

THE TRANSFORMATION OF WORLD ENERGY GOVERNANCE: A BRIEF OVERVIEW FOCUSING ON ENERGY SECURITY

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Overview

A bipolar system created by OPEC and the IEA for world energy governance was established in the 1970s, but only lasted until the 1990s. Entering the 21st century, various international entities proliferated for international cooperation and dialogue on energy issues. As a result, a multilayered intergovernmental system has been formed for world energy governance. In this system, coal has no well-established international organisation/forum, bringing a risk of underrepresentation of coal in policy discussions on energy supply in each country as well as globally. There is no single intergovernmental organisation/forum that comprehensively addresses energy issues and widely involves both developed and developing countries. As such, regional cooperation can be complementary to world energy governance. On the other hand, global warming has surfaced as a pressing issue in international society. While energy-related organisations/forums are focusing on the decarbonisation of energy systems, rather than energy security, which remains an important criterion for energy policy. In order to fill the gap created by the lack of comprehensive intergovernmental organisation/forum for energy governance, worldwide cross-sectional discussion and dialogue by non-governmental entities, such as business circles and academia, has also become important, especially for energy security.

Methods

Historical analysis of world energy governance since the 1970s by observing construction and function of various energy-related organisations.

Results

Up until the 1970s, energy supply and demand was mainly decided by market forces in most countries. Though the oil supply instability in Europe during the Suez Crisis (or the 2nd Arab–Israeli conflict) in 1956 led to the origin of the energy security concept, only a limited number of countries articulated concern over the stable supply of energy.

Two oil crises in the 1970s dramatically changed this state of affairs. Energy security became a major national interest for energy importing countries. International governance for energy issues first emerged after these geopolitical crises, establishing a Cold-war type bipolar system. Oil exporting countries, united in the Organization of the Petroleum Exporting Countries (OPEC), gained the right of price determination in international oil markets through an international cartel for oil supply restriction.

In response, developed countries in the Western Bloc, which were major customers of exported oil, formed the International Energy Agency (IEA) in 1974 under the framework of the Organisation for Economic Co-operation and Development (OECD) and pledged to build oil stockpiles in order to counteract oil supply restrictions by petroleum exporting countries. Both OPEC and IEA were ‘collective defence organisations’ for major energy exporters and importers. That is why the conflict of OPEC and IEA in the 1970s and 1980s can be called a Cold-war type system.

However, this bipolar system could not survive long. Entering the 1990s, both OPEC and IEA waned in influence due to the changing international energy supply and demand. OPEC’s power had been reduced as a collective defence organisation because oil was no longer the overwhelmingly dominant energy source. Partly due to oil importers’ efforts to reduce dependence on oil, oil-substituting energy sources such as coal, natural gas and nuclear energy increased their share in the energy mix of oil importing countries. In addition, oil production outside OPEC members, for example in the North Sea, was promoted and further decreased OPEC’s influence. The decline of OPEC was a laudable success by the IEA and its member countries, but the IEA itself had also experienced a decline of prominence. Because of the globalization of the world economy, industrial activities in developing countries became very lively and their demand for energy increased. The most notable example was China after its ‘reform and opening-up’ in 1978. India followed China. In 1973, IEA members’ share in world energy consumption (total primary energy supply) was a bit more than 60%, but according to the latest IEA statistics, in 2014, it has fallen to less than 37%. Non-IEA countries’ share has risen from 40% to 63% over the same period.

Entering the 21st century, in addition to OPEC and the IEA, various international entities have proliferated for international cooperation and dialogue on energy issues. Just like oil exporting countries, gas exporting countries formed the Gas Exporting Countries Forum (GECF) in 2001, since natural gas has become increasingly important in international energy trade.

Though the IEA has been expanding its scope from primarily focusing on oil to covering other energy resources as well as energy efficiency, its OECD framework hinders the IEA in involving developing countries as full members. Thus, specialised international organisations/fora have appeared for various energy issues, inviting major developing countries as their members. On the energy demand side, the International Partnership for Energy Efficiency Cooperation (IPEEC) was formed in 2008. On the energy supply side, the International Atomic Energy Agency (IAEA), whose major task was originally ‘a watch dog’ for nonproliferation of nuclear weapons, has expanded its role in promoting peaceful use of nuclear energy both from the regulatory side and the policy side. Since most countries possess renewable energy resources, such as solar, wind and geothermal, and those resources are mostly not suitable for international trade, international cooperation for renewable energy energies are sought among many countries that are both a producer and a consumer of renewable energy. The Renewable Energy Policy Network for the 21st Century (REN21) was launched in 2004 as a global multi-stakeholder policy network and the International Renewable Energy Agency (IRENA) was established in 2009 as a formal international organisation.

Furthermore, a proposal by France and Venezuela of a dialogue between OPEC and the IEA resulted in the establishment of the International Energy Forum (IEF) in 1991. In 2002, the IEF decided to have a permanent secretariat to facilitate dialogues between energy producers and consumers. Though the IEF is expected to be a channel between energy producers and consumers, it currently does not play a prominent role in world energy governance.

As the challenges posed by global warming have surfaced as a pressing issue in international fora, the energy security concept has declined in prominence. For climate change, an international governance has been pursued since the 1990s and was adopted through the Paris Agreement, an agreement under the United Nations Framework Convention on Climate Change (UNFCCC) dealing with greenhouse gases emissions mitigation, adaptation and finance on 12 December 2015. As global warming is closely related to CO₂ emission from energy consumption, existing energy-related organisations/fora are switching focus from energy security to decarbonising energy systems.

Unlike environmental issues, the United Nations (UN) has not wielded strong influence over energy issues. A world energy governance led by the UN is not yet foreseeable. For world energy governance, the current multilayered intergovernmental system is expected to continue for the time being.

Conclusions

Currently, a multilayered intergovernmental system exists for world energy governance. In this system, three issues should be noted in relation to energy security. Firstly, coal, the most traditional and abundant fossil energy resource, has no well-established international organisation/forum. This fact may result in underrepresentation of coal in policy discussions on energy supply in each country as well as globally. Secondly, in any case, there is no single intergovernmental organisation/forum that comprehensively covers energy issues and widely involves both developed and developing countries. As such, regional cooperation can be complementary to world energy governance, for example, the European Union (EU) in Western and Central Europe, among others. Thirdly, in order to fill the gap created by the lack of a comprehensive intergovernmental organisation/forum, worldwide cross-sectional discussion and dialogue by non-governmental entities has become increasingly important. The World Energy Council (WEC) and the International Association of Energy Economics (IAEE) are fulfilling such a role in business circles and academia respectively.

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