



Plenary Session One

The New Geography of Energy: Business as Usual or a New Era for Energy Supply and Demand?

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Overview

The pattern of global energy supply and demand that has prevailed over the last three decades is experiencing a transformation, with consequences for the future of energy security and international cooperation that are still unfolding. The two main developments are the rise of Asia Pacific as the dynamic centre of energy consumption and the impressive additions to oil and gas output coming from North America. The first is driven by population increase and, more fundamentally, the economic ascendance of the Asia Pacific economies, which have required more energy to support their economic growth. The second stems from technological breakthroughs that opened up new geological formations for the production of unconventional oil and gas at a reasonable cost.

These twin developments are already influencing the underlying determinants of energy interdependence in virtually every region. The decreasing reliance of North America on oil and gas from the Middle East is intensifying energy links between the Middle East and Asia Pacific and, to a lesser extent, Europe. The largest and sustained source of demand for the Middle East will most likely be concentrated in East and perhaps in the Middle East itself, as per capita energy consumption is rising fast. This trend might be reinforced by energy efficiency gains in Europe and North America, whose demand profiles are expected to remain relatively unchanged over the coming years.

Supply developments in other parts of the world are interacting with these adjustments in complex ways. Deep-water output from Australia and East Africa is expected to increase the pool of available gas in Asia Pacific, in all likelihood entering into direct competition from North American exports—should they materialise. Production of hydrocarbons in Central Asia is seen as an opportunity to provide greater flexibility to the supply systems of Europe and East Asia, while prospects for gas availability from the East Mediterranean might complement supplies in Europe and improve supply conditions in the Levant. In Latin America, the potential of output from both conventional and unconventional sources remains strong and might mean greater integration of sub-regional energy sectors.

Trends such as these illustrate how a larger worldwide pool of proven reserves can shift prospects for output and intercontinental energy trade. They have also

supported optimistic crude supply outlooks as the new norm, standing in stark contrast to the fatalistic view that prevailed only a few years ago. Pessimists argued as recently as 2008 that the world was about to reach the peak of its ability to find and develop reserves, pointing to the increasing complexity and cost of recent projects and the absence of major oil finds in the prior three decades. Today, while some anticipate a virtually inexhaustible abundance, reality likely lies somewhere between these two extremes.

Whether and how this new geography of oil and gas will be affected by renewable energies is yet unclear. By most accounts, the world will continue to rely on fossil fuels as the primary sources of energy for years to come. However, should the economics of wind and solar power become attractive enough to reduce in noticeable amounts the demand for oil, gas and coal, trade and consumption patterns of these commodities will also shift.

To date, most observers would suggest that the members of the OECD and other emerging economies would be the most likely candidates to spur a substitution from fossil fuels to renewables. But owing to the economics of energy and financial markets, Europe and North America are consuming more coal and gas, respectively. Moreover, technology transfer can accelerate the deployment of renewable energies elsewhere. The world may be on the cusp of a new era for renewables, but current and expected trends in energy use provide insufficient evidence in this regard.

Rising oil and gas supply and demand from new quarters, together with the interdependent nature of energy markets, point to tectonic shifts in the global energy map. Though domestic investments in major producing countries and the structure of energy matrices in consuming countries may shift periodically in line with the historical ebbs and flows of market movements, the rise of demand from Asia Pacific and the so-called unconventional revolution appear to be genuine game changers with related implications for producers and consumers alike.

The question is, will the transformation of the global energy landscape require a new or a business-as-usual approach to policy and international cooperation?

Objective of Plenary Session 1

Ministers, heads of international organisations, industry executives and thought-leaders are invited to discuss the challenges and opportunities related to the shifts in the new geography of energy, with a focus on the expected paths for oil and gas supply and demand, and how decision-makers might best craft policy to enhance energy security.

Suggested Questions

- What exactly is the nature of this new energy geography? How is it affecting the prospects for supply and demand in consuming, producing and transit States?
- Does the new energy geography comprise genuinely historic developments, or are we experiencing just another iteration of periodic shifts we have seen before?
- What is the likely impact of a new distribution of energy resources on trade and investment flows on each continent? How will they affect regional energy mixes?
- How should national policy adjustments factor in regional or global developments linked to the new geography of energy?
- If the speed and scale of Asia Pacific energy demand growth continues close to the trends observed during the previous decade, what should the appropriate policy responses be to promote orderly supply growth and markets?
- If the sources of supply become more diverse, and new geographical areas are incorporated into the global supply mix, will markets alone serve to coordinate the allocation of resources on a global scale, or will international cooperation at a governmental level have to be relied upon in specific policy areas to strengthen energy security on all continents?
- How will the new energy geography affect energy security and international energy cooperation?
- What are the primary “known unknowns” or identified variables related to the new energy geography that have yet to play out?
- What does the rising complexity within and among various energy systems imply for overall energy security? Does this augment resilience or pose new challenges to overall system security?

The IEF Reference Shelf: Recommended Reading

The Analytical Centre of the Government of the Russian Federation (2014) Global Energy Governance: Times are changing, *Energy Bulletin*, Issue on Global Energy Governance No. 9, January

IEF and the Duke University Energy Initiative, in consultation with the IEA and OPEC (2014) Fourth IEA-IEF-OPEC Symposium on Energy Outlooks background paper, January

IEF (2013) Fifth Asian Ministerial Energy Roundtable background paper, September

IEF (2012) Third IEF-IGU Ministerial Gas Forum Dialogue Insights report, November