



## Plenary Session Two

### Unconventional Oil and Gas: Outlook, Risks and Potential

15 May 2014



## Overview

With the rise of unconventional oil and gas output, recent talk of peak oil has been replaced by affirmations, sometimes bordering on the exuberant, of considerable abundance for many years to come. While its order of magnitude has yet to be ascertained, current trends suggest that new output from North America will more than compensate for declines in production from other regions. Most analysts expect to observe changes in the inter-regional structure of oil and gas prices, the process of price formation, the direction of trade and the global energy mix.

Among the most talked-about issues is the prospect for increased liquefied natural gas (LNG) trade involving consumers of Asia Pacific and Europe and their most likely new suppliers in Africa, Oceania and North America—though the rest of the Americas cannot be ruled out as important players. Asia Pacific and European consumers see in greater LNG trade an opportunity to secure supplies that complement those they already purchase from Central Asia, the Middle East, and North Africa, which in turn may impact gas prices and support a restructuring of their regional gas markets to increase their flexibility. They would like to see a new pricing mechanism for natural gas, preferably based to some extent on spot prices and less reliant on oil price indexation. Some support the establishment of a hub to serve all of Asia Pacific or another one to serve all of Europe (and not just the continent's Northwest), though this would require much infrastructure building and greater liquidity, without which more efficient price formation is unlikely.

Producers of natural gas recognise the arbitrage opportunities involved, as well as the contribution that diversification of natural gas supplies brings to energy security, but warn that a shift in the pricing mechanism could be disruptive and generate uncertainty to a degree that might discourage new investments to expand gas supply. Many advise against tampering with a system that from their viewpoint has worked and is still needed to forge long-term investment partnerships. They also note that, should gas companies from Africa, the Middle East, Oceania and North America adopt a “herd mentality” and try to simultaneously boost supply for Asia Pacific markets without a corresponding increase in the ability to absorb this supply, prices may fall and in turn delay further necessary investments. From this perspective, greater certainty about policy, consumption plans, and pricing mechanisms is key to solving coordination

challenges and minimising investment risks—both of which are necessary to increase long-term supply.

Turning to light, tight oil (LTO), while the recent production boom in North America is virtually unprecedented, its expected longevity remains a topic of debate. The Organization of the Petroleum Exporting Countries projects that LTO supply in the United States and Canada will peak before the end of this decade, while the International Energy Agency expects growth in LTO, as well as natural gas liquids from shale plays, to position the United States as the world's largest oil producer by 2015. Numerous experts have opined that the rise in unconventional oil and gas production in the US may well maintain its recent momentum, though that outcome is not guaranteed. Risks include low oil prices, an environmental disaster, or geological complexities that vary from state to state.

Many experts have also argued that the unconventional oil and gas revolution could only happen in the US, in large part because the "rules of the game" have proven favourable to development. Countering this stance, over the years diverse nations have embraced a variety of workable fiscal regimes and royalty-sharing schemes to support conventional oil and gas development, so the same adaptability could well apply to unconvensionals. That said, numerous other constraints will likely slow the international spread of this revolution, including water supplies, available financing, drilling capacity and human capital.

In all likelihood, the increase in unconventional oil and gas production outside of North America will take root where these resources are the cheapest alternative to others currently in use or easily accessible. Nations that do not have an urgent need to develop their unconventional resources can afford to watch the industry mature, with the potential benefit of learning from the experiences of others and letting related technology improve.

Whether a nation has designs on producing unconventional oil and gas or not, the potential global reach of this shift in supply and related technological and strategic game changers make it a relevant phenomenon to virtually all stakeholders.

## **Objective of Plenary Session 2**

Ministers, heads of international organisations, industry executives and thought-leaders are invited to discuss the ways in which unconventional oil and gas are impacting both global and domestic markets, and ways in which policies and cooperation agreements might be shaped and structured to enhance global energy security.

### **Suggested questions**

- What will determine the scale of the increase in unconventional oil and gas production in North America?
- How quickly might unconventional production spread to the rest of the world, and what are the key variables that would accelerate or impede the timeline?
- Besides a low crude price or an environmental disaster, what other factors might derail the so-called unconventional revolution?
- How serious and manageable are the environmental implications related to unconventional oil and gas?
- Do unconventional oil and gas require unconventional markets or regulatory frameworks? Or are gas and oil the same, regardless of the source or extractive method?
- What implications might the rise of light, tight oil have for spare capacity or strategic reserves?
- How likely is the shift from the conventional world of three separate gas markets to an unconventional one of a single global gas market?
- What are the pros and cons of incorporating more flexibility and market drivers in long-term gas contracts?
- To what extent are joint ventures between North American firms and companies from other regions empowering the rest of the world with the necessary knowledge to accelerate the extraction of unconventional oil and gas?

### **The IEF Reference Shelf: Recommended Reading**

Oxford Institute for Energy Studies (2014) US shale gas and tight oil industry performance: challenges and opportunities, March

Ministry of Economy, Trade and Industry of Japan, APERC (2013) Summary Statement of the LNG Producer-Consumer Conference, September

IEF (2013) Insights into Unconventionals in the United States and Beyond, Dialogue Insights report, January

IEF (2012) Thought-Leaders Roundtable on Gas, Dialogue Insights report, October