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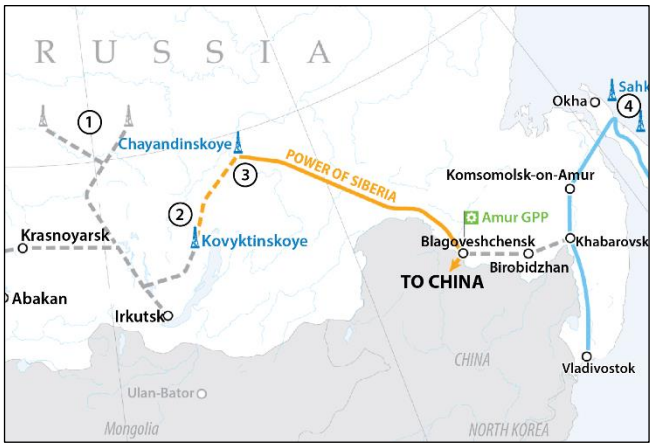
Power of Siberia: A Natural Gas Pipeline Brings Russia and China Closer

Overview

The "Power of Siberia," the first natural gas pipeline to bring Russian gas into China, began operations in December 2019. The pipeline's initial capacity, five billion cubic meters (BCM), would meet 1.3% of China's 2018 natural gas consumption. As the pipeline reaches its full capacity of 38 BCM by 2025, natural gas likely will be able to displace coal in China's northwest region in the long term. The Power of Siberia pipeline runs just over 1,400 miles from Russia's Chayanda natural gas field and connects to China along the border of Heilongjiang province; the pipeline will eventually extend from the Kovykta field (another 400 miles) in Siberia (see **Figure 1**). Congress may consider how this long-term energy arrangement between Russia and China may affect U.S foreign policy and security.

Figure 1. Map of Power of Siberia Project



Source: Modified by CRS, Gazprom, http://www.gazprom.com/projects/power-of-siberia/.

Background

In 2014, shortly after Russia invaded Ukraine, Gazprom, Russia's national gas company, signed a $400 billion contract with China National Petroleum Corp. (CNPC) to supply 38 BCM of natural gas annually for 30 years. The project is the biggest contract in Gazprom's history.

Russia and China had been talking for years about a natural gas pipeline prior to signing an agreement, but could not reach an agreement primarily on price. The pressure of western sanctions on Russia, according to some analysts, contributed to Moscow seeking to open a new market for its natural gas and show the west they had other markets for natural gas exports. According to Bloomberg, Russian officials are reporting the price for the gas at a base of about $360 per thousand cubic meters, similar to the price paid by Germany, Gazprom's biggest and most important customer. The pipeline runs almost solely through Russian territory, resulting in Gazprom agreeing to finance the vast majority of the project.

China's Market

For China, the pipeline helps diversify its energy supply. Initial volumes from Russia via the pipeline will be small relative to China's gas consumption, which has almost tripled over the last decade (to 283 BCM in 2018). China produces about two-thirds of its gas needs domestically.

In 2018, China imported 121 BCM of natural gas, with 60% coming by pipeline and 40% as liquefied natural gas (LNG). Of China's pipeline gas imports, 70% came from Turkmenistan. China also received gas by pipeline from Kazakhstan, Uzbekistan, and Burma. China has multiple LNG import terminals along its coast to access different suppliers. In 2018, approximately 44% of China's LNG imports were from Australia. The United States ranked 6th as an LNG supplier. China imported 1.3 BCM of LNG from Russia.

The Power of Siberia pipeline project finally progressed when, according to press reports, China offered Russia an alternative market to western Europe for its gas in the context of sanctions and Russia capitulated on the price of gas giving it a similar price to its most important customer, Germany. Now that the pipeline is operational China has added another significant source of natural gas supplies. The opening of the pipeline also gives China another option as its demand grows for new supplies.

Russia's Diversification

Russia is the world's largest exporter of natural gas, primarily by pipeline. Russia continues to dominate the European gas market, but growing demand from Asia and geopolitical risks in the west generated new interest in building natural gas export infrastructure to China. Almost 80% of natural gas imports to Asia come by ship as LNG, not by pipeline. This, in part, is because most countries in the region, including China, are not connected by pipeline.

Although in Russia's east, the Power of Siberia should be viewed alongside other major Russian gas pipeline projects, including Nord Stream 2 and TurkStream. The Power of Siberia is mainly about customer diversification for Russia, but similar to the other projects it is also about control of its natural gas, not relying on transit countries, and locking in long-term partners. The opening up of Russia's eastern regions to gas exports may help it mitigate the risks to its western exports. Russia has gas fields in the east, closer to China than Europe, which it can now better exploit. The

pipelines and fields used to supply China's gas are separate from the western Siberian fields that supply Europe.

U.S. Interests

The cooperation required between Russia and China on the Power of Siberia does not bode well for the United States overall, and its individual relationship with either country. The agreement to construct the pipeline in 2014 was, according to some analysts, in part a response to U.S. and European policies to sanction Russia over the invasion of Ukraine, including the occupation of Crimea. The pipeline also came to fruition with the backdrop of various investigations of Russian meddling in U.S. elections.

Additionally, the trade dispute between the United States and China is ongoing, despite some progress. In January 2020, the United States and China signed an agreement known as the Phase One trade deal. Phase One would cut some U.S. tariffs on imported Chinese goods, while China would agree to purchase more U.S. energy and other goods. Prior to the trade dispute, China was a significant buyer of U.S. LNG exports and viewed as a growing market. For 2018, China ranked fourth (behind South Korea, Mexico, and Japan) as a top destination for U.S. LNG, comprising approximately 11% of all of U.S. LNG exports.

Considerations

The amount of gas that will be brought via the Power of Siberia pipeline at full capacity, 38 BCM, will be 13% of China's 2018 total demand. China would be Russia's second largest individual importer behind Germany, but also significantly behind Europe in total (193 BCM of imports in 2018). Neither Russia nor China will likely have significant leverage over the other because of the Power of Siberia. Nevertheless, the pipeline, according to some analysts, also was meant to send a message to the United States. For Russia, it demonstrated that neither the United States nor EU would stop Moscow from pursuing its interests. For China, the timing of the pipeline going into operation demonstrated that U.S. LNG is no longer as strong an incentive in the trade dispute.

Growing Russia/China Relations

Since 2014, Russia and China's relationship has grown stronger on a variety of issues, even more so since the U.S.-China trade dispute. In addition to the Power of Siberia pipeline, since 2018, several major deals and events have signaled a potential new dynamic in the Russia-China relationship, including for natural gas:

- Chinese and Russian troops taking part in joint maneuvers.
- Russia-China trade reached a record level, exceeding $100 billion.
- China LNG imports from Russia more than doubled in 2019.
- Novatek, Russia's largest independent natural gas producer, and Sinopec, one of China's largest state-owned energy companies, signed a joint venture on investing in natural gas projects.
- China's Huawei Technologies Co. struck a deal to develop a 5G network in Russia.

While these interactions demonstrate a strengthening between the two countries, they also may be motived by a common adversary—the United States.

U.S. Natural Gas Relations with China

While China's gas demand has been on the rise, so too have U.S. LNG exports. Between 2016 and the first half of 2019, U.S. LNG exports overall grew by 489%. In the first half of 2019, China's imports of U.S. LNG declined by 83% over the same time period in 2018, in part because of the trade dispute between the countries. In May 2019, China imposed a 25% tariff on U.S. LNG, which led to a halt in U.S. exports to China. Despite the Phase One trade deal, China shows no sign of reducing or eliminating such tariffs, making U.S. LNG uneconomical.

While the Power of Siberia may be of limited concern to the United States at this time, the larger deal between Russia and China could be a harbinger of market trends and a potential loss for future U.S. LNG exports. For instance, the industry publication Platts projects that by 2023, nearly 40% of Chinese gas demand *growth* will come from the Power of Siberia pipeline. For U.S. LNG exporters on the hunt for new opportunities, this could pose a setback.

U.S. Natural Gas Relations with Russia

The Trump Administration's attention to Russian natural gas exports has not focused on China, but on the European Union's dependence on Russian natural gas imports. Its efforts have focused primarily on two issues: promoting the expansion of U.S. LNG exports to the EU and opposing the Nord Stream 2 pipeline, which Russia is constructing to expand capacity to supply natural gas directly to Europe via Germany (bypassing Ukraine). In December 2019, the FY2020 National Defense Authorization Act (NDAA, P.L. 116-92) became law. It includes Title LXXV, the Protecting Europe's Energy Security Act of 2019 (PEESA), which established sanctions related to the Nord Stream 2 and TurkStream pipelines.

CRS Products

CRS Report R45988, *U.S. Natural Gas: Becoming Dominant*, by Michael Ratner.

CRS Report R42405, *European Energy Security: Options for EU Natural Gas Diversification*, coordinated by Michael Ratner.

CRS Report R44483, *China's Natural Gas: Uncertainty for Markets*, by Michael Ratner, Gabriel M. Nelson, and Susan V. Lawrence.

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