

Briefing Note

Developing Hydrocarbon Resources in Arctic Russia: The Role of Sino-Russian Collaboration

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Introduction

A decline in conventional hydrocarbon resources and increasing energy scarcity, along with geopolitical changes, shape today's global energy governance; at times, pressuring corporations to seek resources in precarious regions like the Arctic. The Arctic is the presumed home of a vast amount of fossil fuels (Carmack et al., 2012). Ongoing research shows that rapid biophysical change continues to open the region to new extractive opportunities and risks. While drilling off the coast of Alaska is halted for the foreseeable future – due to low global oil prices, disappointing exploration outcomes, and vocal public opposition – the development of hydrocarbon resources off the coast of Norway and Russia continues. Russian corporations are particularly active in the Arctic with large hydrocarbon projects like Yamal liquefied natural gas (LNG) acting as testing grounds for both Russian institutions and corporations.

New extractive opportunities in the Arctic are open to actors both in- and outside the region; with the role of foreign investors increasing in the Russian Arctic. China, for instance, is gradually turning to the Arctic to support Beijing's political ambitions and to sustain its economic model, dependent on foreign natural resources (Sun, 2014: 40). Concurrently, ongoing economic and political pressures on Russian oil and gas projects have shifted energy cooperation eastward. Sino-Russian collaboration in the exploration of Arctic hydrocarbon resources, started expanding in 2013; when the China National Petroleum Corporation (CNPC) bought a 20 percent stake in the Yamal LNG project.

With such developments in mind, important questions arise across multiple governance scales: globally, in terms of the global geopolitical climate; nationally, in terms of tax incentives in large-scale extractive projects in the Russian Federation; and locally, in terms of environmental governance and human rights. Now, more than ever, is a crucial time for scholars to better understand how these relations play out on the ground, and how this might impact the environment and inhabitants of the Russian Arctic.

Situating Yamal LNG Project & its Key Players

The Yamal LNG plant will produce, liquefy, and ship natural gas from the South-Tambey field, discovered in 1974. Situated beyond the Arctic Circle in the Yamal Peninsula (Northern Russia), the South Tambey natural gas field contains 1.3 trillion cubic meters of natural gas reserves ([Kremlin, 2013](#)). Yamal LNG is currently “the world’s most northerly project of its kind” ([Soldatkin & Astakhova, 2016](#)).

Construction of the Yamal LNG plant, which began in 2013, is projected to cost \$27 billion USD and will be completed in three stages; the first part of the liquefaction train will be operational by the end of 2017 and the latter sections will be completed by 2018 and 2019, respectively. As a part of the project, contractors will drill 124 wells and 19 well pads into the South Tambey field. New infrastructure will be developed to support the LNG plant, including a seaport, an airport, roads, bridges, workshops, housing, as well as water treatment and waste management facilities.

Yamal LNG is a joint venture between Novatek, Total, CNPC, and the Silk Road Fund. A majority of the project’s shares (50.1 per cent) are owned by *Novatek*, an independent Russian oil and gas corporation. *Novatek* forged international partnerships with foreign oil enterprises to carry out the project: in 2010, French oil and gas corporation *Total* bought 20 per cent of Yamal’s shares; and in 2014, *CNPC* signed a framework agreement with Russian government officials and *Novatek*’s representatives to acquire 20 per cent stake in the project. China’s participation in the project expanded in 2016 when the *Silk Road Fund* acquired 9.9 per cent of shares in Yamal LNG. The *Silk Road Fund* invested \$5 billion USD in Yamal LNG and provided an additional \$800 million USD for the implementation of the project (Gerden, 2016). Other shareholders invested \$12.6 billion, of which *CNPC* provided \$5 billion USD, *Total* \$3.7 billion USD, and *Novatek* \$3.9 billion USD ([Kremlin, 2016a](#)).

Chinese state owned banks played an active role in the Yamal LNG project, as well. The Chinese Export-Import (EXIM) bank and the China Development Bank both provided loans for the project on the basis of agreement signed between Yamal LNG and the banks. Under this agreement, Yamal LNG has access to two 15-year credit lines worth of 9.3 billion Euro (approximately \$10.4 billion USD) and 9.8 billion RMB (approximately \$1.4 billion USD) (Yamal LNG, 2016). By providing required financing for Yamal LNG, Chinese banks and enterprises opened the door for Russian LNG exports to China’s energy market (Filimonova, 2013: 10). Moreover, these loans helped Yamal’s executives gain access to financial capital at a time when Russian oil and gas companies were cut off from international capital markets due to Russia’s involvement in Ukraine ([Soldatkin & Astakhova, 2016](#)).

With this distribution of project commitments in mind, it is particularly interesting to observe under which conditions Sino-Russian partnerships will continue to be forged. And so, Yamal

LNG becomes a testing ground for future onshore LNG projects in the Arctic that allow foreign investors to participate.

Brief Analysis & Potential Implications

Sino-Russian collaboration in the development of hydrocarbon resources in the Russian Arctic can be unpacked into sub-categories like a matryoshka, or a nested doll. It is multi-scalar – with global, national, and local implications.

Global

Chinese involvement in the Arctic, to date, is both scientifically- and economically-driven (Sun, 2014: 43). In Norway, the China National Offshore Oil Corporation (CNOOC) partnered with *Petoro*, a Norwegian firm, to jointly explore the offshore Dreki region located between Iceland and Norway (Lanteigne, 2014; Kossa, 2016). In Iceland, the CNOOC partnered with Icelandic energy company *Eykon* to explore for oil in 2013. Meanwhile, Finland and China recently [jointly declared](#) their commitment to intensify economic and technological cooperation, taking into “full consideration the protection and sustainable use of its natural resources” in the Arctic (The President of the Republic of Finland, 2017). Joint-ventures with Russian oil and gas corporations provide another opportunity for China to engage in the development and governance of the Arctic. Chinese investment in the Russian hydrocarbon sector, for instance, continues to facilitate a greater role for China as a global and a regional player; allowing it to shape Arctic narratives and realities as they relate to the global environment and politics (Bennett, 2015; Steinberg et al., 2015).

China is party to key legal frameworks and international organizations pertaining to Arctic governance, including the *United Nations Convention on the Law of the Sea* (UNCLOS) and the *International Maritime Organization* (IMO) (to which Russia also adheres). It is also an Observer State at the *Arctic Council*, an intergovernmental forum where it has greater access to information and a better chance of having its voice heard (SAO, 2011: 50-51), but has limited influence and no voting rights. Developments therefore follow “the rules and regulations set by Arctic countries and international agreements...” and thus, “[f]or new and emerging rules governing international practices, China, along with other non-Arctic countries, is eager to weight its influence, but only through following the already established rules, and solely for the purpose of good Arctic governance” (Sun, 2014: 42).

While China has no official Arctic strategy, its current approach to hydrocarbon development in the Russian Arctic appears to fit within China’s ‘*One Belt, One Road*’ (OBOR) initiative. The OBOR initiative is designed to reshape global geopolitics through transportation corridors and is motivated by energy demand, security considerations, and market access ([Fallon, 2015](#)). Russian support for the initiative grows as its political relations with Western states deteriorate in light of Western-imposed sanctions. Meanwhile, China uses its growing partnership with Russia to circumvent its non-Arctic status. China also benefits from broader geopolitical changes in the region, by partnering with corporations domiciled in Arctic states to develop natural resources in the region. Sino-Russian collaboration thereby reflects a reformative shift in the policies of both actors, thus enabling China’s ambitions in the region.

A bilateral economic relationship with Russia helps secure and diversify China's energy future, too. Bilateral relations between Russia and China are built on the [Treaty for Good Neighborliness, Friendship and Cooperation](#), which includes a focus on energy and raw material trade (Rossiyskaya Gazeta, 2009). Since this agreement was signed, Chinese FDI into the Russian hydrocarbon sector has increased exponentially. For example, Chinese FDI stock in the Russian oil and gas sector expanded from \$430 million USD in 2008 to \$3.38 billion USD in 2014 (Ministry of Economic Development of the Russian Federation, based on the data from the Eurasian Development Bank, 2016). This exponential growth in Chinese FDI signals growing corporate relations between Russian and Chinese companies in the hydrocarbon sector.

National

Russia's [Arctic strategy](#), put forward in 2009, identifies its Arctic zone as a core national interest and resource base for oil and gas development ([President of the Russian Federation 2009](#)). The strategy is motivated by Russia's economic dependence on revenue from the oil and gas sector, which has been rising steadily from 2006. Currently, approximately 50 per cent of the federal budget is generated from energy exports ([Ministry of Finance of the Russian Federation, 2015](#)). Hydrocarbon resources also account for 68 percent of Russia's total exports (PwC, 2016). Given Russia's dependence on hydrocarbon revenue, it appears that Russia will be unable to sustain its economic development without developing its hydrocarbon resources.

The depletion of oil and gas resources in western Siberia forces Russian corporations to shift extractive activities northward to the Yamal peninsula. Their efforts are supported by the Russian government, which assumed a leading role in the Yamal LNG project through a public-private partnership scheme. The government invested public funds to build infrastructure in the Yamal Peninsula to stimulate the development of hydrocarbon resources. Media covering the Yamal project estimate that the government contributed over 47.3 billion RUB (approximately \$843 million USD) and provided 150 billion RUB (approximately \$2.7 billion USD) in loans through the National Welfare Fund of Russia ([Soldatkin & Astakhova, 2016](#)). The money was used to construct the sea port and adjacent infrastructure. By investing in the seaport, the government opened the door for subsequent construction of the LNG plant in Yamal. In addition to the generous financial support, Russia effectively subsidized portions of the project by adjusting taxation rates for extractive companies operating in the Yamal Peninsula. Russian President Vladimir Putin has approved an economic strategy promising zero tax on mineral extraction from fields located in the Yamal peninsula – for a duration of 12 years, or until a specified output is achieved (Gerden, 2016).

Yamal LNG is also the first Arctic LNG project to enlist the help of Chinese state-owned enterprises (SOEs). It is important to remember, however, that significant national incentives for such investment exist as well. Chinese SOEs participate in the construction of the Yamal LNG plant; winning tenders for specific aspects of the project. According to a news report by [Klimenko and Sørensen \(2017\)](#), Chinese corporations will be responsible for the production of around 80 percent of the equipment for the project. For example, CNPC and Magang Group Holding Company, took over construction of steel structures for the plant and delivered complete parts of the project to the Yamal peninsula. CNPC is completing four engineering packages for Yamal, one of which was recently shipped from Shandong Province in China to Yamal ([CNPC, 2016](#)). China's Sinotrans Shipping Ltd. gained a contract to build tankers which

will be operated by Russia's Sovcomflot around the Arctic along with other corporations from Greece, Russia, and South Korea (Gerden, 2016).

Local

The project is situated in a precarious location. Firstly, the area's environment – its shifting climate, endangered flora and fauna, and permafrost melt ([Environ, 2014](#)) – is increasingly vulnerable in the face of large-scale projects like Yamal LNG. An environmental study, conducted prior to the implementation of the Yamal LNG project, found that both the local environment, and Indigenous inhabitants, will be adversely affected by infrastructure and off-road vehicle trails developed to explore Yamal's hydrocarbon fields (Walker et al., 2009). A change in salinity level in the Bay of Ob and heightened greenhouse gas emissions are but two consequences (Ametistova & Knizhnikov, 2016). Moreover, the advanced technology upon which this project relies may fail and potentially degrade local ecosystems (Young, Kim & Kim, 2012: 4).

Hydrocarbon developments have social implications, as well. As an example: resource extraction in resource-rich areas like the Yamal Peninsula presents a simultaneous challenge to the world's largest area of reindeer herding and traditional land-use practices (Larsen et al., 2014). Some scholars like Gritsenko ([2017](#)) point to a potential rise of social tensions between locals and migrant workers as a result.

Another key problem is the lack of access to documents (due to long distances or disclosure) in mandatory participatory processes for non-state actors like Indigenous peoples. Local authorities and the public – both identified as key actors in Russia's environmental impact assessment process – can request public ecological expertise – appearing to protect the rights of those contesting the project – at their own cost, which is often prohibitive. Still, the conclusion of this process bears little legal force in determining project implementation (Koivurova et al., 2016: 189). In Russia, the legal system does not provide equal protection to both Indigenous communities and corporations, placing pressure on corporate social responsibility to fill regulatory gaps (Новикова, n.d.). In the case of Yamal LNG, Novatek strives to consult with Indigenous peoples about the project through stakeholder engagement that meets best practices in the Russian Federation. However, it still falls short of engaging Indigenous communities and accurately assessing the impact of this large-scale development on the local population ([Мурашко, 2015](#)).

At the same time, the project may stimulate economic and social development in the region. It is expected that the project will attract investment, create employment, develop infrastructure, and support existing economic activities ([Gritsenko, 2017](#); [Filimonova & Krivokhizh, 2014](#)). The project has created direct and indirect economic linkages domestically and internationally. In the Yamal peninsula, 22,000 people are employed by Yamal LNG directly; with 14,000 people working in Yamal on rotation ([Environ, 2014](#); [Kremlin, 2016b](#)).

Since 67 percent of the budget revenue of Yamalo-Nanets is generated from taxes paid by gas enterprises operating in the region, the development of new fields has become essential to sustaining the Okrugs' economic development as is (Kharitonova & Vizhina, 2009: 120). Unsurprisingly then, the development of the hydrocarbon sector – primary resources, improved

infrastructure, and the attraction of extractive “megaprojects” (Ibid: 121) – is at the center of the [Yamalo-Nanets Autonomous Okrugs’ Strategy \(up to 2020\)](#) for socioeconomic development.

Conclusion: A Way Forward

Yamal LNG project is one site where we can trace aspects of new policies in hydrocarbon and financial sectors in Russia. Current policies are influenced by Chinese SOEs forging close ties with Russian corporations to be able to participate in Arctic projects located in Russia. These Russian companies, with minority Chinese investment, are obligated to undergo a national environmental impact assessment and ecological assessment prior to project implementation “for any economic activity that holds potential risks for the environment, an assessment of the possible negative impacts should be done.” (Koivurova et al., 2016: 185-186).¹ However, Russian environmental impact assessment processes have not been updated in 17 years (since 2000), and therefore reflect the practices of that time. The likelihood that future updates will be influenced by the cultural norms and values of the private sector, and multinational corporations, is thus highly plausible (Koivurova et al., 2016: 199) – an interesting prospect when considering Chinese investment and Russian national incentives.

Cooperation on the Yamal Peninsula aside, Russian and Chinese companies are still seeking further mutual ground for energy cooperation in the Arctic. It is plausible that other big Asian players, such as Japan, may be interested in partnering with Russian hydrocarbon companies to develop new hydrocarbon projects (such as Arctic LNG-2) in the region. Further research is still required to trace the policies, goals, and investment commitments of new actors in the region. The investment flows will likely shape the future of extractive projects in the Arctic. They will thus require closer monitoring and oversight to ensure that human modification of the landscape does not harm local environment and security. Additional research and data can help provide better baselines.

Notes

1. It is important to note, however, that Russia has yet to ratify the *Convention on Environmental Impact Assessment in Transboundary Context*.

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