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The Transformation of World Energy Governance: A Brief Overview Focusing on Energy Security

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1. Background

- Asia Pacific Energy Cooperation (APEC) launched [APEC Oil and Gas security Exercises \(OGSE\)](#) in 2012 and expanded its scope to [APEC Oil and Gas Security Initiative \(OGSI\)](#) in 2014, including emergency exercises, government officials' networking and topical studies.
- As a project executant of OGSE and OGSI, [Asia Pacific Energy Research Centre \(APERC\)](#) has continued questioning what is an appropriate role for regional forum such as APEC in energy security.
- This presentation is one of byproducts of such “soul-searching effort’s”.
 - Evolution of energy security concept
 - Its relationship with APEC energy cooperation
 - Transformation of world energy governance focusing on energy security

2. Bipolar System of OPEC and IEA after the 1970s

- Up until the 1970s, energy supply and demand was mainly decided by market forces in most countries.
 - ⇒ Only a limited number of countries articulated concern over the stable supply of energy (energy security).
- Two oil crises in the 1970s dramatically changed the situation.
 - ⇒ 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**.
 - **The Organization of the Petroleum Exporting Countries (OPEC)** gained the power of price determination in international oil markets through a cartel.
 - Developed countries in the Western Bloc formed **the International Energy Agency (IEA)** in 1974 under the framework of the OECD and pledged to build oil stockpiles in order to countervail oil supply restrictions.

2. Bipolar System of OPEC and IEA after the 1970s

- 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 because oil was no longer the overwhelmingly dominant energy source.
 - ✓ Oil-substituting energy sources such as coal, natural gas and nuclear energy increased their share in the energy mix of oil importing countries.
 - ✓ Oil production outside OPEC members was promoted and further decreased OPEC’s influence.

2. Bipolar System of OPEC and IEA after the 1970s

- The IEA had also experienced a decline of prominence.
 - ✓ Industrial activities in developing countries became very lively and their demand for energy increased.

Cf. Notable examples: China, India

Cf. World energy consumption **in 1973: IEA 60% vs. Non-IEA 40%**
in 2014: IEA 37% vs. Non-IEA 63%

3. The Multilayered Intergovernmental System since the 21st Century

- Entering the 21st century, **various international entities** have proliferated for international cooperation and dialogue on energy issues.
- Gas exporting countries formed **the Gas Exporting Countries Forum (GECF)** in 2001.
 - ← 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.
 - ⇒ **Specialised international organisations/fora** have appeared for various energy issues, inviting major developing countries as their members.
 - Energy demand side
 - **The International Partnership for Energy Efficiency Cooperation (IPEEC)** was formed in 2008.

3. The Multilayered Intergovernmental System since the 21st Century

- 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.
- The Renewable Energy Policy Network for the 21st Century (REN21) was launched in 2004 as a global multi-stakeholder policy network.
- The International Renewable Energy Agency (IRENA) was established in 2009 as a formal international organisation.
 - ← International cooperation for renewable energy energies are sought among many countries that are both a producer and a consumer of renewable energy.
 - ✓ Most countries possess renewable energy resources (solar, wind and/or geothermal)
 - ✓ Those resources are mostly not suitable for international trade.

3. The Multilayered Intergovernmental System since the 21st Century

- Crosscutting issues
- 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.
- The end of the Cold War influenced the governance of international energy issues. In 1991, western countries signed [the European Energy Charter \(EEC\)](#) with Russia and western European countries in order to protect and promote their [investment in the energy sector](#) in the former Eastern Bloc.
⇒The EEC was later expanded to [the International Energy Charter \(IEC\)](#).

3. The Multilayered Intergovernmental System since the 21st Century

Figure1: The Transformation of World Energy Governance

“Cold War” Type Bipolar System (IEA vs OPEC) after the 1970s

Energy	Consumer		Supplier
	Developing	Developed	
Oil	-	IEA	OPEC
others	-	-	-



Multilayered Intergovernmental System since the 21st Century

Energy	Consumer		Supplier
	Developing	Developed	
Oil	-	IEA	OPEC
Gas	-	(IEA)	GECF
Coal	-	-	-
Nuclear	IAEA		
Renewable	IRENA		
(Crosscutting)	IPEEC, IFC, IEC		

4. Global Warming and Energy Security

- 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.

5. Conclusion

- Currently, a multilayered intergovernmental system exists for world energy governance. In this system, three issues should be noted in relation to energy security.
 1. Coal has no well-established international organisation/forum.
⇒ Underrepresentation of coal in policy discussions on energy supply in each country as well as globally.
 2. No single intergovernmental organisation/forum that comprehensively covers energy issues and widely involves both developed and developing countries.
⇒ Regional cooperation can be complementary to world energy governance.
Ex. European Union (EU)
 3. In order to fill the gap created by the lack of a comprehensive inter-governmental organisation/forum, worldwide cross-sectional discussion and dialogue by non-governmental entities has become increasingly important.
Ex. The World Energy Council (WEC)
The International Association of Energy Economics (IAEE)

References

- Gas Exporting Countries Forum (GECF) (2017). The GECF History,
https://www.gecf.org/_resources/files/pages/history/gecf-history-file.pdf
- International Atomic Energy Agency (IAEA) (2017). History,
<https://www.iaea.org/about/overview/history>
- International Energy Agency (IEA) (2016). World Energy Balance 2016, III.56.
- IEA (2017). History, <https://www.iea.org/about/history/>
- International Energy Charter (IEC) (2017). The Energy Charter Process,
<http://www.energycharter.org/process/overview/>
- International Partnership for Energy Efficiency Cooperation (IPEEC) (2017). Introduction,
<https://ipeec.org/cms/1-introduction-.html>
- International Renewable Energy Agency (IRENA) (2017). Creation of IRENA,
<http://www.irena.org/menu/index.aspx?mnu=cat&PriMenuID=13&CatID=30>
- Organization of the Petroleum Exporting Countries (OPEC)(2017). Brief History,
http://www.opec.org/opec_web/en/about_us/24.htm
- Renewable Energy Policy Network for the 21st Century (REN21) (2017). About us,
<http://www.ren21.net/about-ren21/about-us/>



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