

PROSPECTS FOR UNCONVENTIONAL NATURAL GAS SUPPLY IN ASIA

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Overview

The unconventional natural gas boom started in North America less than ten years ago. Progress is still in its infancy and knowledgeable observers point to substantial changes over coming decades. The gas revolution is projected to extend to around the world, including to Asia, leading to substantial economic and geopolitical impacts. In an effort to integrate the issues, this paper analyses the past, present and future of unconventional gas development – the latter with a focus on Asian prospects.

Methods

The paper is organised as follows: section 1 briefly defines unconventional gas, section 2 contrasts the historically declining output levels of gas in the US with the recent production achievements, section 3 explores the impact of the revolution so far on energy markets in Asia, section 4 considers the anticipated production achievements as the rest of the world – including the large Asian unconventional gas holders like China – overcomes its inhibitions and jumps on the bandwagon. Finally, section 5 briefly sketches the policy implications for global and Asian energy markets of a successfully maturing unconventional gas revolution.

Section 4 uses a simple yet highly reasonable methodology to explore what may occur and where (Aguilera and Radetzki, 2013). It assumes that the rest of the world is equally successful as the US was between 2006 and 2014 in exploiting its share of the unconventional gas resources between 2015 and 2035; i.e. with a substantial delay and at less than half the speed attained by the US. The case of Asia is projected separately in the same fashion.

Results

The methodology employed would yield a rest of world 2035 unconventional gas output of 73 tcf. The importance of this supply addition can be measured in many ways, but it is large. The projected gas expansion corresponds to nearly 60% of current global output. The 20-year output growth projections for rest of world unconventional gas are almost 50% greater than the global gas production rise in the preceding 20 years. Results for Asia will be assessed separately.

Conclusions

Setting up a public policy framework to allow and promote unconventional gas exploitation, an institutional infrastructure of sorts, is a precondition for the launch of a global revolution. The authorities have to establish transparent regulatory, environmental and fiscal regimes, remove depressing price controls, straighten out inconsistencies between the powers of consecutive layers of public authorities, allow innovative private firms into the picture, clarify the roles of these firms vis-à-vis existing state owned behemoths, resolve land issues and ownership conflicts and facilitate technology imports. The first and arguably most important implication of a global unconventional gas spread would be a downward pressure on the recently higher gas prices in regional markets outside North America, especially in Asia.

References

Aguilera, R., and M. Radetzki. 2014. "The Shale Revolution: Global Gas and Oil Markets Under Transformation." *Mineral Economics* (26) (3): 75-84.