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# Introductory Remarks: International Energy Governance

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#### INTERNATIONAL ENERGY GOVERNANCE

This panel was convened at 12:30 p.m., Friday, March 30, by its moderator, Lakshman D. Guruswamy of the Center for Energy and Environmental Security, University of Colorado Law School, who introduced the panelists: Yuka Fukunaga of Waseda University School of Social Sciences; Gabrielle Marceau of the Legal Affairs Division, World Trade Organization; Timothy Meyer of the University of Georgia School of Law; and Yulia Selivanova of the Trade and Transit Department, Energy Charter Secretariat.

#### INTRODUCTORY REMARKS BY LAKSHMAN GURUSWAMY\*

Writers spanning two centuries, from Herbert Spenser in the 18th century<sup>1</sup> to Leslie White in the 20th century,<sup>2</sup> have asserted that the ability to harness energy is the basis of both social progress and development disparities among societies. Harnessing energy refers to the ability of humans to convert or transform exogenous energy (meaning energy outside themselves) to perform jobs for us. A primary reason for the greater economic progress of some countries over others lies in their access to cheap energy.<sup>3</sup> Over the past two centuries efficiencies in the way in which coal, gas, and oil were converted into useful energy (by combustion processes or producing electricity) has accounted for the economic growth of western civilization.<sup>4</sup>

Juxtaposed to the importance of energy, international energy governance (IEG) only functions in a random and truncated fashion, and has not been conceptualized in any comprehensive manner. Strikingly, the energy cycle of hydrocarbons or fossil fuels<sup>5</sup> outlined below, on which the world relies for over 80% of its energy, demonstrates the disjointed patchwork of energy governance.

#### MINING AND PRODUCTION

IEG can empower or encourage mining and production through financial or other incentives for mining and extraction of fossil fuels, or restricting such mining and production, or resolving practical difficulties as was the case with the Agreement on the Resolution of Practical Problems with Respect to Deep Seabed Mining Areas, concluded at New York on August 14, 1987.<sup>6</sup> Similarly, the International Labour Organization has enacted a number of treaties governing the safety of mines for extraction, including oil, gas, and other minerals, or prohibiting child labor. OPEC lays down quotas restricting production of oil. The United

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<sup>&</sup>lt;sup>1</sup> HERBERT SPENCER, FIRST PRINCIPLES (1897).

<sup>&</sup>lt;sup>2</sup> Leslie White, *Energy and Tools, in* The Evolution of Culture: The Development of Civilization to the Fall of Rome (1959).

<sup>&</sup>lt;sup>3</sup> Fred Cottrell, Energy & Society: The Relation Between Energy, Social Change, and Economic Development 7 (rev. ed. 2009).

<sup>&</sup>lt;sup>4</sup> Robert U. Ayres & Benjamin Warr, The Economic Growth Engine: How Energy and Work Drive Material Prosperity, at xviii–xxi (2009).

<sup>&</sup>lt;sup>5</sup> This brief overview does not cover the IEG of nuclear or renewable energy.

<sup>&</sup>lt;sup>6</sup> 1987 U.S.T. LEXIS 53.

<sup>&</sup>lt;sup>7</sup> 1995 U.S.T. LEXIS 228.

<sup>&</sup>lt;sup>8</sup> Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor (ILO No. 182), 2133 U.N.T.S. 161 (entered into force Nov. 19, 2000).

http://en.wikipedia.org/wiki/OPEC#Quotas\_circa 2005.

Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol attempt to control emissions of CO<sub>2</sub> that could result in restrictions on the mining and production of fossil fuels. The OECD Agreement on an International Program (IEP) of 1974, as amended, was initially dedicated to respond to physical disruptions in the supply of oil, as well as to serve as an information source on statistics about the international oil market and other energy sectors.

#### TRANSPORT, DISTRIBUTION, AND STORAGE

Fossil fuels need to be transported, stored, and distributed. Billions of gallons of oil are transported across the globe by ship, causing oil pollution of the oceans because of operational reasons or tanker accidents. Vessel pollution is regulated by a number of international instruments that indirectly act as instruments of energy governance. Pipelines also transport or convey oil both nationally and internationally, and bowsers carry petroleum both nationally and internationally by road and rail. The Energy Charter Treaty (ECT) of 1994, and the Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA) of 1998 were signed by 52 countries that include Russia, the EU, and eastern and western Europe. The ECT seeks to ensure reliable cross-border energy transit flows through pipelines, grids, and other means of transportation, and the resolution of disputes between participating countries. There are health and safety ramifications to these activities, and they are governed internationally as well as nationally by a variety of treaties and national laws.<sup>11</sup>

#### TRADE AND COMMERCE

A number of international treaties deal with trade and commerce in energy. The most important is the World Trade Organization, which deals with the global rules of free trade between nations. WTO agreements—negotiated, signed, and ratified by a large majority of the world's trading nations—provide the legal ground rules for international commerce, including fossil fuels. The WTO also has a compulsory system of dispute resolution. Other regional treaties include the ECT, which aims to protect foreign investments; promote non-discriminatory conditions for trade in energy materials, products, and energy-related equipment based on WTO rules; and provisions the promotion of energy efficiency.

#### COMBUSTION AND USE

Fossil fuels are combusted and used in nearly all kinds of transportation, including large and small personal and commercial vehicles like cars, trucks, trains, planes, ships, and military vehicles. Fossil fuels are also used for heating and cooling commercial buildings and homes. While there are no treaties actually controlling the use of fossil fuels in transportation, the UNFCCC and the Kyoto Protocol could indirectly lead to the greater production of vehicles using renewable energy rather than fossil fuels, and to greater efficiencies in the heating and cooling of buildings.

 $<sup>^{10}</sup>$  See generally Lakshman D. Guruswamy, International Environmental Law in a Nutshell, ch. 11 (4th ed. 2011).

<sup>&</sup>lt;sup>11</sup> See generally REGULATING ENERGY AND NATURAL RESOURCES (Barry Barton, Alastair Lucas, Lila Baretra-Hernández & Anita Rønne eds., 2006).

#### WASTE DISPOSAL AND POLLUTION

There is an incessant flow or extraction of materials composed wholly or in part of fossil fuels, which are transformed into various goods and services—from shirts to computers to shampoos, and so on, which are used by humans. The problem is that the waste these products create must ultimately re-enter the environment. The First Law of Thermodynamics predicates that matter and energy are never destroyed but are only transformed. Therefore, while the material inputs extracted from the environment are transformed into goods and services, they do not go away. They return to the environment as wastes or pollutants that are equal to the raw materials and energy that entered the environment. The UNFCCC and the Kyoto Protocol seek to reduce carbon dioxide resulting from the use of fossil fuels. A number of other treaties deal with pollution from toxic and hazardous materials arising from the use of energy. 12

#### REASONS FOR THE FRAGMENTATION OF IEG

Among the reasons for the fragmentation of international energy governance are the failure to integrate all parts of the energy cycle; creating differing institutions for coal, oil, and gas; a singular and insular focus on mitigation of carbon dioxide; a dominant emphasis on energy security; a paramount focus on supply to the exclusion of demand; disregarding the pivotal importance of energy conservation and efficiency; a lack of emphasis on renewable and sustainable energy; blindness to the needs of the "Other Third" and energy poverty; and creating a multitude of organizations with competing and overlapping missions and perspectives. These organizations include, inter alia: the UN agencies (UN Energy, the UN Environment Programme, the UN Industrial Development Organization, the UN Development Programme, the UN Food and Agriculture Organization, and the World Health Organization); the Commission on Sustainable Development; the International Energy Agency; the Energy Charter Treaty; the International Atomic Agency; the International Renewable Energy Agency; the World Trade Organization; REN 21 (the Renewable Energy Policy Network for the 21st Century); the Renewable Energy and Energy Efficiency Partnership; the Global Environment Fund; the World Bank Gas-Exporting Countries Forum; and the International Energy Forum.

## RENEWABLE ENERGY TRADE AND GOVERNANCE

# By Yuka Fukunaga\*

Among the various forms of energy, my presentation focuses on renewable energy. In particular, it discusses a WTO dispute between Japan and Canada, concerning Ontario's Feed-in Tariff Program (FIT Program). I begin with the factual background of the dispute,

<sup>&</sup>lt;sup>12</sup> See generally Guruswamy, supra note 10, chs. 9, 10.

<sup>\*</sup> Professor, Waseda University; Assistant Legal Counsel, Permanent Court of Arbitration. These remarks represent the author's personal views and do not represent the views of the Permanent Court of Arbitration.