view, therefore, India has interest in import policies and tariffs of a large number of countries spanning Asia, North America, Middle East, Europe, and Africa. It is pertinent to mention that the exports to some of these countries may be meant for other destinations also, as some of them such as Singapore, Netherlands, Malta, and Bahamas may be importing as hubs of supply across the region or the world. Country-specific analysis of negotiating issues between India and its main export markets for petroleum products is outside the scope of this chapter. However, the need to factor this into the overall negotiating stance of India in a future negotiation on trade and energy will be discussed in the last section.

India does not levy any custom duty on imports of crude, kerosene, or LPG, while the duty on petrol and diesel is 2.5 % ad valorem. Excise duty on petrol and diesel is at a specific rate of Rs. 14.35 and Rs. 2.00, respectively, while kerosene is free of excise duty. There is a cess of Rs. 2,500 per ton on crude oil (MoPNG, GOI, PPAC 2012).

India maintains price controls on four 'sensitive' petroleum products—petrol, diesel, liquefied petroleum gas (LPG), and kerosene—to insulate consumers against high global crude oil prices.

India had an administrative price mechanism until 2002, where after pricing of petroleum products were supposed to be deregulated. Domestic prices of diesel, kerosene, and LPG are, however, still controlled by the government. While kerosene and LPG is supplied to consumers at subsidized prices, marketing companies sell diesel at government mandated prices and cross subsidize them by prices of petrol, passing on some subsidized element to upstream companies, and facing under-recoveries for the balance. Until 2009–2010, under-recoveries were being partially covered by the government by issue of oil bonds through extra-budgetary resources.

Table 5.6 Price build-up of petrol at Delhi effective 16-11-2012

C&F (cost & freight) price of gasoline (petrol) BS III equivalent	$/bbl 113.74
Average exchange rate	Rs./$ 54.24
Refinery transfer price (RTP) on landed cost basis for BS IV petrol (price paid by the oil marketing companies to refineries)	Rs./L 39.65
Price charged to dealers (excluding excise duty and VAT)	Rs./L 45.03
Add specific excise duty @ Rs. 9.48/L (Rs. 9.20/L + 3 % education cess)	Rs./L 9.48
Add dealer commission: add VAT (including VAT on dealer commission) applicable for Delhi	Rs./L 1.79
@ 20 % less VAT rebate @ Rs. 0.32/L	Rs./L 10.94
Retail selling price at Delhi (rounded off)	Rs./L 67.24

Source PPAC, Ministry of Petroleum and Natural Gas, Government of India (2012)

Prices of other products, like petrol, are determined by the concerned marketing company. The Refinery Transfer Price, which is calculated on trade parity-based price of crude, is the starting point of retail price determination by marketing companies. For the Indian Oil Corporation, for example, the retail price is calculated based on a price build-up as given in Table 5.6.

Investments in the oil sector are also relevant for this study. India has opened up its energy sector to international investors as part of the Hydrocarbon Vision 2025. It has developed a New Exploration Licensing Policy (NELP) for exploration of oil in the country, both onshore and offshore. Investment through NELP so far is estimated at US$ 16.507 billion.

India is also investing in coal bed methane (CBM). Reserves established in the five blocks explored so far are estimated at 250 bcm (8.92 trillion cubic feet). CBM gas production at present is about 2 lakh cubic meters per day. Thirty-three blocks of CBM have been awarded for exploration. Similarly, efforts have begun to explore shale oil and gas reserves in the country.

While shale gas has already been commercialized elsewhere, particularly in the US, India is still in the process of getting the technology for its exploration and extraction.

In order to supplement domestic availability of crude and gas, India has made substantial efforts for acquisition of oil and gas assets abroad. ONGC Videsh Limited (OVL), a subsidiary of ONGC and the prime mover in this direction, has produced about 8.82 mmt of oil and gas equivalent under its assets abroad during 2011–2012. The 20 countries in which Indian companies, both public and private have acquired assets include Vietnam, Russia, Sudan, Myanmar, Brazil, Kazakhstan, Gabon, Colombia, Trinidad and Tobago, Nigeria, Oman, Venezuela, Yemen, Australia, and Timor-Leste. OVL also has two pipeline projects abroad, one each in Sudan and Myanmar. OVL produced 9.4 mmt of oil and oil equivalent abroad in 2010–2011, which is equal to 22 % of domestic oil production from its assets.

In view of the above, inward as well as outward investments in the oil and gas sector are also relevant for India's negotiating positions in a possible negotiation on trade and energy.

Transporting natural gas through pipelines is much cheaper as compared to shipping lines. However, it involves substantial initial capital investment in foreign countries and their maintenance and safety. India has planned two such pipelines. The first is the Turkmenistan–Afghanistan–Pakistan–India (TAPI) gas pipeline, for which a Gas Pipeline Framework Agreement was signed in 2010 and conclusion of a Gas Sale Purchase Agreement is under progress. The second is the Iran–Pakistan–India (IPI) petroleum pipeline under which 60 million metric standard cubic meters per day (mmscmd) of gas is proposed to be supplied in Phase 1 to be shared equally between India and Pakistan, and another 90 mmscmd to be supplied in Phase 2. The political and technical difficulties in making progress on this pipeline are still a roadblock; the last ministerial level meeting was held as far back as 25 April 2008.

India is also building a strategic crude oil storage capacity of 5.33 mmt at three different places in the country (MoPNG, GOI, Strategic Plan 2011–2017).

From the above it is clear that not only is India aware of the large gap between the domestic availability and demand of oil but is taking multi-pronged action to secure its energy needs. Secure and predictable supply of its oil and gas needs, therefore, will mainly inform India's negotiating stance in the event the international community initiates action to create multilaterally acceptable rules of the game. Securing its interest vis-à-vis its main suppliers will be the first and foremost negotiating objective of India in such negotiations. Given the growing importance of export of surplus refined products from India, retaining its competitive edge in the oil products market will be the second important objective. While pursuing this positive agenda, care will have to be taken to participate actively in possible negotiations on subsidy, anti-dumping, and trade-related investment measures in the energy sector to defend the government's policy in the oil and gas sector.

5.5 Trade Regimes of India's Main Suppliers of Crude Oil

India has been scouting for oil supplies all over the world. Looking at the supply sources for the last 10 years, India has imported oil from 59 countries. Of these the first 15 supply a million metric tons or more. These, in the order of supplies during 2011–2012, are Saudi Arabia, Nigeria, Iran, Iraq, Kuwait, UAE, Venezuela, Angola, Oman, Qatar, Brazil, Algeria, Yemen, Malaysia, and Egypt. Of these, all except three (Algeria, Iran, and Iraq) are WTO members and hence have a greater stake in the possible future negotiations on trade and energy in the WTO. All the top ten suppliers of oil and gas to India are members of OPEC except Brazil.

This section outlines the current trade, pricing, and other relevant policies of some of these countries to exemplify their production and policy position on oil, and then analyzes possible common interests with India.[11]

5.5.1 Gulf Cooperation Council

The Gulf Cooperation Council (GCC) was established by an agreement concluded on 25 May 1981 in Riyadh, Saudi Arabia among Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and UAE in view of their special relations, geographic proximity, similar political systems, joint destiny, and common objectives.[12] Oil is the major export item for its members, five of which are among the top 15 suppliers of petroleum to India. Saudi Arabia, India's largest supplier of petroleum, plays a dominant role in its functioning.

With a bilateral trade estimated at US$ 113 billion during 2010–2011, GCC is India's largest trading partner in the world. Nearly 40 % of India's crude oil import is met from GCC countries. The Gulf region plays a crucial role in our energy security and pace of economic growth. India has successfully bid for oil blocks in Qatar and Oman. Efforts are ongoing to set up joint ventures in downstream petrochemicals, fertilizer, and energy-intensive industries in the GCC countries and in India. The OMIFCO fertilizer plant in Oman and the Essar steel plant in Qatar are good examples.

India and GCC have signed a Framework Agreement on Economic Cooperation to explore the possibility of a Free Trade Area between them.

5.5.1.1 Kuwait

Kuwait has not bound any of its crude oil and petroleum-related products in the WTO. Natural Gas is bound at 100 %. It is a member of the GCC. The GCC MFN applied tariffs on petroleum products, such as crude oil, refined petroleum oils; petroleum coke and petroleum jelly are 5 %. Applied duty on natural gas is also 5 %.

All Chap. 27 HS code goods are subject to export licensing. Although Kuwait applies no export duties, taxes, charges, or levies, a license has to be obtained from Kuwait Petroleum Corporation for crude oil, etc., considered to be a strategic product.

With some exceptions, prices of goods and services are freely determined by the market. The Government controls the prices of public utilities such as electricity and water, as well as public transportation prices.

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[11] Information in this section of the chapter has been taken from the WTO Trade Policy Reviews of the mentioned countries/territories, from the websites of the Oil Ministries of these countries, or from the trade statistics of India on the website of the Department of Commerce, GOI.

[12] http://www.gcc-sg.org/eng/

Petroleum accounts for about half of Kuwait's GDP. Kuwait is a founding member of OPEC. It has been allocated a quota of 2.3 mb/d. About three-fifths of its crude extracted is exported and the rest is used in refineries. Of the refined oil, another three-fifth is exported.

Kuwait is the world's 9th-largest crude oil producer, has almost 8 % of the world's proven crude oil reserves, and ranks 18th in global natural gas reserves. Kuwait aims to become a key world player in petrochemicals on the basis of its comparative advantage in natural gas and through joint ventures with foreign enterprises.

Under the Kuwaiti Constitution, all natural resources, including oil, are owned by the State. The State alone has the right to exploit, utilize, and safeguard these resources. The right to concessions and/or monopolies for the exploitation of Kuwait's natural resources, including oil, may only be created by virtue of a law and for a limited time only. According to Kuwait's Foreign Investment Law of 2001, a foreign investor may carry out economic activities in industries other than oil and gas exploration and production.

The Supreme Petroleum Council (SPC) is the highest policy body that oversees Kuwait's overall petroleum and gas sector. The Council sets general oil and gas policy within the framework of the national economic and social development plan; it is chaired by the Prime Minister and meets at least four times a year. The Ministry of Oil is the main regulator of the oil and gas sector and exercises policymaking powers in conjunction with the SPC. The Kuwait Petroleum Company (KPC), established in 1980, is the main operational entity responsible for Kuwait's hydrocarbon interests throughout the world. It is a state-owned holding corporation of ten specialized subsidiaries in Kuwait and worldwide. KPC is run by an independent management team and Board of Directors. KPC and its subsidiary companies benefit from certain exclusive concessionary rights and privileges in the oil and gas subsector, including the downstream petroleum activities (i.e., processing of crude oil to fuel). In addition to local oil production, Kuwait is engaged in crude oil and natural gas exploration, development, and production in 15 countries in Africa, the Middle East, and Asia, through the Foreign Petroleum Exploration Company (KUFPEC), a subsidiary of KPC. Through another subsidiary called Kuwait Petroleum International (KPI), also known as Q8, KPC runs around 4,000 gas stations across Europe in addition to having two refineries in Europe (Netherlands and Italy) and two coming up in Asia (China and Vietnam).

Through Operating Service Agreements (OSAs) with KPC and its subsidiaries, international oil companies (IOCs) maintain control over the operational management, act as a contractor or service provider, and employ a set quota of 30 % of Kuwaiti labor. In addition, the IOCs incur 100 % of the capital and operating costs and is paid in return a per-barrel fee, along with allowances for capital recovery and incentive fees for increasing reserves.

The majority of Kuwaiti crude oil exports (around 83.3 %) are exported to Asia, followed by North America (8.9 %) and Europe (4.3 %). Most of the crude oil is sold on term contracts, with the price linked to the respective market benchmark crude in each of the Asian, European, and U.S. markets.

Kuwait's estimated natural gas reserves stood at nearly 1,784 bcm, about 1 % of the world's total. Natural gas in Kuwait is a multipurpose resource: while it is mainly used for domestic electricity generation, it is also used for water desalination, as a feedstock for the petrochemical industry, and to free-up additional crude oil for export. Since current levels of natural gas production do not meet national consumption levels, the authorities fill in the gap by imports. Kuwait has recognized the importance of LNG to cover the shortage in gas in Kuwait, especially during the summer season, from economic and environment point of views. It has procured a long-term contract for LNG imports until 2013. In order to reduce Kuwait's dependence on gas imports and become self-sufficient, the authorities aim to increase production to an estimated 19.3 billion m^3 by 2014 by maximizing the exploration, development and production of non-associated gas, and by adopting a zero flaring policy for both onshore and offshore operations.

Kuwait is active in the petrochemical industry. The first chemical fertilizer complex both in Kuwait and the region, comprising ammonia, urea, ammonium sulfate, and sulphuric acid production was completed in 1966. The main petrochemical products include fertilizers, olefins, and aromatics. Producers of fertilizers may benefit from a regulated price of natural gas, which is available to all users in Kuwait. The feedstock of other petrochemical industries is linked to international crude oil prices.

5.5.1.2 Qatar

Qatar's proven reserves of natural gas, estimated at 25,783 bcm, are the second largest in the world (14.3 % of the globe's total proven reserves). Qatar is also one of the largest liquefied natural gas (LNG) producer in the world, and has built the world's largest gas-to-liquids (GTL) plant. Furthermore, the development of gas-intensive industries, such as petrochemicals, fertilizers, and refining, is a key component of Qatar's overall diversification strategy.

Qatar's 'expected' petroleum reserves amount to 27,016 million barrels (mb) (3,917 mb of crude oil and 23,099 mb of condensate). Mining and quarrying, basically petroleum and natural gas, accounts for almost 60 % of Qatar's GDP, 70 % of government revenues, and about 90 % of total merchandise export earnings. Employment in extraction of crude oil and natural gas, as well as in the manufacture of refined petroleum products represented 11.25 % of Qatar's total labor force.

Qatar's exhaustible natural resources, including petroleum and natural gas wealth are 100 % owned by the State, as is Qatar Petroleum (QP). Qatar's royalty system on mineral products (12.5 % on petroleum and 20 % on natural gas) has been designed to enable QP to recover the government intake from operators, through levies (QP pays the Government on behalf of petroleum operators), and dividends (the Government owns QP and all its revenue goes back to the Treasury).

QP is the exclusive agent for the Government in the conduct of petroleum and natural gas operations, either directly, or in cooperation with foreign corporations through production sharing agreements (PSAs) or development and fiscal agreements (DFAs). Provisions of the agreements are aimed at increasing investment inflows, as well as technology and expertise transfer. Crude oil exploration and production activities may be carried out under PSAs, which allow foreign contractors to hold up to 100 % "working interest". Such PSAs are also referred to as development and production sharing agreements (DPSAs) or exploration and production sharing agreements (EPSAs). Natural gas development activities are conducted either by QP, or under DPSA contracts that allow foreign companies to hold up to 100 % working interest, or under a DFA's royalty and tax regime.

Qatar's petroleum is produced through QP's operated fields (i.e., the onshore Dukhan Field, and two offshore fields in Bul Hanine and Maydan Mahzam), as well as through fields operated under PSAs, in which QP has a share. Qatar is pursuing an intensive exploration drive to enlarge its hydrocarbons reserve base, so as to expand the lifetime of its reserves and broaden its production capacity.

The export base of Qatar was heavily concentrated in crude petroleum until 2002, when exports of LNG became the country's most important foreign exchange source. The share of LNG exports in total merchandise exports has since risen exponentially and that of crude petroleum declined. Asian countries are the destination for all of Qatar's crude oil exports, mainly Japan and South Korea. China, Philippines, Singapore, Taiwan, Thailand, and India complete the list of importers of Qatar's crude oil.

All mining and quarrying products are subject to a 5 % customs tariff. Imports of electricity also carry a 5 % tariff rate. As a result of its participation in the GCC customs union, Qatar applies the GCC common external tariff (CET) which has increased its simple average MFN duty rate from 4.2 % in 2002 to 5.2 % in 2004; *ad valorem* rates account for 99 % of total tariff lines, the tariff also comprises alternate duties. MFN applied tariffs average 7.1 % on agricultural products and 4.8 % on non-agricultural products. Manufacturing, and mining and quarrying are granted almost the same level of average tariff protection (5.3 and 5 %, respectively). All of Qatar's tariff lines are bound, generally at ceiling rates, leaving margins for applied tariff increases.

No duties or taxes are levied by Qatar on its exports. According to the authorities, Qatar does not participate in any arrangements designed to curb or control exports to third countries at the request of foreign governments/companies, except those on oil and gas exports derived from its membership in OPEC.

Certain products, such as gas, petroleum, electricity, and water, as well as some services are subject to price controls. In general, the prices of these goods and services are set by the relevant companies, subject to approval by the Council of Ministers. Qatar maintains price controls on petroleum products and natural gas. Prices are differentiated according to final use. Prices are suggested by QP, subject to approval by the Council of Ministers. According to the authorities, there are no measures to promote local processing of petroleum products before their exportation.

Table 5.7 Qatar's proposal for items relating to environmental goods and services

Category	Environmental goods and technology
I Gas turbines combined cycle power generation	Liquefied natural gas
	Natural gas
	Natural gas driven turbines and associated parts used
II Chemical gas to liquid (GTL) fuels	GTL LPG
	GTL diesel
	GTL naphtha
	GTL jet fuel
	GTL lubeoils
	GTL methanol
	GTL dimethyl ether
III Natural gas fuel cell technologies	Fuel cell power plants residential fuel
	Cells
	Commercial fuel cells

Source WTO document: TN/TE/W/19 (accessed from https://docs.wto.org)

Qatar grants a 10 % price preference for Qatari products and 5 % price preference for GCC products in all government procurement.

Given that Qatar has a key interest in maintaining comparative advantage in exports of natural gas, LNG, and GTL, it has submitted a proposal in the Special Session of the WTO Committee on Trade and Environment for inclusion of items in the list of environmental goods and services so that tariffs on them could be reduced/removed (Table 5.7).

5.5.1.3 Saudi Arabia

Saudi Arabia became a member of the WTO in 2005. In its accession commitments, Saudi Arabia has also taken tariff bindings commitments. It has bound customs duty on crude oil at 8 % and on natural gas at 15 %. Saudi Arabia started applying the GCC common external tariff in 2003. Its applied tariff on both crude oil and natural gas is 5 %.

Saudi Arabia does not impose export duties on any goods except hides and skins, which will also be eliminated in 2013.

Saudi Arabia is the world's largest exporter of oil and one of the biggest producers of oil and natural gas. It has proven reserves of 265 billion barrels, which is a quarter of the total OPEC reserves, and another 100 billion barrels of probable reserves. It has capacity to produce 12.5 million bbl per day of crude, and produces about 8.5 million bbl per day currently. At the time when OPEC had the maximum ceiling of 28 mb/d, Saudi Arabia had a production quota of 9,099,000 barrels per day.

Domestic consumption is about 1.9 million bbl per day. One-fifth of its GDP, nine-tenth of its government income, and more than one-fifth of its export earnings

come from the hydrocarbon sector. In fact, trade to GDP ratio of Saudi Arabia has scaled up from 89 % in 2005 to 105 % in 2008, and came down to 97 % in 2010.

As a result of Saudi Arabia's geographic position and lack of pipeline connection to its markets, crude oil and its products are exported via tankers from the ports of RasTanura and Ju'aymah on the eastern coast, and Yanbu' on the western coast. Asia accounts for 70 % of Saudi Arabia's crude oil exports

Foreign investors cannot invest in Saudi Arabia in oil exploration, drilling, and production. On the other hand, Saudi and GCC investors do not require a license to invest. The requirement of Saudi Arabia General Investment Authority (SAGIA) approval for foreign investment is a national treatment limitation inscribed in its schedule on specific commitments in Services. Crude oil, gas, and downstream products are subject to automatic licensing by the Ministry of Petroleum and Mineral Resources. In recent years, foreign investors have made significant investments in the upstream development of non-associated gas, as well as in refining and downstream oil and gas industries.

The Saudi Arabian Oil Company (Saudi Aramco) benefits from certain concessionary rights and privileges with respect to production of crude oil, including on upstream oil extraction, and certain similar exclusive privileges and rights in the gas sector. The (upstream) oil extraction industry in Saudi Arabia is operated exclusively by the Saudi Aramco. Saudi Aramco is a wholly state-owned company established by Royal Decree in 1988. The company conducts its activities on a commercial basis subject to government regulations, including those related to the exploitation of national natural resources. Saudi Aramco also seeks to encourage the development of local contractors in its area of operation. Its procurement procedures afford full opportunity for all qualified suppliers of goods and services of WTO member countries to participate in competitive bidding.

Saudi Aramco operates three domestic joint-venture refineries: with Exxon-Mobil in Yanbu' (SAMREF); with Shell in Jubail (SASAREF); and with Sumitomo Chemical at Petro Rabigh (an integrated oil refinery and petrochemical plant, fed by crude oil, ethane, and butane). The total refining capacity in Saudi Arabia is roughly 2.1 mbbd.

Until the 1970s, gas produced in Saudi Arabia was mainly a by-product of oil production, or "associated" gas released as a by-product of the extraction of crude oil and was flared. In the late 1970s, the Government began to capture and commercialize gas, with a view to use it for its domestic consumption. This included the use of gas as a feedstock to industry, replacing oil and thus freeing up additional quantities of oil for export. During the same period, Saudi Aramco developed a national gas infrastructure, the "master gas system". The master gas system has been expanded and further enhanced in order to reflect expanded domestic and industrial consumption, and is now one of the largest gas networks in the world. Saudi Arabia ranks 4th in global gas reserves (associated and non-associated), estimated at 284 trillion cubic feet.

Natural gas and natural gas-based liquids (NGLs) are also used to supply fuel and feedstock requirements of Saudi Arabia's electricity, water, and petrochemical industries. The processing of natural gas also results in the production of around

410.2 mb of NGLs per year, around half of which is exported. Domestic consumption is split into household use and petrochemical feedstock for industry. NGLs (propane, butane, and natural gasoline) in excess of domestic demand are sold for export.

Fuel, gas, electricity, energy transportation services are all subject to domestic price regulation. For obvious reasons, motor spirit in Saudi Arabian fuel stations is the cheapest in the world. Domestic sales of heavy naphtha to industrial consumers in Saudi Arabia are at the prevailing international price. Export prices for heavy naphtha are based on the international market price.

Saudi Arabia has a Bilateral Investment Promotion and Protection Agreements (BIPA) and a Double Taxation Avoidance Agreement (DTAA) with India. It has also signed MOUs on technical cooperation in standardization, quality, and metrology with India.

Saudi Arabia's economic policy aims to further reduce its dependency on hydrocarbons and accelerating non-oil (e.g. manufacturing and services) growth to generate more employment opportunities for the growing Saudi labor force. Given that the oil sector is not labor-intensive, and increasing public sector employment is not sustainable in the long-run, Saudi Arabia is trying to enhance the employability of nationals by reducing the educational mismatch between Saudis' qualifications and private sector needs through the "Saudization" program.

5.5.2 Nigeria

The applied MFN tariff in Nigeria consists of five bands: duty-free, 5, 10, 20, and 35 %. All tariffs are applied on an *ad valorem* basis. Tariff on mining and quarrying products is unbound in the WTO. The applied tariff is 5.3 % (5 % customs duty and 0.3 % additional duties). Tariff preferences are provided to ECOWAS member states. Duty-free imports of plant and machinery for the mining sector are permissible. All goods imported into export processing zones are exempt from customs duty and other taxes. Additional duties and taxes that may apply to oil imports include a port development levy of 7 % of the duties payable and a Comprehensive Import Supervision Scheme charge of 1 % on the f.o.b. value of imports.

Nigeria does not have any export duties. The Export Amendment Decree of 1992 allows that all raw material or unprocessed commodities, whether mineral or agricultural, may be subject to the payment of an export levy as may be prescribed, from time to time. But this levy is not currently operational.

Nigeria has 37.2 billion barrels of proven reserves of crude oil. Crude oil contributed 16 % of Nigeria's GDP in 2009, down from 27 % in 2003. The production of crude was 1,842 bbl per day in 2009, down from 2,365 bbl per day in 2005. Nigeria is a member of OPEC. It had a production quota of 2,306,000 bbl per day when the OPEC limited its production to a maximum of 28 million tons. Most of Nigerian crude is high quality with low sulfur content (Bonny light and

Forcados) and therefore gets a slight premium over benchmark prices. Forty percent of Nigerian crude is exported to the US, 11 % to India, and 10 % to Brazil.

Proven reserves of natural gas in Nigeria are 5.25 trillion m^3. This is 2.8 % of total world reserves. Most natural gas in exported as Liquefied Natural Gas (LNG). The West African Gas Pipeline has enabled Nigeria to export gas to Ghana, Togo and Benin, and potentially to Ivory Coast and Senegal. Nigeria Gas Company, an NNPC subsidiary, has monopoly on supply of gas to the domestic market.

The Government owns all minerals including crude oil and natural gas in Nigeria. The Government grants production licenses to Nigerian citizens only. In practice, most of the production is through joint ventures or production sharing contracts between the Nigerian National Petroleum Corporation (NNPC) and international oil companies. NNPC has 12 subsidiaries.

Before 2004, Nigeria followed a pro-cyclical fiscal pattern with high oil prices leading to high public spending and high growth followed by cut-backs and recession when oil prices fell. The authorities recognized the destabilizing impact of a pro-cyclical fiscal policy and, in order to manage revenue volatility and improve the implementation of fiscal policy, implemented the "oil revenue fiscal rule" in 2004. It is an informal political agreement between different layers of government for the allocation of benchmark oil revenues. Oil revenues are calculated based on a benchmark oil price and projected production levels. Any revenue in excess of the benchmark level is supposed to be transferred to the "excess crude account" (ECA). In 2007, a Fiscal Responsibility Act was enacted to, inter alia, give a legislative basis to the informal oil-revenue-based fiscal rule. The Fiscal Responsibility Act prescribes procedures for formulating, executing and publishing the annual budget and medium-term expenditure framework, and sets out the role of the budget oil price. It also contains a rule limiting the overall budget deficit to 3 % of GDP, with only a very restrictive escape clause.

Initially, the oil revenue fiscal rule was effective, with the pro-cyclicality of public spending declining substantially during 2005–2008 as surplus oil revenues were sterilized in the ECA. However, the lack of a legal basis to enforce the rule led to ad hoc disbursements from the account. Thus, despite world oil prices and domestic oil production well in excess of the budget benchmarks in 2010, the government spent all current oil revenues and drew on savings in the ECA at a time when stabilization called for a rebuilding of ECA balances. The balance in the ECA peaked at US$20 billion in 2008, and then declined to US$ 3.4 billion in 2010. Nevertheless, the budget price of crude oil has been maintained. The price came down to US$ 45 per barrel in 2008 during the banking crisis, but trade was not restricted even during the crisis.

Petroleum is a highly taxed commodity in Nigeria. Tax rate under the Petroleum Profit Tax (PPT) Act is 85 % for mature sole risk or joint-venture partners, marginal field operators, and service contracts that have fully recovered their capital investment, 65 % for newer sole risk or joint-venture partners, marginal field operators, and service contracts that have not fully recovered their capital investment, 50 % for profit sharing contracts, and 30 % for gas production, transmission, and distribution. Similarly, rents are payable based on factors like

the size of the contract area; royalties are payable based on production and whether it takes place onshore, shallow offshore, or deep offshore; and bonuses are payable when the PSC or joint-venture agreement is signed, with further bonuses payable when a production threshold is reached.

However, some incentives are also applicable to the oil and gas sector: capital allowance is provided at the rate of 20 % per annum in the first 4 years, 19 % in the 5th year, and the remaining 1 % in the books; investment tax credit provided at 50 % for production sharing contracts; petroleum investment allowance provided at varying rates from 5 to 20 % depending on water depth; and profits are allowed to be repatriated. There is no foreign exchange regulation, and dividend derived from manufacturing companies in petrochemical and liquefied natural gas subsectors are exempt from tax.

Price preference of 10 % is given to domestic oil companies for exploration under the Nigerian Content Development Bill, 2010.

Fuel is subsidized in Nigeria. In the past, the Federal Government allocated crude oil to the NNPC for refining and sale to private retail outlets at fixed prices. Since 2003, the Federal Government determines the prices of petroleum products (now covering petrol and diesel only), and it provides a subsidy to meet the difference between these prices and a price set by the Petroleum Products Pricing Regulatory Agency (PPPRA). The price set by the PPPRA is based on import parity pricing adjusted for cost of transportation, distribution, and marketing.

The Petroleum Industry Bill, aiming to implement recommendations of the Oil and Gas Sector Reforms Implementation Committee (OGIC) of 2000 through the National Oil and Gas Policy, 2007, has been pending in the National Assembly of Nigeria for 5 years. These recommendations include the separation of functions relating to policy formulation, regulation, and commercial operations; an independent regulatory and licensing agency for inspection service; restructuring the NNPC to focus only on commercial activities; setting up a new area-management scheme to encourage development; and make undeveloped areas available for reallocation.

Similarly, the Gas Master Plan, approved in 2008, is intended to address challenges such as export orientation of the sector as opposed to domestic supply, short-term reserve constraints, and debt of NNPC.

5.5.3 Venezuela

Venezuela is the world's fourth largest oil producer. It plays a major role in the international oil market as it is one of the few petroleum exporting countries outside the Middle East with spare capacity. Venezuela's petroleum reserves are estimated at 77,658 mb, corresponding to about 70 years of production at the current pace, and gas reserves at 25,474 million cubic feet, representing about 100 years of production. Its crude production capacity is about 3.58 mb/d and refining capacity around 3.1 mb/d. Its output is estimated at 1,151 mb (3.05 mb/d), equivalent to around 4 % of global production and 10 % of OPEC output.

The first move towards the establishment of OPEC took place in 1949 when Venezuela approached Iran, Iraq, Kuwait, and Saudi Arabia to suggest talks and explore ways to improve communications between them. These five countries formally established OPEC in 1960 as a permanent intergovernmental organization; as a founding member, Venezuela enjoys certain special rights within the organization. Venezuela has a quota of 3,223,000 barrels per day in OPEC.

Production of refined products is estimated at 440 mb (1.24 mb/d) and gas production at 253 million cubic feet. Many of Venezuela's hydrocarbon resources are obtained at low cost and a large part of domestic industry has developed on the assumption that this advantage will be translated into a supply of inputs at a price below the international market price. In a number of large production chains, for example, aluminum and petrochemicals production, the Venezuelan market structure allows input prices to be set below the world market price.

The Venezuelan economy is strongly reliant on the hydrocarbons sector, which generated about a quarter of GDP and over 80 % of merchandise exports earnings. The hydrocarbons sector is largely in the hands of the State. Under the Constitution, the petroleum industry and other sectors, operations and goods and services which are in the public interest and of a strategic nature are reserved for the State. It provides that the State shall retain all shares of Petróleos de Venezuela, S.A. or of any other body created to manage the petroleum industry, with the exception of subsidiaries and strategic joint ventures. It further provides that the State shall promote the domestic manufacture of raw materials deriving from the exploitation of non-renewable natural resources with a view to assimilating, creating, and inventing technologies, creating jobs and driving economic growth.

In order to infuse investment into the sector, the Hydrocarbons Law was passed in 2001, enhancing investment opportunities for the private sector and introducing changes in taxation. Although private investment and control are allowed in new refineries, existing refineries and primary activities are reserved for the State or must be under State control. The gas industry has its own legislation and is open to the private sector.

The Hydrocarbons Law provides for the government to fix the price of hydrocarbons by-products in the domestic market and adopt measures to guarantee supply. It increased the royalty payable for petroleum production to 30 % of the volume of hydrocarbons extracted from any deposit, compared with 16 2/3 % under the previous Law. It also provides for the payment of a Special Consumption Tax, a Surface Area Tax, and a General Consumption Tax. The Special Consumption Tax, imposed on Venezuelan hydrocarbons used as inputs, is 10 % of the value of each cubic meter of products derived from the hydrocarbons produced and consumed as fuel in the operations of enterprises in the petroleum sector. The General Consumption Tax, paid by the consumer, applies to each liter of products derived from hydrocarbons sold on the domestic market at a rate ranging from 30 to 50 % of the price paid by the final consumer and is fixed annually. The Surface Area Tax applies to those parts of concessions that are not being exploited and it increases over time.

One of the goals of trade policy is to strengthen Venezuela's position in the international economy. This objective is to be achieved by identifying and developing new markets for non-traditional Venezuelan products, building up strategic partnerships in the petroleum sector with a view to increasing the value added to the country's exports, and supporting the OPEC.

Venezuela supplies about 56 % of its crude production to USA and 70 % to North America in all. It aims to supply a significant part of the balance production to neighboring countries through various Petroleum Supply Agreements. These Agreements have very favorable credit and financial terms for the buyer countries. Under the Programme for Energy Cooperation with the Countries of Central America and the Caribbean (also known as the San José Pact) signed by Mexico and Venezuela in 1980, 160,000 barrels of crude oil and petroleum products) are supplied to Barbados, Belize, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, and Panama. Under the Caracas Energy Cooperation Agreement signed in 2000 by Belize, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, and Panama, Venezuela supplies 80,000 barrels per day of crude oil, petroleum products, and LPG to these countries. The agreement expired in October 2001, but a new agreement was signed in December 2001. The signatory countries were Barbados, Dominica, Grenada, Guyana, Haiti, Honduras, Jamaica, and Saint Vincent and the Grenadines. It is understood that Jamaica is the only country to have availed itself of the original agreement, as well as of its renewal. The Comprehensive Cooperation Agreement which Venezuela signed with Cuba in 2000 provides for a supply of 53,000 barrels of crude oil and petroleum products per day on terms and conditions similar to those stipulated in the Caracas Energy Cooperation Agreement. In view of the limited offtake from neighboring countries, Venezuela has diversified its exports beyond Americas. Memorandums of Understanding and Energy Cooperation Programmes have also been concluded with Colombia, India, Mexico, Nigeria, and the United Kingdom. In 2012, Venezuela was the seventh largest supplier of crude to India.

Venezuela's oil revenues account for roughly 94 % of export earnings, more than 50 % of federal budget revenues, and around 30 % of gross domestic product. Apart from petroleum, the country's natural resources include natural gas, iron ore, gold, bauxite, diamonds, and other minerals.

Venezuela applies the Andean Community Common External Tariff, with some exceptions. The average applied MFN tariff is 12 %, and including variable levies, 12.4 %. Venezuela has bound in the WTO its entire tariff at a general level of 35 for non-agricultural products, and of between 10 and 135 % for agricultural goods.

Under the General Agreement on Trade in Services (GATS), Venezuela exempted petroleum-related services from MFN treatment in agreements with Germany, France, Brazil, and Central American and Caribbean countries which grant preferences for the distribution and marketing of petroleum and petroleum products, and also for advisory services and the exchange of technology.

5.6 India's Positive Agenda in Negotiations

Having examined the trade and pricing policies of some of the major suppliers of petroleum to India, this section attempts to put it in the context of India's key energy-related interests that may become subject of future negotiations in the WTO and offers a positive agenda for India to explore in such negotiations.

5.6.1 Energy Security

The first issue of relevance in terms of a positive agenda is securing India's energy security. Of the top 10 suppliers of oil to India, nine are members of OPEC, and the tenth (Oman) generally follows the OPEC on energy issues. Similarly, of the top 15, 10 are from the Middle East region, two from Latin America, two from North Africa, and one from Asia. Therefore, in terms of coalition building, countries from the Middle East may offer opportunities for India to work with in order to secure its energy needs. Such collaboration, in turn, may provide opportunities to these countries to secure India as a long-term market for their oil and gas. They predominantly represent the OPEC interests. Collaboration with OPEC members is, thus, a possible positive agenda for India in future negotiations.

Even though oil reserves are finite, in most of these countries they will last for 60–80 years at present production levels. Continued availability of a secure market for oil and oil products, therefore, is likely to be the prime concern of OPEC members. In terms of sustainable conservation, their focus may remain on improving technology to make fossil fuels cleaner and better for the environment.

OPEC's long-term strategy is to continue to have an active role in trade and environment and climate change-related multilateral negotiations, recalling the principle of "common but differentiated responsibilities", as well as the obligations of industrialized countries with regard to developing country parties. The strategy also calls for an active and more coordinated role of OPEC in trade-related negotiations, as well as increased cooperation with other developing countries, reinforcing the principle of permanent national sovereignty over natural resources, and recognizing the exhaustible and non-renewable character of oil. India's strategy is fairly aligned with theirs in the climate change negotiations as both are members of the Group of 77, thereby offering another opportunity to build a coalition within and outside the WTO.

The external sector policy in India's Hydrocarbon Vision 2025 is to supplement domestic availability of oil with a view to provide adequate, stable, assured, and cost-effective hydrocarbon energy to the Indian economy. To achieve it the actions required in the medium term include putting in place a comprehensive policy to include total deregulation of overseas Exploration & Production (E&P) business and empowering them to compete with international oil companies with provision of fiscal and tax benefits, leveraging India's large-scale oil and gas needs to obtain

quality E&P projects abroad, having a focussed approach for E&P projects, and build strong relations in focus countries with high attractiveness like Russia, Iraq, Iran, and North African countries.

The Working Group on Oil and Gas for India's 12th Five Year Plan also stresses on increased trade and investment efforts with oil producing countries. The National Action Plan on Climate Change underlines the UNFCCC principle of "common but differentiated responsibilities" of nations in mitigation and adaptation efforts towards resolving climate change issues and stresses the importance of developed countries meeting their Kyoto Protocol commitments and the need for transfer of technology to developing countries and a conducive intellectual property rights policy to achieve it.

The common threads in the OPEC long-term strategy and India's policy on hydrocarbons and climate change are useful pointers to the possible collaboration between the two in future negotiations on trade and energy security as well. A focus on optimal supply and pricing policies coupled with efforts to get the developed countries to meet their mitigation targets while providing financial and technological support for adaptation and transfer of technology is one such thread.

5.6.2 Import Tariffs

The second issue of relevance in terms of the positive agenda is import tariffs. Many of the original GATT members had kept the tariff on crude oil and petroleum products unbound. India has also not bound its tariff for crude oil or natural gas. Among its major suppliers which are also WTO members, only Malaysia and Nigeria have both tariff lines unbound. Kuwait has crude unbound and natural gas bound at 100 %. Brazil and Venezuela from Latin America have 35 % tariff binding, while Angola from sub-Saharan Africa has bound crude at 80 % and natural gas at 60 %. Egypt and Oman have bound both tariff lines at 20 %. Qatar and UAE have bound both at 15 %. Most of the recently acceded members have had to negotiate comparatively much lower tariff bindings. Saudi Arabia has bound crude at 8 and natural gas at 15 %. However, the applied rates for all these countries are much lower, ranging from 0 to 5 %, except for Venezuela which has an applied rate for crude at 10 %. India has an applied rate of 5 %.

India exports petroleum products, mostly to countries that are not major suppliers of crude or gas. It will be in India's interest, therefore, to seek lowering of petroleum product tariff bindings. Further, if India proposes to follow a policy of opening up the domestic refinery market for international competition as evidenced in its Hydrocarbon Vision 2025, potential investors may find it beneficial to invest in downstream production if tariff is lowered. Since most OPEC members from the Middle East have low tariff bindings on petroleum products, the two could collaborate to demand reduction/removal of tariffs on petroleum products. They could work together to seek non-actionable status for investments/subsidies

on technology upgradation efforts in optimizing oil recoveries and clean production activities.[13] They could also seek removal/reduction of tariff and non-tariff barriers on gas related trade and technological products, as has been proposed by some countries like Oman in the WTO.

5.6.3 Export Tariffs

The third issue in terms of the positive agenda relates to export tariffs and restrictions. There are proposals from some WTO members to seek binding of export tariffs. Historically, due to focus on opening markets rather than ensuring availability of raw materials as inputs for production, export restrictions have not been the focus of trade negotiations. It is only in recent accessions that export restrictions on exhaustible natural resources, and binding export duties, have been demanded and, at times, secured.

Indian refiners (whether existing new refineries or expected refinery capacity through foreign investment) are likely to fare significantly better than competitor refineries in other Asian countries. First, the large-scale and world-leading complexity of India's new greenfield refineries mean marginal costs of production are significantly less than older, less complex facilities, thereby increasing refining margins. Second, India's new refinery capacity is equipped to process heavier and cheaper crude grades, again putting upward pressure on refining margins by lowering input costs. Finally, Indian refineries are configured to produce complex, high-end products which will retail in international markets at a premium. This too will support refining margins. It is likely that there will be excess refinery capacity in Asia due to many new refineries being set up in the region. Even then, the Indian refinery sector is likely to maintain the market share as a result of unique, clean, and high-end product slates.

The emergence of India as a global refined product exporting hub is likely to have significant implications for regional product markets, extending the depth of product markets in the Middle East and Southeast Asia in particular. Growing exports of refined products from India have the potential to add to the energy security of countries in the Middle East and Asia-Pacific that are increasingly reliant on refined product imports, such as Iran, Saudi Arabia, Vietnam, Indonesia, and Australia. This confluence of interests of India and countries in the Middle East and Asia-Pacific region offer an opportunity for coalition building in order to secure export tariff bindings on oil and gas in return for export tariff bindings on petroleum products in future negotiations on energy.

[13] Reviving Article 8.3(c) of the WTO Agreement on Subsidies and Countervailing Measures could be one such effort.

5.6.4 Dual Pricing

The fourth issue of relevance is dual pricing. Resource endowed countries often apply multi-tier pricing policies for various domestic consumers of oil and gas on the one hand and the export or international price on the other. Complex public policy objectives and methodologies deployed by such countries pose a multiple set of challenges in terms of determining legality under various WTO agreements. EU, OPEC, CIS and ASEAN Member States, and Canada, China, India, and Mexico have been known to have adopted dual pricing at some stage or the other, yet there has been no challenge to this practice in the WTO dispute settlement mechanism. Mexico went as far as delaying its WTO accession for 6 years to reserve its sovereign rights over its natural resources in its Protocol of Accession. Russia's accession was delayed *inter alia* due to this issue.

With increased role of environmental protection and climate change concerns in public policy, dual pricing policy has been considered a legitimate means of adopting cleaner technologies, even if inefficient energy consumption may hamper new investment in the sector, as has been evidenced in Russia and China. In developing countries in particular, subsidization of domestic industries through low cost energy becomes a policy objective to stimulate growth, raising the ire of developed countries that face production shifts in the process. Within regulated economies like the EU, these dual pricing practices are subjected to litigation even today.

Price controls are recognized under the national treatment provisions of GATT as requiring restraint, but the focus of the provision is on protecting the interests of resource suppliers, rather than importers.[14] More relevant for exporters needing competitively available inputs is rules on export restrictions[15] in GATT where restrictions and prohibitions other than duties, taxes, and other charges made including those made effective through quotas or other measures are prohibited. But it is not clear whether these other measures include energy pricing measures. No WTO dispute has ruled on the matter.[16]

Many of the main suppliers of oil and gas to India resort to dual pricing, and so does India. In terms of negotiating stance, therefore, India may wish to continue arguing against coverage of energy dual pricing under WTO disciplines.

5.6.5 Transit Rules

The fifth issue relates to transit rules. For India, it has two main dimensions. The first is using transit countries like Pakistan and Afghanistan to import oil and gas

[14] Article III.9 of GATT 1994.

[15] Article XI.1 of GATT 1994.

[16] While the WTO disputes in India-QRs and Japan-Semi-conductors cases have ruled that Article XI.1 is comprehensive enough to cover export restrictions, there has been no ruling on energy dual pricing being covered under 'other measures'.

through pipelines from countries in the Near East and Central Asian regions. India currently has two pipeline projects underway; the TAPI gas pipeline from Turkmenistan and the IPI petroleum pipeline from Iran. The second dimension is transit rights of its neighboring countries such as landlocked Nepal and Bhutan intending to import oil and gas using Indian ports or territory, and Bangladesh using North-Eastern Indian territory to bring gas from its eastern neighbors like China and Myanmar.

Pipeline transit issues are currently relevant negotiating issues in case of pipelines running from the Caspian Sea area across Europe, and the stance of the participating countries[17] in a possible trade and energy negotiation may guide Indian negotiators in the future.

Article V of GATT 1994 guarantees freedom of transit. The guarantee applies to the WTO member where the transiting good originates or is destined for, and a WTO member whose territory is used for transit. Thus, India and Pakistan being the country of destination and transit, respectively, in the TAPI and IPI pipelines, Article V provisions will apply to transit through pipelines. However, Turkmenistan, Iran, and Afghanistan are not yet members of the WTO, Turkmenistan not even an observer/applicant for accession. Thus, GATT/WTO obligations cannot be invoked with them.

Even for those to whom the obligations apply, many questions remain. For example, since the freedom of transit is guaranteed to traffic in transit, i.e., goods and means of transport (vessel) that are *in* transit, it is not clear whether fixed infrastructure used for transit such as pipelines are covered. While electricity is beyond the scope of this chapter, it is interesting to note that there is still a lack of clarity whether it is a good, and thus covered under the obligations flowing from Article V. Similarly, while the MFN obligation is explicitly covered in the provision, it is not clear whether all the elements of the national treatment obligation also apply.

Another element needing clarity is whether the guarantee applies irrespective of the capacity of transit infrastructure to bear the load of all transit needs of all littoral/hinterland nations. In other words, can capacity constraints be used as an excuse to deny freedom of transit? For pipelines which are often constructed with specific users in mind and for specific oil/gas to be transited to specific destinations, this becomes an important issue. Therefore, invocation of GATT Article V may not always be a solution in such circumstances.

Some proposals in the Doha negotiations on trade facilitation proposed clarity for the application of Article V to pipelines, and even additional obligations not envisaged by the drafters of the Article. EU, Switzerland, and a group of countries led by Turkey submitted proposals to specifically include fixed infrastructure like pipelines, national treatment, and elements that may cover issues relating to congestion management and insufficient pipeline capacity.

[17] Including under the Energy Charter Treaty of the European Union.

Given the nature of pipeline projects, disciplines on investment may be equally relevant to secure transit rights by nations. Investment is not covered in the Doha negotiations, except implicitly in the GATS framework. Therefore, proposals may be required under the services negotiations to secure that aspect of pipeline transit. Safety of pipelines against pilferage and terrorism is another missing element in ongoing negotiations.

In light of the above-mentioned difficulties, developments relating to the European proposal may have to be awaited for better clarity of transit obligations under the WTO rules. After having gained experience through its ECT negotiations, and the fact that Caspian Sea area countries are the most concerned, negotiations in this area may be driven by them.

Another relevant transit issue is shipping lines involved in oil trade. In so far as India's oil supplies are concerned, the shipping lines used are international tanker businesses, which work under market forces. Therefore, negotiations on matters relating to possible trade distortions due to policies of shipping lines may continue for a considerable time in the future in maritime forums such as the International Maritime Organization (IMO).

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