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Arctic LNG: The Energy on East Asia's Doorstep

By Mia Bennett

Synopsis

Arctic LNG projects offer East Asian countries a chance to diversify their energy portfolios and export their offshore technology and tankers to new markets. This could also lead to wider cooperation between East Asia and Arctic countries.

Commentary

THE RECENT spurt of Arctic oil and gas development is often perceived as a result of increased accessibility due to climate change. Yet the extraction of hydrocarbons in the Arctic has just as much to do with global commodities cycles and technological developments. Due to the high prices of oil and gas in recent years, Arctic liquefied natural gas (LNG) is now more commercially feasible to develop, although massive outlays are still required.

LNG is a major energy source for Japan and South Korea – the world's two largest LNG importers – and increasingly China, too. However, Arctic LNG will not form a critical part of East Asian energy portfolios overnight.

Northern Sea Route–Arctic energy corridor?

Norway, Russia, the United States, and Canada – all permanent members in the Arctic Council – hope to develop their Arctic resources to take advantage of East Asian LNG markets, where prices are currently the highest the world at around US\$15/MMBtu. Presently within the Arctic, LNG is exported only from the Snøhvit project in northern Norway. Russia has numerous plans to develop LNG exports, principally from the Yamal project. Though not north of the Arctic Circle, ExxonMobil is aiming to restart LNG exports from the Kenai terminal in southern Alaska, which exported to Japan from 1969 to 2012.

When LNG from Snøhvit sails to Japan via the Suez Canal, it usually takes 32 days – the longest LNG commercial voyage in the world. If gas needs to be acquired quickly, however, as in the wake of Fukushima, it helps to have resources closer at hand. One such avenue to bring Asian markets closer to natural gas deposits is the Northern Sea Route (NSR), which links northern Europe and Northeast Asia via the north coast of Russia. This Arctic energy corridor could shorten the distance from East Asia to projects like Snøhvit and Yamal. Already, LNG and other hydrocarbons, such as jet fuel and naphtha, have been transported along the route.

While it is widely cited that the NSR cuts the distance between Rotterdam and Yokohama by 40%, distances to more northerly locations are further reduced, with a 56% reduction between Kirkenes, in northern Norway and Yokohama. Of course, although the NSR is shorter than the Suez route, it is not necessarily cheaper due to Russian fees, specialised ship construction and the need to hire icebreaker escort.

Even in cases for which the NSR is not a time- or cost-saving route, as in Southeast Asia, Arctic LNG could still be of interest commercially. Singapore, for instance, is working to become an LNG trading hub for the Asia-Pacific region. It should be noted, however, that Singapore and other Asian countries are also looking south to LNG developments in Australia, Indonesia, Malaysia, and even Papua New Guinea, projects with which the Arctic may struggle to compete.

The expanded development of resources on East Asia's doorstep like Russia's Sakhalin, where Gazprom has partnered with Shell and Japanese companies Mitsubishi and Mitsui, is also crucial. LNG can reach Japan in three days from Sakhalin, the NSR's sub-Arctic eastern gateway.

Asian technology moves Arctic LNG

Asian countries are not only interested in purchasing Arctic LNG. They also seek to supply the projects with their home-grown ships and offshore equipment. South Korea, China and Japan are also shipbuilding powerhouses. South Korea has built 100 LNG tankers since 2009 next to China's 20 and Japan's 13. Daewoo recently won a contract to provide 16 ice-class LNG carriers for the Yamal project, furthering Seoul's Arctic reach.

The mutual benefits that Asian and Arctic countries are drawing from trade and business cooperation could strengthen bilateral ties in the region. Japanese Prime Minister Shinzo Abe led a delegation of 100 businessmen to Moscow in April 2013, and energy cooperation was high on the agenda. In September 2012, former South Korean President Lee Myung-bak visited Norway and Greenland to sign memoranda of understanding on energy and shipbuilding. Northeast Asia's strengths in shipbuilding and offshore technology are thus key to the developing the Arctic.

Looking north – and west

LNG developments are also happening across the North Pacific. In the US, which is awash in natural gas thanks to the fracking boom, the Department of Energy recently approved a permit for the proposed Jordan Cove LNG Export Terminal in Oregon to export up to 800 million standard cubic feet per day for 20 years, most of which will go to Asia. The growth of the US as an LNG exporter could eventually undercut Russia's dominance, allowing Asian countries more negotiating room with Russia for LNG contracts.

In Canada's British Columbia, 14 projects are angling to export LNG across the Pacific. A provincial trade mission in May 2014 to Malaysia, Singapore, and Hong Kong underscores Canada's desire to take advantage of East Asia's increasing energy needs.

The accession in May 2013 of China, India, Japan, Singapore, and South Korea to observer status in the Arctic Council reflects their interests in the circumpolar north, particularly with regard to the development of the region's resources. Japan, South Korea, and China are particularly keen to import Arctic energy resources and to supply projects there. This is helping to strengthen bilateral cooperation between the two regions.

Yet East Asian countries are likely wary of over-dependence on any one exporter, Arctic or otherwise, especially in light of recent developments in Europe vis-à-vis Russia. Asia's drive for Arctic LNG should thus be seen in the context of a global shift in energy supplies.

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