



UNDER PRESSURE:

RUSSIAN ENERGY COOPERATION
WITH JAPAN AND SOUTH KOREA
SINCE WESTERN SANCTIONS

Maria Shagina





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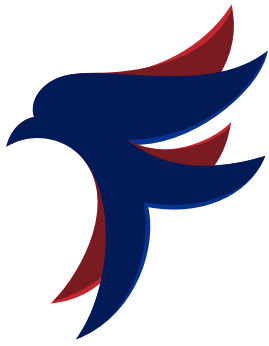
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EXECUTIVE SUMMARY

Maria Shagina

This report will examine Russian-Japanese and Russian-South Korean energy cooperation. Neither Japan nor the Republic of Korea imposed energy sanctions on the Russian Federation, and both U.S. allies continue to expand their energy deals despite Western sanctions. In the framework of Prime Minister Shinzō Abe's eight-point economic cooperation plan and President Moon Jae-in's Nine-Bridges initiative, Japanese and South Korean companies actively participate in Russia's ambitious energy projects, such as Yamal LNG, Arctic LNG-2, and projects on Sakhalin Island. As U.S. sanctions expand further, intensifying energy relations will put Japanese and South Korean companies in the line of fire.

Looking at existing and planned joint energy projects, this report will analyze the countries' rationale for deepening cooperation. It will then examine how Japanese and South Korean energy companies adapt to Western sanctions—in particular to U.S. secondary sanctions—and highlight the strategies that companies use to navigate sanctions' loopholes. Finally, it will assess potential challenges for energy cooperation stemming from additional U.S. sanctions, Russia's import substitution policy, and China's growing energy demand.

Energy Cooperation: Trends and Rationale

The Russian Federation is one of the most resource-rich countries in the world—it is the largest producer of crude oil and the second largest producer of natural gas. Despite its immense resource potential, the country was a latecomer to the Asia-Pacific. In 2008, Russia’s share of oil exports to the region amounted to 8%, while natural gas imports were non-existent. Recognizing Asia’s growing market, the Russian government set out to boost the share of oil and gas exports to 22-25% and 19-20%, respectively, by 2035.¹ While the reserves in Western Siberia and the Volga-Urals region were developed in the 1970-80s and oriented to commercially attractive Western markets, Russia’s eastern regions remained largely untapped, and the pace of their exploration was slow. The deposits in Eastern Siberia, the Far East, the Yamal Peninsula, and the Arctic were complex, hard-to-recover, and required sizable investment and technological innovation. Yet, as resource bases in Western Siberia depleted and energy demand grew in the Asia-Pacific, Russia’s eastern regions became crucial for maintaining production volumes. As early as 2009-10, Russia’s energy supply to Asian countries began to increase gradually, and by 2017, Russia already exported 25% of its oil and 6.7% of its gas to the region (Figure 1).²

After the Ukraine crisis and subsequent imposition of Western sanctions, Russia’s pivot to Asia accelerated. Russian banks and energy firms faced capital restrictions on Western markets and were banned from purchasing equipment and services for their deepwater, Arctic offshore, and shale oil exploration and production projects. This combination of financial and technological sanctions hit the Russian energy sector

hard. Limited access to Western capital cut off sources of financing for long-term and high-cost energy projects. Russian energy companies have high corporate debt levels and are now forced to pay lofty interest rates for non-Western sources of financing.

The ban on Western equipment limited the development of technologically advanced and capital-intensive shale and offshore projects. While Western Siberia suffered primarily from sanctions that limited technology needed to intensify production, Eastern Siberia—where large investments and state-of-the-art equipment are necessary to explore unconventional reserves—was hit by both financial and technological sanctions. Although Russian energy companies succeeded in developing certain homegrown technologies, import substitution has failed to produce equipment for deepwater, Arctic offshore, and shale exploration. To reduce dependency on Western funding and manufacturers, Russian energy companies quickly pivoted to the Asian market. The People’s Republic of China, Republic of Korea, Japan, Republic of India, and Socialist Republic of Vietnam became Russia’s main alternatives.³

“Limited access to Western capital cut off sources of financing for long-term and high-cost energy projects. Russian energy companies have high corporate debt levels and are now forced to pay lofty interest rates for non-Western sources of financing.”

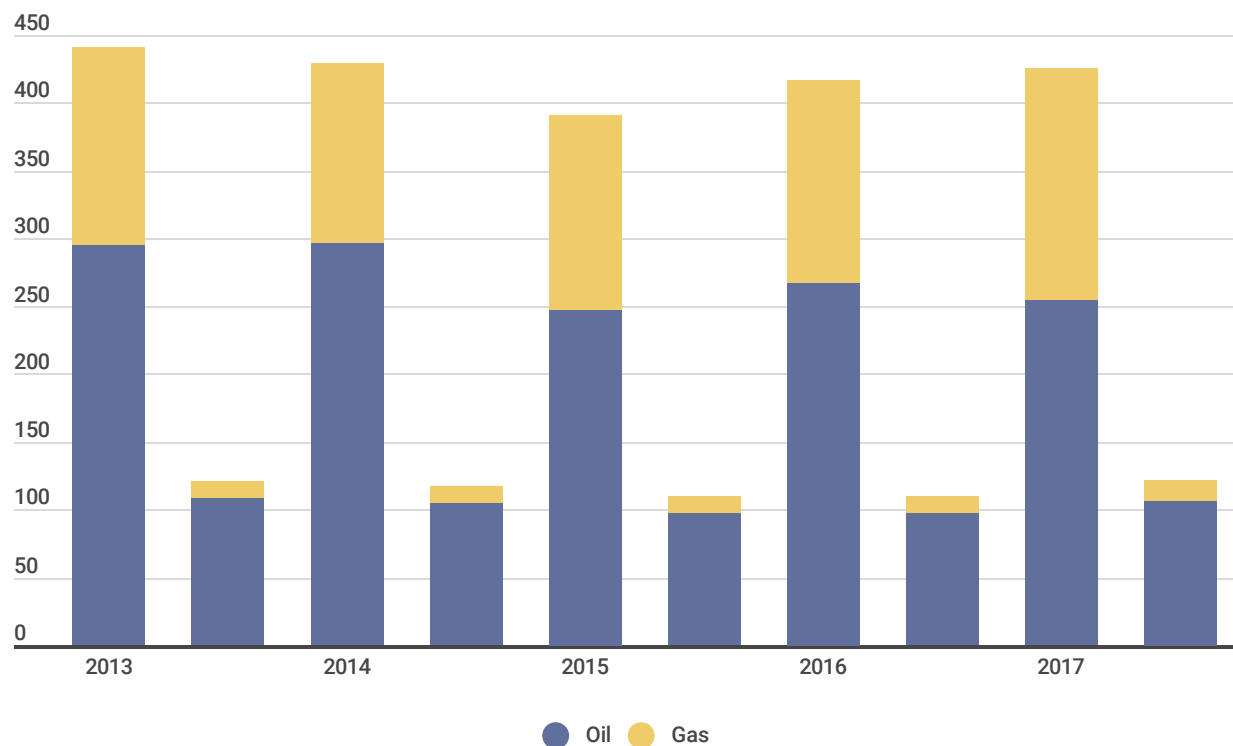
As the United States’ main allies in Northeast Asia, Japan and South Korea were expected to follow suit and join Western sanctions.

¹ Ministry of Energy of the Russian Federation, *Energy Strategy of Russia for the Period Up To 2030* (Moscow, 2010), p. 23.

² BP Statistical Review of World Energy, 67th edition, June 2018.

³ Maria Shagina, “Russia’s Energy Sector: Evaluating progress on import substitution and technological sovereignty,” GRI Special Report, *Global Risk Insights*, April 2018, 4.

FIGURE 1. RUSSIAN HYDROCARBON EXPORTS TO EUROPE AND ASIA-PACIFIC, 2013-17, MTOE



Source: Author's calculations based on BP Statistical Reviews of World Energy, 2013-2017.

Japan implemented symbolic sanctions, but failed to target the Russian oil and gas sector. Seoul criticized the annexation of Crimea, but refrained from imposing any sanctions. Ultimately, both countries saw energy cooperation as mutually beneficial for several economic and geopolitical reasons.

First, Russia offers an alternative to reduce energy dependence on imports from the Middle East. As Japan and South Korea's share of Middle Eastern imports climbed above 80%, overreliance on the region became a national security issue. The proximity of Russia's eastern regions is attractive: the route is shorter and avoids the Straits of Hormuz and Malacca, passages hindered by piracy and transportation bottlenecks.

Second, using energy cooperation as a bargaining chip, both countries hope to address geopolitical concerns. Japan seeks to soften Russia's stance on the so-called Northern Territories (Kuril Islands)—a group of islands near Hokkaido, whose status has

been disputed since the Soviet occupation in 1945—by investing in the country's Far East.⁴ South Korea hopes to engage Russia in the Democratic People's Republic of Korea's denuclearization process.⁵ Seoul views Moscow as a trustworthy negotiator and safeguard for a nuclear deal with Pyongyang.⁶

Last, fearing China's economic and military dominance in the region, Japan and South Korea hope to prevent a robust Sino-Russian alliance from developing at their expense.⁷ Tokyo and Seoul believe an alliance between Russia and China would upset the regional balance and leave them isolated. By showing a commitment to energy cooperation, Japan

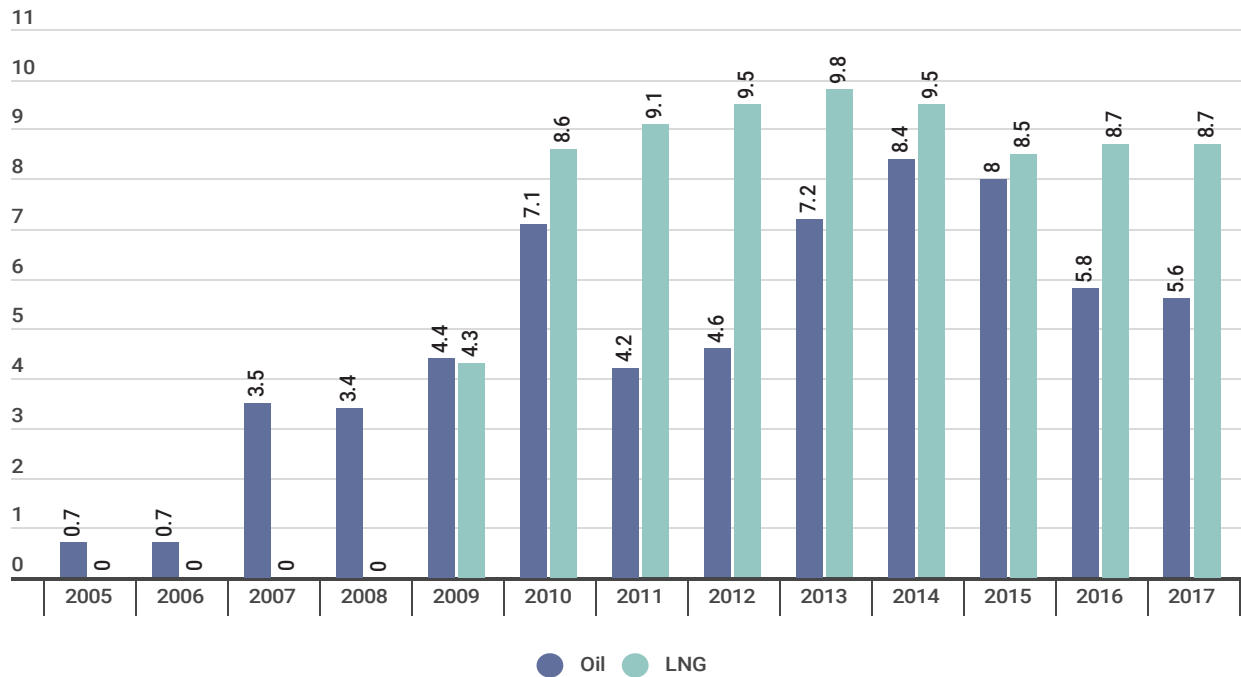
⁴ James D.J. Brown, "Japan's New Approach to Russia," *The Diplomat*, 18 June 2016.

⁵ Address by President Moon Jae-in at the State Duma of Russia, *Briefings and Speeches*, 21 June 2018.

⁶ Lyle J. Goldstein, "Moon Shines in Moscow," *The National Interest*, 4 July 2018.

⁷ Shoichi Itoh, *Russia Looks East: Energy Markets and Geopolitics in Northeast Asia*, Center for Strategic and International Studies, 2011, p. 31.

FIGURE 2. RUSSIAN SHARES IN JAPAN'S TOTAL OIL AND LNG IMPORTS, 2005-2017 (%)



Source: UN Comtrade

and South Korea are signaling to Russia that they can be alternative regional partners to China. In this way, both countries attempt to maintain the fragile balance in the Asia-Pacific.⁸

For Russia, energy cooperation with Japan and South Korea provides an alternative market, too. Russia increases its leverage vis-à-vis the European Union and diversifies its pivot to Asia by reducing reliance on China. Russia is able to access untapped resources in the Far East, accelerating both exploration and development by attracting Japanese and South Korean investment and technology. Finally, cooperation with Tokyo and Seoul give Moscow an opportunity to demonstrate that it is not fully isolated and that it can find international partners despite Western sanctions.

Russia-Japan Energy Cooperation

Japan's energy cooperation with the Soviet Union began in the 1970-80s. However, it was not until the start of the Sakhalin projects—international consortiums for oil and gas production on Sakhalin Island—and the construction of the Eastern Siberia Pacific Ocean (ESPO) pipeline—a Sino-Russian joint project that exports crude oil to the Asia-Pacific—that Russia's share of Japan's oil and gas imports became noticeable. The Sakhalin projects have since become a reliable source of oil and liquefied natural gas (LNG) for Japan. Established in 1995, Sakhalin-1 shipped its first commercial oil to Japan in 2005. It soon became Japan's main source of oil. Due to limited capacities, however, natural gas exports did not reach their full potential. The Sakhalin-2 project filled this gap and became a key source of LNG for Tokyo. After the

⁸ Interview with expert on Russian-Japanese relations, Tokyo, January 2018.

2011 Fukushima nuclear disaster, Sakhalin-2 proved to be a steady source for emergency supplies.⁹ Since 2013-14, Japan's oil and LNG imports from Russia peaked at 7.1% and 9.8%, respectively, and they remain roughly at this level today (Figure 2).

Since 2012, Russian-Japanese energy relations have deepened due to personal diplomacy between Russian President Vladimir Putin and Japanese Prime Minister Shinzō Abe. Despite Russia's international isolation since the Ukraine crisis, Japanese companies actively participated in Yamal LNG, one of the largest Russian projects affected by Western sanctions. In 2013, Japan's JGC Corporation and Chiyoda Corporation won an engineering and construction tender for the LNG plant. In 2014, Mitsui O.S.K. Lines (MOL) agreed to spend \$973 million on three of Novatek's fifteen brand-new ice-tankers.¹⁰

“For years, Russia’s ineffective regulatory regime, excessive red tape, and opaque legal system have presented major problems for Japanese business.”

In May 2016, the Abe government launched an eight-point economic cooperation plan encompassing energy, infrastructure, and agriculture in hopes of creating a relationship of trust with Russia and softening its stance on territorial negotiations. Within this cooperation plan, the Japan Bank for International Cooperation (JBIC) signed a memorandum of understanding (MoU) for strategic cooperation with Novatek and two months later provided a €200-million loan

9 Hirofumi Arai, “Japan-Russia Economic Cooperation with Emphasis on Energy Cooperation,” in *Japan-Russia Relations. Implications for the U.S.-Japan Alliance*, edited by Gilbert Rozman (Washington, D.C.: Sasakawa Peace Foundation USA, 2016), p. 103-104.

10 “Mitsui O.S.K. to join pioneering Arctic shipping effort,” *Nikkei Asia Review*, 9 July 2014.

for a \$27-billion facility.¹¹ Even prior to the launch of Yamal LNG, Mitsui & Co., Marubeni Corp, and Mitsubishi Corp were poised to sign a cooperation agreement with Novatek on Arctic LNG-2, its second LNG plant.¹²

Despite numerous meetings between Abe and Putin, however, the share of Japanese investment in Russia's Far East is marginal, and the eight-point economic cooperation plan failed to make much of an impact. Looking for “win-win” projects, the Japanese Business Federation Keidanren was pessimistic about finding profitable ventures. Even after Moscow created Advanced Special Economic Zones (ASEZs) in the Far East, Japanese business had little inclination to invest. Western sanctions were not the main impediment. For years, Russia's ineffective regulatory regime, excessive red tape, and opaque legal system have presented major problems for Japanese business. Japan's expectations that sanctions might incentivize Russia to improve its investment climate did not materialize.¹³

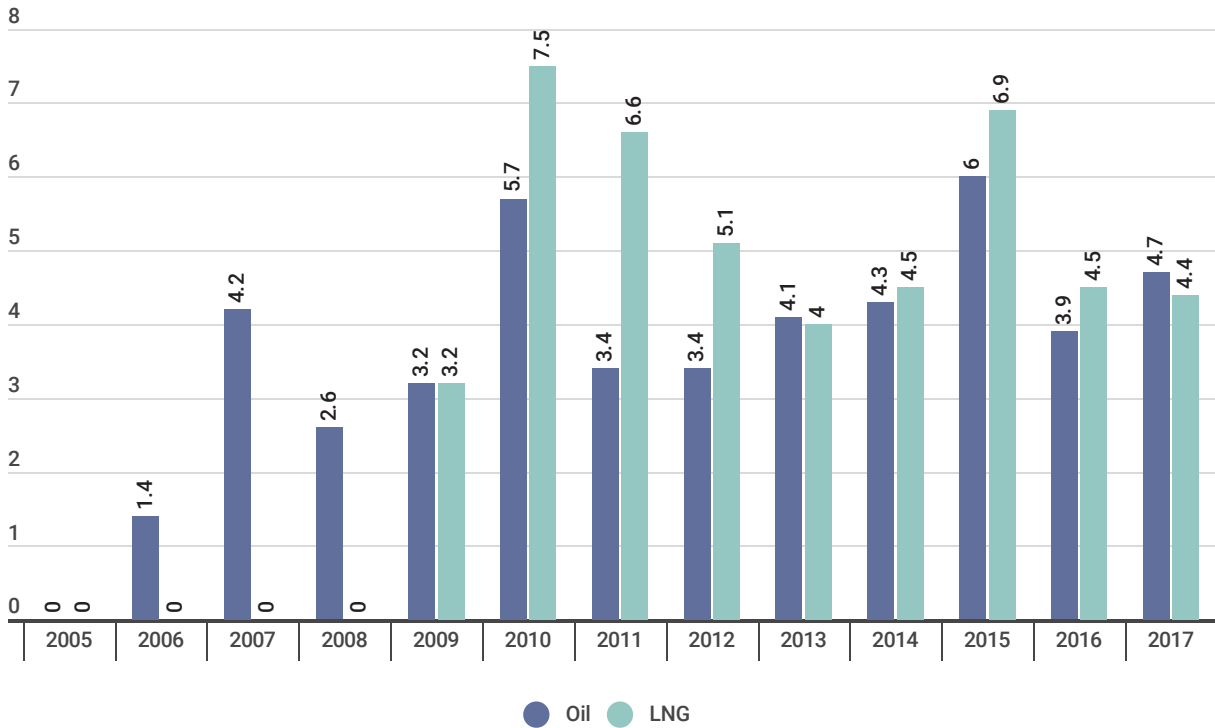
In December 2016, the much-anticipated Yamaguchi summit failed to result in a deal on the territorial issue. Nevertheless, the Abe government was determined to use energy cooperation to compel Russia into negotiations and improve bilateral political relations. Coaxed by the government, Japanese businesses reportedly signed 23 energy-related agreements. In 2016, the state-run Japan Oil, Gas and Metals National Corporation (JOGMEC) was poised to buy a 19.5% equity stake in Rosneft as means to provide funding. The deal was aborted, however, after the unexpected arrest of then-Economy Minister Alexey Ulyukaev

11 “MoU with JSC Novatek for Strategic Partnership,” *JBIC Press Release*, 5 September 2016; and “Yamal LNG secures \$200 mln JBIC loan,” *LNG World News*, 16 December 2016.

12 “Japan trading houses poised to sign Russian LNG deals,” *Nikkei Asian Review*, 16 December 2016.

13 Interview with a Keidanren representative, Tokyo, January 2018.

FIGURE 3. RUSSIAN SHARES IN SOUTH KOREA'S TOTAL OIL AND LNG IMPORTS, 2005-2017 (%)



Source: UN Comtrade

shook Japanese officials.¹⁴ In August 2017, JBIC established a \$1-billion investment fund with the U.S.-sanctioned Russian Direct Investment Fund (RDIF) for projects in energy, Far East industry, and technology development. Later, the fund made its first investment of \$170 million. A portion of those funds went to Transneft, another state-owned firm targeted by U.S. and EU sanctions.¹⁵

In September 2017, JOGMEC and Irkutsk Oil Company (INK) signed a framework agreement for joint exploration in Eastern Siberia.¹⁶ In November 2017, Mizuho Bank, Sumitomo Mitsui Banking Corporation, and J.P. Morgan provided a €1-billion credit for five years to Gazprom, sanctioned by the

U.S.¹⁷ In February 2018, JBIC established a joint venture together with the Far East and Baikal Region Development Fund, also under U.S. sanctions, for the promotion of Japanese investment in Russia's ASEZs.¹⁸ In May 2018, JBIC provided a \$39-million credit line to Sberbank, Russia's largest commercial bank and targeted by U.S. and EU sanctions, for the purchase of Japanese machinery and equipment to be used in infrastructure and energy development.¹⁹ In this way, Japanese banks and export credit agencies provided a lifeline for sanctioned Russian energy companies, banned from long-term borrowing from the West.

In September 2018, at the Eastern Economic Forum (EEF) in Vladivostok, Japanese energy

14 "Ulyukaev Arrest Scuppered Japanese Bid for Shares in Russia's Rosneft," *Moscow Times*, 15 December 2016.

15 "Russia-Japan Investment Fund makes first investments of \$170 mln," *Reuters*, 6 December 2017.

16 "Framework Agreement signed between JOGMEC and INK on new joint exploration project," *JOGMEC New Releases*, 7 September 2017.

17 "Mizuho Bank, SMBC, and J.P. Morgan to provide EUR 1 billion credit facility to Gazprom," *Gazprom News and Events*, 28 November 2017.

18 "JBIC Establishes Joint Japanese Project Promotion Vehicles in the Russian Far Eastern region," *JBIC Press Releases*, 19 February 2018.

19 "Export Credit Line for Sberbank of Russia," *JBIC Press Releases*, 25 May 2018.

companies made headlines. Demonstrating a commitment to energy cooperation with Russia, the Abe government tried to galvanize stagnant investment. JOGMEC signed a MoU with Novatek to develop energy cooperation in the Yamal and Gydan Peninsulas, particularly Novatek's Arctic LNG-2 project and its transshipment terminal in Kamchatka. Later, MOL and Marubeni Corp joined a feasibility study for the transshipment terminal. Gazprom conducted talks on the expansion of Sakhalin-2 with Mitsui & Co. and signed a MoU with the Japanese company to explore the possibility of cooperation on Baltic LNG.²⁰ In December, Mitsui & Co. confirmed talks for acquiring stakes in three projects—Arctic LNG-2, the expansion of Sakhalin-2, and Baltic LNG.²¹ Itochu, another Japanese company, also showed interest in Baltic LNG and might acquire 10% in the project.²² SODECO, a Japanese energy consortium, announced its plans to join other partners from Sakhalin-1 to build Far East LNG.²³ Despite the government's assurances, however, no binding contracts have been sealed as Japan's private companies fear looming U.S. sanctions.

Russia-South Korea Energy Cooperation

Deprived of fossil fuels of its own, South Korea has traditionally viewed Russia's Far East as a source of raw materials. In the 1970-80s, South Korea planned large-scale energy projects with the Soviet Union, but they were largely unprofitable. South Korea first became interested in Sakhalin energy

projects in 1994, but progress was extremely slow and did not show tangible results until 2009. As with Japan, Russian-Korean energy cooperation solidified only after the launch of the Sakhalin projects and ESPO pipeline. In 2009, Russia and South Korea signed its first long-term agreement for the annual delivery of 1.5 million tons of LNG to Korea Gas Corporation (KOGAS) for 20 years.²⁴ Whereas in 2009 all Russian-produced energy—that is, both oil and gas—amounted to 6.4% of South Korean energy imports, in 2017, South Korea imported 4.7% of its oil and 4.4% of its gas from Russia. (Figure 3).

In the wake of the Ukraine crisis, the U.S. pressured South Korea to impose sanctions. Although Seoul condemned Russia's annexation of Crimea, it abstained from punitive measures.²⁵ As the U.S. and EU expanded their sanctions, South Korea kept silent. Despite American pressure on the EU and Japan to show solidarity, Washington took a lighter approach with Seoul.²⁶

During the Park Geun-hye administration, the share of Korean investment in overseas energy projects, including in Russia, was marginal. In 2013, the Korean Investment Corporation and RDIF signed an agreement for cross-border investments, but progress was slow. Only after the election of President Moon Jae-in in May 2017 did South Korean economic cooperation with Moscow kick off within the framework of the New Northern Policy. The policy aimed to strengthen economic relations with Russia, Mongolia, and Central Asia, promote peace and prosperity in the region, and shape the regional geopolitics

20 "Russia, Japan discuss energy cooperation, sign LNG agreement in Vladivostok," *S&P Global Platts*, 10 September 2018.

21 "Mitsui confirms talks for stake in Russian LNG project," *Nikkei Asian Review*, 23 December 2018.

22 "Сахалинский клуб переедет на Балтику," *Коммерсант*, 14 декабря 2018 ["The Sakhalin Club is moving to the Baltics," *Kommersant*, 14 December 2018].

23 "Exclusive: Exxon, Rosneft to build LNG plant with Japanese, Indian partners – sources," *Reuters*, 23 October 2018.

24 Se Hyun Ahn, "Framing Energy Security between Russia and South Korea: Progress, Problems, and Prospects," *Asian Survey* vol. 50 no. 3 (2010), pp. 596–599.

25 "Seoul diplomat: South Korea does not plan sanctions against Russia, but anticipates difficulties," *KyivPost*, 25 July 2014.

26 Maximilian Hess, "Does it matter that South Korea has not imposed sanctions on Russia?" *Intersection*, 17 May 2016.

in the Northeast Asia.²⁷ As part of the New Northern Policy, the Nine-Bridges initiative was launched to pursue joint projects with Russia in areas such as energy, Arctic shipping routes, shipbuilding, and transportation. From Seoul's point of view, the development of regional trade and energy networks offered the best guarantee for long-term peace on the Korean Peninsula. For Russia, the plan offered desirable investment in its Far East.

Navigating sanctions, Korean companies intensified energy cooperation with Russia. In 2017, the Russian government allegedly requested that KOGAS, a state-owned gas company, invest in Sakhalin offshore and Arctic onshore projects and increase its LNG imports.²⁸ Despite the fear of new U.S. sanctions, KOGAS caved and signed a MoU with Novatek to explore participation in Arctic LNG-2 and the transshipment terminal in Kamchatka. KOGAS will also look into increasing Russian LNG shares.²⁹ Driven by commercial interests, the Moon administration wanted to secure the order of additional LNG carriers for Daewoo Shipbuilding Marine Engineering (DSME). KOGAS' equity participation in Arctic LNG-2 and LNG off-takes was somewhat of a prerequisite.³⁰ In light of improving relations between the two Koreas, KOGAS revived talks with Gazprom on building the Trans-Korea pipeline—also known as the “peace pipeline”—which would bring Russian gas through North Korea into South Korea.³¹ Another geopolitical energy project aimed at easing regional tensions is the Northeast

Asian Super Grid.³² The project looks to export Mongolia's wind and solar power and Russia's hydropower to the Koreas and China. The feasibility of the project is unclear, however. International sanctions complicate North Korea's involvement, and the project requires a massive investment of roughly \$6.2 billion.³³

“In the past few years, South Korea has become an important partner in Russia's import substitution efforts.”

In the past few years, South Korea has become an important partner in Russia's import substitution efforts. Russian energy companies have supplanted banned Western technology with South Korean equipment, which is generally of higher quality than Chinese equipment, particularly in the shipbuilding sector. In 2014, Samsung Heavy Industries won a \$444-million order to build three Arctic tankers for Gazprom Neft, sanctioned by the U.S. and EU.³⁴ The same year, DSME received an order to build 15 Arc7 ice-tankers for Novatek's Yamal LNG project. In 2017, Hyundai Samho Heavy Industries signed a binding agreement with Zvezda Shipbuilding Complex, a Rosneft-led shipyard in the Far East, to provide technical support for the design and construction of Aframax vessels. The cooperation aimed to compensate for Rosneft's lack of expertise in shipbuilding and advance its localization program.³⁵ In 2018, a similar joint venture was established with Samsung Heavy Industries to provide technical support for the construction

27 Ramon Pacheco Pardo, “Moon's Eurasia: opening up North Korea, serving Seoul's interests,” *The Interpreter*, 18 December 2018.

28 Keun Wook Paik, “South Korea's Energy Policy Change and the Implications for its Imports,” *OIES Paper NG 132*, The Oxford Institute for Energy Studies, June 2018, p. 19.

29 Mike Corkhill, “Kogas closes in on Arctic LNG 2 play,” *LNG World Shipping*, 25 June 2018.

30 Keun Wook Paik, “South Korea's Energy Policy Change,” p. 19.

31 “Kogas willing to work with Russia on North Korea gas pipeline,” *Interfax Global Energy*, 28 June 2018.

32 “Plan for north-east Asian electricity ‘super grid’ boosted,” *Financial Times*, 2 November 2017.

33 “Northeast Asia super grid” costs at least \$6.2 billion: KEPCO,” *The Korea Times*, 17 January 2019.

34 “S. Korea's Samsung Heavy to build oil tankers for sanctioned Russian firm – sources,” *Reuters*, 10 October 2014.

35 “Rosneft and Hyundai Samho Heavy Industries strengthen technological cooperation,” *Press Release*, 2 June 2017.

FIGURE 4. ENERGY FIELDS AND LICENSED AREAS IN THE SAKHALIN REGION



Source: PJSC Gazprom

of shuttle tankers and offshore platforms.³⁶

As in Japan, South Korean business has been reluctant to invest in Russia's Far East due to administrative hurdles, undeveloped regional infrastructure, and U.S. sanctions. Despite the government's encouragement, the number of projects implemented with Korean investment is low. Expertise and technology transfer in the shipbuilding sector are two of the few successful cooperation areas.

Impact of Western Sanctions

Due to their strategic links with Washington, Japan and South Korea have delicately balanced between the U.S. and Russia. Japanese and Korean companies are generally mindful of not openly violating Western sanctions. By keeping a low profile, businesses in both countries navigate through the sanctions regime. "We want to respond seriously to overtures by Russian businesses in areas such as lifestyle-related industries and infrastructure that aren't subject to U.S. and European sanctions," noted Tatsuo Yasunaga, President of Mitsui & Co.³⁷

Despite Japan and South Korea's decision not to impose energy sanctions, both countries' energy relations with Russia were affected by Western sanctions due to the centrality of the U.S. financial system. Japanese and Korean companies experienced difficulties financing sanctioned Russian firms, and they were reluctant to give loans in U.S. dollars, thus hindering their investment decisions.³⁸

36 "Zvezda, Samsung Heavy to Set Up Shuttle Tanker JV," *World Maritime News*, 11 September 2018.

37 "Japanese companies respond to Tokyo's call for Russian deals," *Nikkei Asian Review*, 17 December 2016.

38 Japan Business Federation Keidanren, "Результаты анкетного опроса относительно условий ведения бизнеса с Россией (2018 фин.год), Обзор," 11 сентября 2018 ["Survey results regarding the conditions of doing business with Russia (2018 FY), Overview," 11 September 2018]; "US sanctions fail to impact Moscow, Seoul Energy Sector Coop – Russian Rep," *Sputnik International*, 11 September 2018.

Sanctions added more uncertainty and risk to Russia's already adverse investment climate.

There are several deals, mainly Japanese ones, that were directly affected by Western sanctions. In July 2017, a deal between Rosneft, JOGMEC, Inpex Corp, and Marubeni Corp for offshore oil exploration in the Tatar Strait was blocked (Figure 4). The U.S. Office of Foreign Assets Control (OFAC) objected to the deal as it undermined the principle that none of the G7 allies should profit from deals that U.S. oil and gas companies are not allowed to participate in.³⁹ Moreover, the licensed field included areas deeper than 152 meters, which violates U.S. sanctions.⁴⁰

"Although LNG was not directly targeted by the U.S. and EU, financial and technological sanctions, combined with a sharp decline in oil prices, undermined the feasibility of LNG projects."

Cooperation between Gazprom and South Korean and Japanese companies stalled after the Yuzhno-Kirinskoye field was targeted by U.S. sanctions in 2015. The undeveloped field is an indispensable source of reserves for Sakhalin-3 and the expansion of Sakhalin-2. Currently, Gazprom and its partners face a dilemma: in order to increase production, expansion is necessary, but Gazprom lacks access to the additional gas reserves. At the last EEF in Vladivostok, Gazprom, Shell, and Mitsui & Co. discussed ongoing preparations for the construction of a third LNG train without specifying the project's reserves.⁴¹ A potential solution could be if Sakhalin-2

39 Jack Farchy, "U.S. Stymies Japan's Plan to Explore for Russian Oil," *Bloomberg*, 14 July 2017.

40 "US sanctions on Russia getting in a way of Japan's oil exploration plans, sources say," *The South China Morning Post*, 14 July 2017.

41 "Gazprom and Shell discuss next steps in Baltic LNG project," *Gazprom's Press Release*, 12 October 2018.

buys gas surplus from Sakhalin-1 or builds its own LNG plant at De Kastro on the Russian mainland.⁴² U.S. sanctions on the Yuzhno-Kirinskoye field might also affect the route of the Trans-Korea pipeline. Previously, Yuzhno-Kirinskoye was one of the potential resource fields for the pipeline.⁴³

Indirectly, Western sanctions also affected Russia's LNG project plans. Although LNG was not directly targeted by the U.S. and EU, financial and technological sanctions, combined with a sharp decline in oil prices, undermined the feasibility of LNG projects. Barred from international markets, Rosneft's Far East LNG and Gazprom's Vladivostok LNG faced fierce competition for domestic funds. At the same time, geopolitical tensions with the West shifted Russia's focus to China. Once considered flagship projects in Russia-Japan energy cooperation, Far East LNG and Vladivostok LNG were indefinitely postponed, as Moscow favored increasing pipeline capacity to China. Oil prices below \$70, furthermore, made Arctic projects barely profitable, causing Rosneft's Pechora LNG and Gazprom's Baltic LNG and Shtokman LNG to be stalled or postponed.

Adaptation Strategy

To adapt to the new, unfavorable market conditions, Japanese and South Korean companies adopted de-risking strategies. First, they participated in areas exempt from sanctions but vital for Russia's ambitious projects. Companies provided technical support for the construction of LNG carriers and financial support for their purchase. They offered engineering expertise for the construction of the LNG modular plants. So far, unlike Chinese and Indian businesses, Japanese and Korean firms have refrained from investing directly in Russian state-

42 Michael Bradshaw, "Russian sanctions slowing progress offshore Sakhalin," *Offshore Magazine*, 1 February 2018.

43 Keun Wook Paik, "South Korea's Energy Policy Change," p. 22.

run companies. Fearing U.S. sanctions, for instance, Japanese companies refused Rosneft's offer to buy a share in Far East LNG, the Eastern Petrochemical Company, and Zvezda Shipbuilding Complex, while Korean companies hesitated to acquire equities in Arctic LNG-2.⁴⁴

Second, governmental backing of joint projects has been crucial to mitigate sanctions risk. Mutually established intergovernmental investment funds and export-import trade agencies have become a key platform for financial transactions. The main source of Japanese and Korean funding came from government-backed channels disconnected from Western financial institutions. For example, the Export-Import Bank of Korea signed a MoU with Russia's Export Credit and Investment Insurance Agency to fund joint projects.⁴⁵ In the same vein, state-backed entities such as JBIC and JOGMEC guaranteed the support of the Japanese government to encourage private companies to participate in Russian investments.

Third, to avoid the U.S. nexus and dollar-denominated payments, Japan and South Korea considered alternative currencies to secure wire-transfers. JBIC proposed direct ruble-yen currency swaps with Gazprombank, VTB, and VEB although the plan did not come to fruition.⁴⁶ Due to high interest rates, the ruble's volatility, and the dominance of the U.S. dollar on the energy market, using alternative currencies proved unsuccessful. Payments in euros via small European banks may have more potential, however, given the development of special purpose vehicles.

Finally, the broader involvement of foreign

44 James Henderson, "Key Determinants for the Future of Russian Oil Production and Exports," *OIES Paper WPM 58*, The Oxford Institute for Energy Studies, April 2015, p. 51; and Keun Wook Paik, "South Korea's Energy Policy Change," p. 19.

45 "EXIAR signs a Cooperation Agreement with the Export-Import Bank of Korea," *Russian Export Center's News*, 6 September 2017.

46 "Japan Bank: US Sanctions Could Lead to Direct Ruble-Yen Currency Swaps," *Sputnik International*, 3 September 2015.



Sakhalin-2 project. (Source: Shell)

participants helped Japan and South Korea avoid sanctions risks. To reduce Japan's visibility in financing Yamal LNG, for instance, JBIC provided the loan as part of an international financial package.⁴⁷ In a similar vein, by inviting Japanese and Indian companies to participate in the construction of the LNG plant at Sakhalin-1, Rosneft tried to minimize sanctions risks for a project that was originally intended to be executed in partnership with Exxon Mobil.⁴⁸

Future Challenges

Moving forward, Russia-Japan and Russia-South Korea energy cooperation faces several potential challenges stemming from looming U.S. sanctions, Russia's import substitution policy, and China's growing energy demand.

⁴⁷ Shoichi Itoh, "Japan's Opaque Energy Policy toward Russia: Is Abe Being Trumped by Putin?" in Erica Downs (et al.) *The Emerging Russia-Asia Energy Nexus*, NBR Special Report No. 74, December 2018, p. 41.

⁴⁸ "Exclusive: Exxon, Rosneft to build LNG plant with Japanese, Indian partners – sources," *Reuters*, 23 October 2018.

New U.S. Sanctions

Signed by President Donald Trump in August 2017, the Countering America's Adversaries Through Sanctions Act (CAATSA) stiffened conditions for Russia's energy sector. New debt borrowing for Russian banks and energy companies has been limited to 14-days and 60-days maturity, respectively. Technological sanctions were toughened, too: technology transfer to deepwater, Arctic offshore, and shale oil projects is prohibited if designated Russian energy companies have 33% or greater ownership. More importantly, the new regulation introduced secondary sanctions on third parties. Non-U.S. individuals and entities can face sanctions if they are involved in the construction, modernization, or repair of Russia's energy export pipelines—i.e., those that originate in Russia and deliver hydrocarbons to another country. Investment and loans of more than \$1 million or equipment and services worth more than \$5 million per year can be blocked. Sections 225 and 226 of the legislation require that the president impose sanctions if non-U.S. individuals and companies make a significant

investment in deepwater, Arctic offshore, and shale oil projects.⁴⁹

The ongoing Sakhalin-1 and Sakhalin-2 oil projects are beyond the scope of CAATSA sanctions as pre-existing contracts were excluded. Sakhalin-2's gas project is also out of reach, as CAATSA targets pipelines, but not LNG. However, the expansion of Sakhalin-2 is at risk. Already complicated by the sanctioning of the Yuzhno-Kirinskoye field, the project might face new obstacles. Roman Dashkov, Chief Executive Officer of Sakhalin Energy, was included in the so-called Kremlin report, and the company could be included on the Specially Designated Nationals List (SDN list) as a parastatal entity with more than 25% state ownership.

The possibility that Sakhalin Energy could be included in the SDN list will prevent Japanese and Korean companies from venturing into restricted activities. Participating in the construction of the Sakhalin-Hokkaido and Trans-Korea pipelines and buying equity in Arctic LNG-2 and the LNG transshipment terminal could be risky business, too, as both would involve significant transactions on behalf of Russian energy companies.

“A 2016 survey revealed that 48% of Japanese companies doing business in Russia were concerned about future prospects.”

Newly proposed U.S. sanctions bills, the Defending Elections against Trolls from Enemy Regimes Act (DETER Act) and Defending American Security from Kremlin Aggression Act (DASKAA), take an even more adversarial approach to Russia. Both bills propose sanctions on new issuances of Russian sovereign debt, which will further

49 U.S. Department of the Treasury, “Countering America’s Adversaries Through Sanctions Act,” (Public Law 115-44) (CAATSA), 2 August 2017.

complicate financing and state support to Russian energy companies. DETER includes a provision to place large Russian energy companies on the U.S. SDN list.⁵⁰ If Rosneft or Gazprom are targeted, Japanese and Korean companies would be forced to cease any purchases of Russian gas and oil from Sakhalin-1 and Sakhalin-2 and abandon their joint ventures.⁵¹

Russia’s Import Substitution

Responding to strengthening Western sanctions, the Russian government has fully embraced a high-profile program of import substitution. The program aims to enhance Russia’s economic sovereignty and technological resilience by developing domestic manufacturing and replacing Western equipment with homegrown goods. The Ministry of Energy has identified a set of priorities, including hydraulic drilling technologies, offshore equipment, and geological and seismic software. It hopes to reduce Russia’s dependency on imported technologies from 80% to 43%.

Whereas the import substitution program is a long-term goal, Moscow sees access to Asian technology as an emergency measure to supplant much-needed modern technology and equipment in the short term. Some Russian companies have succeeded in developing homegrown technologies. However, 70-90% of the equipment and services for deepwater, Arctic offshore, and shale exploration is still imported. Asia-Pacific countries have become an alternative for Russia to obtain technology that is otherwise unavailable. By providing equipment and services, Asian countries cushioned the effect of sanctions and enabled energy projects’ operations.

50 Peter Harrell and Elizabeth Rosenberg, “Tightening Sanctions on Russia,” Center for a New American Security, 11 September 2018; and Richard Nephew, “The Outlook for U.S. Sanctions on Russia Following the Midterm Elections,” Center for Global Energy Policy, p. 3.

51 Keun Wook Paik, “Sino-Russian Gas and Oil Cooperation: Entering into a New Era of Strategic Partnership?” *OIES Paper WMP 59*, Oxford Institute for Energy Studies, April 2015, p. 37.

However, Russia's localization policy has negatively affected Asian countries' participation by trumping quality and cost factors. Despite the fact that Russian-made equipment is 70% costlier and of lower quality than foreign equipment, foreign companies have reportedly been forced to use Russian equipment.⁵² A 2016 survey revealed that 48% of Japanese companies doing business in Russia were concerned about future prospects. In the long term, Japan's exports to Russia could decrease, resulting in lost commercial opportunities.⁵³

Protecting Russian producers in shipbuilding became a central part of import substitution. New Russian regulation regarding the Arctic allows fossil fuels to be shipped via the Northern Sea Route only in vessels built in Russia and registered under the Russian flag.⁵⁴ The new bill will affect South Korean DSME's future involvement in Novatek's Arctic LNG-2. Having received the order for 15 ice-breaking LNG carriers for Yamal LNG, DSME hoped to build the same number of LNG carriers for the second plant. However, according to the new legislation, the fleet for Arctic LNG-2 should be domestically manufactured. Leonid Mikhelson, Novatek's chief executive, confirmed that Arctic LNG-2 will see an increase in Russian equipment and technologies.⁵⁵ Instead of DSME, Novatek is considering ordering LNG carriers from Zvezda Shipbuilding Complex, despite 60-80% higher costs and no quality guarantees.⁵⁶ Although DSME might lose its contract with Novatek, other Korean companies such as Hyundai Samho Heavy Industries and Samsung Heavy Industries will profit from

52 Japan Business Federation Keidanren, "Результаты анкетного опроса относительно условий ведения бизнеса с Россией (2016 фин. год), Обзор," 2 сентября 2016 ["Survey results regarding the conditions of doing business with Russia (2016 FY), Overview," 2 September 2016].

53 Ibid.

54 Atle Staalesen, "New restrictions coming up in Russian Arctic shipping," *The Barents Observer*, 28 March 2018.

55 Jason Corcoran, "Novatek Arctic LNG project defies US sanctions," *Petroleum Economist*, 17 October 2018.

56 Shagina, "Russia's Energy Sector," p. 13.

cooperation agreements with Rosneft's Zvezda. In fact, in January 2019, the former created an engineering center with Zvezda to provide necessary know-how in Russia's shipbuilding and drilling localization.⁵⁷

China's Growing Demand

By 2050, China will be a global leader in energy consumption.⁵⁸ Its growing energy demand could cause substantial shifts in energy markets and strengthen competition for Russian energy resources in the Asia-Pacific. Regional energy dynamics have already been affected by the landmark gas deal between Russia and China, under which Gazprom agreed to export up to 38 billion cubic meters through the Power of Siberia pipeline for 30 years. Giving priority to Power of Siberia, Gazprom shelved its decision to build Vladivostok LNG, a former flagship project of Russo-Japanese energy cooperation. Revived talks about constructing the Altai pipeline (Power of Siberia-2), which would link Western Siberia with China's Northwest, could trigger the suspension of other expensive LNG projects.⁵⁹ Furthermore, the China-oriented Power of Siberia pipeline might affect the feasibility of the proposed Trans-Korea pipeline. Nevertheless, given the political nature of the Trans-Korea pipeline, economic calculations will not be the main factor.⁶⁰

Ultimately, Moscow's geopolitical ambition to exploit regional competition over Russian energy resources has failed. As a latecomer to the Asia-Pacific, Russia began with weak leverage. Despite existing geopolitical tensions between Japan and China, the Sino-Japanese political rivalry does not

57 "Конструкторов позвали на Большой Камень," *Коммерсант*, 15 января 2019 ["Engineers were called to the Bolshoy Kamen," *Kommersant*, 15 January 2019].

58 "IEEJ Outlook 2050 – Prospects and challenges until 2050 – Energy, Environment and Economy," Institute of Energy Economics, Japan, October 2017, p. 2.

59 Keun Wook Paik, "Sino-Russian Gas and Oil Cooperation," pp. 37-38.

60 Keun Wook Paik, "South Korea's Energy Policy Change," p. 22.

significantly affect the business sphere. In the energy sector, Japanese policymakers take a pragmatic approach towards energy security and promote international energy cooperation, including with Chinese companies. Similarly, Sino-Korean energy relations are cooperative. Seoul and Beijing have committed to strong energy sector cooperation to enhance Northeast Asian market development. Overall, Sino-Russian energy cooperation would bring more stability to the region's energy market.⁶¹

Little Room for Growth

Japan and South Korea's interest in energy cooperation supports Russia's pivot to Asia and helps to limit Russia's dependency on the Chinese market. Despite the Abe and Moon governments' drive to boost energy cooperation, however, there are currently more projects on paper than in practice. The slow pace of energy cooperation has largely been affected by Russia's adverse investment climate and under-developed infrastructure in the eastern regions. Western sanctions complicated financial transfers and added greater reputational risks for Japanese and South Korean companies.

Although Japan and South Korea failed to introduce energy sanctions on Russia, the impact of Western sanctions, in particular those of the U.S., forced companies to develop de-risking strategies. Keeping a low profile, Japan and South Korea provided a financial lifeline for Russian oil and gas majors, supplied state-of-the-art equipment, and offered expertise for technologically demanding projects. Governmental support became instrumental for minimizing sanctions risks, while government-backed channels were crucial for securing financial transactions. Japan and South Korea considered currency

alternatives to the dollar to avoid OFAC's reach and approached energy projects in broad international partnerships to mitigate sanctions exposure. By participating in Russia's localization program, international companies ducked the ban on technology transfer and provided much-needed expertise and equipment.

In the future, Japanese and South Korean businesses may find themselves between a rock and a hard place. On one hand, businesses will experience more pressure from their respective governments. As Russia-Japan territorial negotiations intensify, the Abe government will want to show its full commitment to economic cooperation, strongly encouraging Japanese businesses to forge more energy deals. Similarly, to achieve its foreign policy goals, the Moon government will incentivize Korean businesses to invest more in energy-related projects. On the other hand, with U.S. sanctions intensifying, it will become more difficult for Japanese and South Korean companies to sustain the same scale of energy cooperation with Russia. As room to maneuver gets limited by new U.S. sanctions bills, navigating sanctions loopholes will only become riskier. 🦋

61 Shoichi Itoh, "Sino-Russian Energy Relations in Northeast Asia and Beyond," in S. Itoh (et. al.) *Japan and the Sino-Russian Entente. The Future of Major-Power Relations in Northeast Asia*, NBR Special Report No. 64, April 2017, p. 30.

APPENDIX: RUSSIA-JAPAN & RUSSIA-SOUTH KOREA ENERGY COOPERATION PROJECTS

Projects	Partners	Start	Development under sanctions
Sakhalin-1 (5 MMt)	Rosneft (20%), ExxonMobil (30%), SODECO (30%), ONGC (20%)	2005: oil production	<ul style="list-style-type: none"> • JBIC, Mizuho Bank, Sumitomo Mitsui Banking Corporation, and Sumitomo Mitsui Trust Bank provided a \$450 mln loan for the development of the Odoptu field (03/16) • JGC is considering constructing a mini LNG plant (03/16) • Rosneft, ExxonMobil, SODECO, and ONGC announced plans to carry out a final investment decision (FID) for the construction of an LNG plant (10/18)
Sakhalin2 (10 MMt, +5MMt for the 3rd train)	Gazprom (50%), Shell (27.5%), Mitsui & Co. (12.5%), Mitsubishi Corp (10%)	1991: oil production 2009: LNG production	<ul style="list-style-type: none"> • Construction of the 3rd train was postponed to after 2023 due to the U.S. sanctioning the Yuzhno-Kirinskoye field • The 4th train was postponed to after 2023 • Shell and Mitsui & Co. discussed the ongoing preparations for the expansion of the third train (09/18)
Sakhalin-3	Gazprom	N/A	<ul style="list-style-type: none"> • Yuzhno-Kirinskoye field was targeted by OFAC for the exploration and production of oil (2015)
Yamal LNG (16.5 MMt for 3 trains)	Novatek (51.1%), Total (20%), CNPC (20%), Silk Road Fund (9.9%)	2017-2019	<ul style="list-style-type: none"> • JGC and Chiyoda received a tender for engineering, procurement, and construction (2013) • JBIC provided a €200 million loan (12/16) • DSME received the order to build 15 LNG carriers (2014) • 3 Arc7 ice-class LNG carriers were purchased by MOL (2014)
Arctic LNG-2 (15.5 MMt for 3 trains)	Novatek, Total (10%)	After 2022	<ul style="list-style-type: none"> • Mitsui & Co., Mitsubishi Corp, and Marubeni Corp signed MoU with Novatek (2016) • JOGMEC signed MoU with Novatek to acquire equity stakes (09/18) • KOGAS signed MoU with Novatek to explore opportunities for equity acquisition and LNG off-takes (09/18)
Vladivostok LNG (15 MMt)	Gazprom, Itochu, JAPEX, Marubeni	Postponed	<ul style="list-style-type: none"> • The project was indefinitely postponed, and Power of Siberia was prioritized
Far East LNG (5 MMt)	Rosneft, ExxonMobil, Itochu, Marubeni	Postponed (after 2023)	<ul style="list-style-type: none"> • The project was postponed due to unfavorable market conditions and technological difficulties (2014)
Baltic LNG (10 MMt)	Gazprom, Shell	Postponed (after 2023)	<ul style="list-style-type: none"> • Mitsui & Co. signed MoU with Gazprom (09/18) • Itochu signed MoU with Gazprom to become a partner and acquire 10% in the project (12/18)

Projects	Partners	Start	Development under sanctions
Shtokman LNG (7.5 MMT)	Gazprom(51%), Statoil (24%), Total (25%)	Postponed	<ul style="list-style-type: none"> Japan was seen as the primary market for Shtokman LNG to substitute nuclear energy (2012) Statoil and Total withdraw from the project due to Western sanctions (2015)
Sakhalin-Hokkaido gas pipeline (22 bcm)	Gazprom, Itochu, JAPEX, Marubeni	Stalled N/A	<ul style="list-style-type: none"> Gazprom and JOGMEC conducted a joint feasibility study (2017)
LNG transshipment terminal in Kamchatka	Novatek	After 2022-2023	<ul style="list-style-type: none"> Marubeni Corp, MOL, and JOGMEC signed MoU with Novatek (09/18) JBIC might provide financial support, whereas Japanese LNG plant builders might provide technological support KOGAS signed MoU with Novatek to participate in building the complex and in LNG trading (09/18)
Trans-Korea gas pipeline (10 bcm)	Gazprom, KOGAS	Stalled since 2011	<ul style="list-style-type: none"> Gazprom and KOGAS signed a “road map” for the project (2011) Gazprom and KOGAS to conduct a joint feasibility study
Zvezda Shipbuilding Complex	Rosneft, Rosneftegaz, Gazprom	After 2021	<ul style="list-style-type: none"> Hyundai Samho Heavy Industries signed a cooperation agreement (2017) and created an engineering center with Zvezda (2019) Samsung Heavy Industries to provide technological support to build shuttle tankers and offshore platforms (2018)
Far East Petrochemical Company	Rosneft, Marubeni Corp, Mitsubishi Heavy Industries	After 2018	<ul style="list-style-type: none"> Mitsui & Co. signed MoU with Rosneft on the development of the petrochemical Complex in Nakhodka (2013) Marubeni Corp and Mitsubishi Heavy Industries signed a cooperation agreement with Rosneft to conduct a feasibility study (2016)
Joint hydrocarbon exploration projects	JOGMEC, INK, Itochu, INPEX	2007: INK-Sever; 2009: INK-Zapad	<ul style="list-style-type: none"> JOGMEC and INK signed MoU on the joint geological program in East Siberia (12/16) and Heads of Agreement (04/17) JOGMEC and INK signed the binding Framework Agreement on new joining exploration project in East Siberia (09/17)



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