**Arguments for and against LNG expansion as a base for Russian gas exports to Asia**

William K. P. Kucera, MBA student, University of Dundee, +7 916 535 1439, wkpkucera@dundee.ac.uk

## Overview

Two major factors distinguish Russia’s gas industry from its oil equivalent. First, whereas the post-Soviet oil sector was reorganised into several vertically integrated companies, the gas industry has largely remained under the control of a single large state entity known as Gazprom. Second, most of the country’s gas reserves are to be found in two separate provinces. The first, in Western Siberia, is connected to the European market by an extensive pipeline infrastructure developed over several decades. The second, in Eastern Siberia, has remained largely undeveloped.

Asia, in particular China, represents the most logical market for monetising Russia’s undeveloped gas reserves. In May 2014, Russia signed its first gas export deal with China in the form of the 38bcma Power of Siberia pipeline connecting Eastern Siberia with northeast China. This 30-year agreement has been valued at $400 billion, and will require an estimated $80 billion capital investment in pipeline and associated production infrastructure. This was followed in November 2014 with a memorandum of understanding between Gazprom and CNPC for a 30 bcma supply agreement in the form of the 2600 km Altai pipeline connecting Western Siberia with northwest China.

Although Chinese financing in the form of a $27 billion loan had been expected for Power of Siberia, it appears that this would have been accompanied by the condition of a lower gas price. Gazprom seems to have opted to proceed without Chinese financing rather than accept these conditions. The finalisation of the Power of Siberia deal in particular is the result of a convergence of factors in both Russia and China.[[1]](#footnote-1) These include growing gas demand in China, and Russia’s desire to diversify export markets. Several questions arise as a consequence, such as what impact it will have on the sequencing of other Russian projects, and what effect it will have on Asian gas pricing. The Power of Siberia deal represents the first large-scale source of Russian pipeline gas into an East Asian market, and is thought to be more economically efficient than the LNG projects that East Asian buyers currently depend upon.

The Power of Siberia and Altai pipeline deals could result in a more integrated Euro-Asian gas distribution infrastructure. This has particular significance for China, whose per capita length of gas pipeline is only 1% of that of the US.[[2]](#footnote-2) There are consequences for the regional distribution of the world’s gas trade, as China is projected to overtake Germany as the single largest market for Russian gas exports. Gazprom has reportedly indicated that it may re-allocate supply from the proposed Vladivostok LNG project to its Chinese pipeline projects.

Meanwhile, another ground-breaking development is the Yamal LNG project, a 16.5 mtpa Novatek-led venture in the Russian Arctic, in which Total and CNPC each hold 20% stakes and the Chinese state’s Silk Road Fund has a 9.9% shareholding. The devaluation of the rouble during 2014-15 has reduced Russian domestic gas prices in dollar terms. This has affected the profitability of producers such as Gazprom. LNG offers a quicker option for the monetization of gas reserves than the pipeline alternative. At both the project and macro-levels, LNG provides Russian producers with the ability to diversify the customer base and in so doing, reduce exposure to country-specific risks.

Globally, the natural gas market is the most recent of the major commodities to be subjected to the forces of globalisation. Major cost reductions have been achieved in the LNG production and transport process, driving growth in new production sources and transport routes. These trends are in effect serving as the foundations of a global gas market.[[3]](#footnote-3) In order for Russia to fully participate in the emerging gas trade it must expand its LNG export capacity alongside any new pipeline routes, and recalibrate its pipeline exports to Europe.[[4]](#footnote-4) There is an excess of developed gas reserves in Russia which requires access to new markets.

## Methods

This paper assesses the risks and opportunities associated with the pipeline and LNG options for bringing Russian gas to Asian markets, in order to address the question of how the Russian gas industry’s available investment options should be prioritised. Several current and proposed gas export projects are evaluated in the context both of the Russian investment environment and the nature of demand from prospective Asian gas markets.

## Results

The first section of this paper introduces the genesis of Russian gas exports to Asia, in particular the Sakhalin-2 PSA that is a legacy of the 1990s, and the Kovykta field in Eastern Siberia that was the subject of interest for many parties, including BP which indirectly controlled the field for several years, and Chinese, Korean and Japanese buyers, but failed to proceed in the absence of agreement over the terms on which Gazprom would be involved. Today Kovykta is designated to feed the Power of Siberia pipeline. The second section examines the pros and cons of the Power of Siberia and Altai pipelines. The third section considers the pros and cons of various LNG projects (proposed and underway) led by Russia’s three gas producers.

## Conclusions

The paper is likely to conclude that both the Power of Siberia and Altai pipelines can be justified by commercial and political rationales, and should be pursued by Gazprom owing to its experience in operating a vast pipeline network. Gazprom’s focus on its pipeline projects however should not detract from Russia’s objective of increasing its share of the global LNG trade. Rosneft and Novatek should be given free rein to develop export LNG projects with foreign partners in order to allow the Russian gas industry greater participation in newer markets such as South and Southeast Asia, as well as Japan, South Korea, and Taiwan for which pipeline connections are unlikely to be feasible for the foreseeable future.

## References

Andrews-Speed, P. *The Long Road to the China-Russian Gas Deal: The End of the Beginning* (OGEL, June 2014)

Andrews-Speed, P. *China’s International Energy Strategies at a Time of Low Prices* (OGEL, 2015)

Baily, J. and Lidgate, R., ‘LNG price reviews: a sign of the times’ Journal of World Energy Law and Business 7(2), 2014.

Belyi, A. V. and Talus, K. (eds) States and Markets in Hydrocarbon Sectors (Basingstoke: Palgrave Macmillan, 2015)

Cameron, P. D. International Energy Investment Law: The Pursuit of Stability (Oxford University Press, 2010)

Dimitroff, T. J., Risk and Energy Infrastructure: Cross-Border Dimensions, (London: Globe Law and Business, 2011)

Henderson, J., and Walker, C., *The Great Energy Infrastructure Game* (Infrastructure Journal, 30/11/2011)

Henderson, J., and Pirani, S., The Russian Gas Matrix: How Markets are Driving Change (Oxford: Oxford University Press, 2014)

Kolmar, M. ‘Nord Stream – It’s done! PFI Global Energy Report 2010’ 438 in Morrison, R. (ed), The Principles of Project Finance (Farnham: Gower Publishing, 2012)

Paik, K. W. Sino-Russian Oil and Gas Cooperation: The Reality and Implications (Oxford: Oxford University Press, 2012)

Picton-Turberville, G. (ed), Oil and Gas: A Practical Handbook, (London: Globe Law and Business, 2009)

Stern, J. (ed), The Pricing of Internationally Traded Gas (Oxford: Oxford University Press, 2012)

1. Keun-Wook Paik, ‘Looking East: Russia’s Expanding Role in Asia’s Energy Markets’, panel discussion hosted by National Bureau of Asian Research, 2014 Pacific Energy Summit, 30 June – 1 July 2014, Seoul. [↑](#footnote-ref-1)
2. Wenron Jiang, ‘Energy Security, Geopolitics, and the China-Russia Gas Deals’, 15(2) *China Brief* (23 January 2015), Jamestown Foundation. [↑](#footnote-ref-2)
3. Marian Radetzki, A Handbook of Primary Commodities in the Global Economy (Cambridge University Press, 2008), 14-15. [↑](#footnote-ref-3)
4. James Henderson and Tatiana Mitrova, ‘The Political and Commercial Dynamics of Russia’s Gas Export Strategy’ (Working Paper NG 102) Oxford Institute for Energy Studies, September 2015, 1. [↑](#footnote-ref-4)