World Energy Resources

Unconventional gas, a global phenomenon

Natural gas is currently the number three fossil fuel in terms of share of the global primary energy mix and for years the world has debated the potential for natural gas to play a critical role in creating a more resilient and sustainable energy future. The '2012 World Energy Council Survey of Energy Resources: Shale Gas – What's New' predicted that shale gas development would have a "significant impact on the dynamics and prices" of future natural gas markets. This latest study on the global implications of unconventional gas argues that, despite the uncertain price environment, unconventional gas has already become a global phenomenon and will continue to have global implications for some time to come.

1. Interconnected markets

2. International growth of unconventional gas

3. Shifting portfolio allocations

Growing supplies of unconventional gas, led by the United States (US) shale gas story, are entering regional natural gas markets and they have the potential to reflect a significant share of future natural gas supply additions globally. The implications of this phenomenon on global markets are an important consideration for energy professionals seeking to understand the future of the industry.

Key findings and implications

The bearing of unconventional gas on changing market dynamics should not be under-estimated. Now that Australian coal bed methane (CBM) and US shale gas are emerging on the global market as liquefied natural gas (LNG), the impact will no longer be contained to regional markets. In particular, three trends emerge as the most meaningful in the global context:

1. Interconnected markets

With excess supplies in the market, there has been price normalisation and other structural shifts towards a more global and transparent market across the three main regional hubs: Asia, Europe, and North America.

2. International growth of unconventional gas

Exploration and production (E&P) operators in Australia, China, and Argentina have made progress in growing unconventional gas supplies outside of North America.

3. Shifting portfolio allocations

In this time of uncertainty, US unconventional gas emerged as a cost competitive asset type that continues to shift industry capital towards flexible, shorter-cycle investments in North America shale assets.

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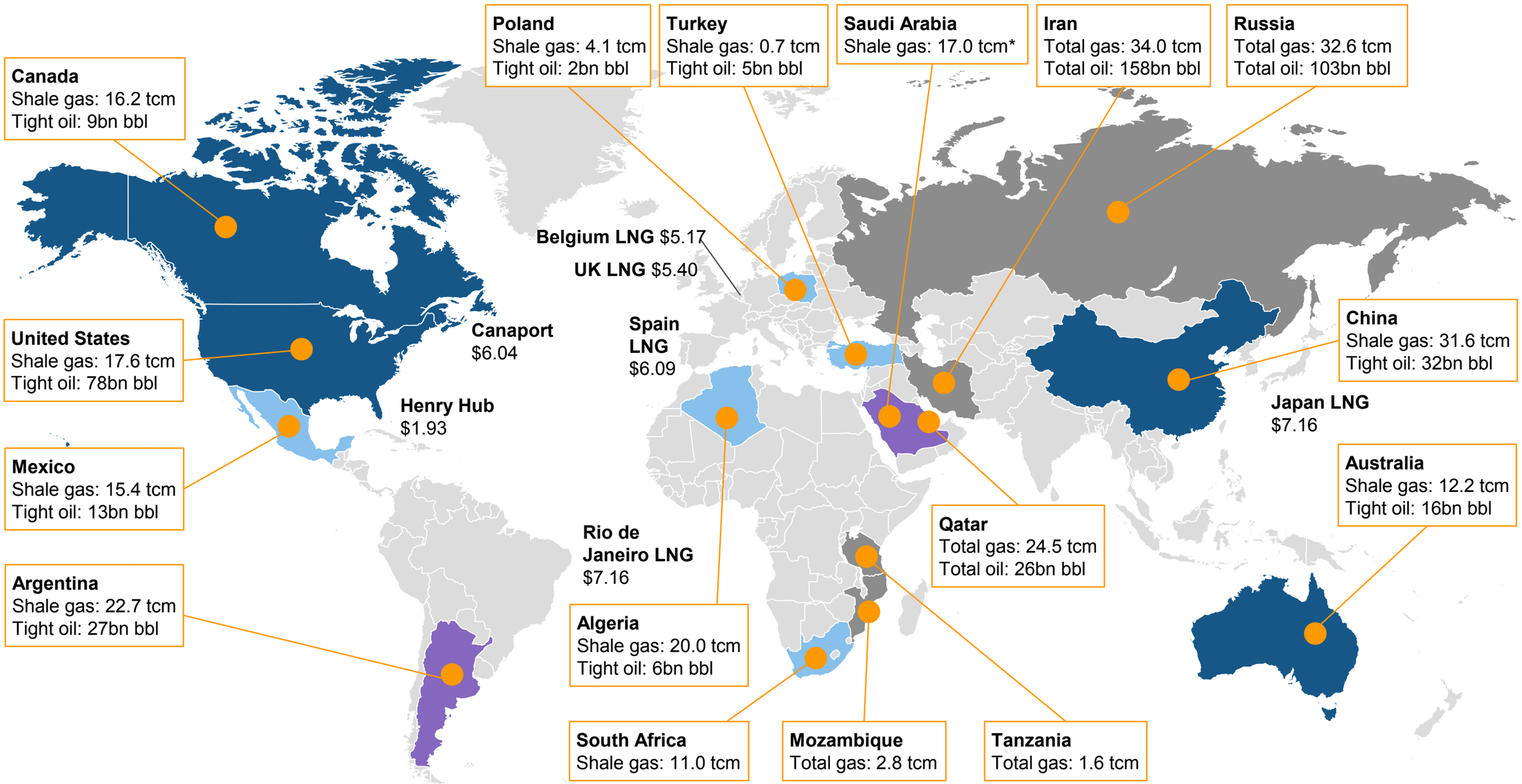
Despite the uncertain price environment, unconventional gas has become a global phenomenon with new supplies coming from Australia, China and New Frontier countries.



- Current unconventional gas producer
- Planned unconventional gas production by 2020
- Potential new frontier for unconventional gas
- Potential new supplies of conventional gas

*Estimate

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Source: BP Statistical Review of World Energy, EIA, FERC, and Reuters

In this challenging period, US shale gas has demonstrated that its economics are more competitive than many conventional assets, namely due to the short-cycle and flexible nature of shale gas operations. The surprising resilience of US shale gas and LNG projects creates optimism about the role of unconventional gas as a competitive resource in the global energy mix.

The key uncertainty, outside of North America, is whether gas can be made available at prices affordable to consumers while offering suppliers incentives for continued infrastructure investments. Unconventional gas reduces concerns about security of supply by providing a new cast of gas suppliers who are bringing competition, liquidity, and consumer bargaining power to the market.

National Oil Companies driven by the desire to bring affordable natural gas supplies online, are also making progress in developing unconventional resources outside of North America. The evolution of this trend will create competing investments for some conventional assets and influence how trade flows evolve across regional markets.

Recommendations

The World Energy Council's Resources 2013 chapter on natural gas predicted natural gas could reach 25% of the global energy mix by 2030. In the process of developing the 2016 World Energy Scenarios to 2060, natural gas was identified by industry leaders as having the potential to play a critical role in the grand transition to an affordable and environmentally sustainable energy future. The US shale gas revolution was often called out as an example of how technology innovation could drive to more affordable and secure supplies of natural.

However, key uncertainties in the market create concerns about the future of natural gas demand and about the ability of suppliers to deliver affordable and secure supplies for the long-term. Certain decisive interventions were called out as having the potential to drive changes that could tackle the significant challenges facing market actors in their drive for a clean, secure, and affordable energy future.

Industry

Policymakers

Consumers

Key messages

Industry:

Bring a higher degree of focus to portfolio allocation, risk management, and efficiency and continue to seek new and innovative investment partnerships to deliver projects.

Policymakers:

Establish policies that promote a liquid market and competition needed for security of supply and the formation of clear price signals.

Consumers:

Evaluate the economic and environmental benefits of diversifying energy assets with natural gas in power, industry, transportation, and chemicals and consider innovative investment partnerships to secure supplies.

In shifting the supply structure of the global market, unconventional gas may compliment the actions of key actors by increasing transparency, competition, and reshaping the economics of natural gas. This will enable the confidence for investors to develop the infrastructure required for the reliable and safe use of natural gas as a fuel source for the long-run.

World Energy Council
62–64 Cornhill, London EC3V 3NH,
United Kingdom

Phone: +44 (0)20 7734 5996
www.worldenergy.org

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Contact World Energy Resources Team
E-mail: resources@worldenergy.org

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