

ISSUE BRIEF

Sino-Russian Strategic **Energy Ties**

Enduring Partnership or Fragile Bonds?

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Introduction—Sino-Russian Gas Deals: Where Do They

The possibility of Sino-Russian energy ties developing into an enduring and comprehensive partnership has drawn much attention from policy circles in Washington and across Asia. The debate on the Sino-Russian energy partnership has intensified with two major deals on natural gas. In May 2014, China agreed to a \$400 billion deal for the annual delivery of 38 billion cubic meters (bcm) of Russian natural gas utilizing the Power of Siberia pipeline, due to start in 2018 and scheduled to continue for more than thirty years. In November 2014, a memorandum of understanding was signed for a second pipeline, Altai, to deliver 30 bcm of natural gas annually from Russia to China. If both deals reach final commitments and proceed as scheduled, it could mean that Russia would be exporting over 68 bcm of natural gas annually to China by 2030.1

Since China and Russia signed these two major gas deals in 2014, many things have changed. At the time, Russian relations with the West were at a low point over Russia's annexation of Crimea. Since the signing, global oil prices have fallen, the ruble has collapsed, China's economy has slowed, and Western sanctions continue to squeeze Russia. In addition to these external geopolitical and economic factors, changing internal dynamics in each country have made the implementation

The Global Energy Center sustainable energy. Alongside government, industry, and civil society partners, the Center works to devise creative responses to address the energy security, environmental sustainability, and economic competitiveness challenges of a

If both deals reach final commitments, they would account for 17 percent of China's gas consumption by 2020. See Eric Yep, "New Russia-China Deal Could Further Hit Natural Gas Prices," Wall Street Journal, November 10, 2015. According to another projection for China's natural gas demand by the National Bureau of Asian Research, these deals would account for approximately 20 percent of China's total gas consumption by 2030, if they both reach final commitments. See Jaffe et al, "China's Energy Hedging Strategy: Less Than Meets the Eye for Russian Gas Pipelines," National Bureau of Asian Research, February 9, 2015.

and execution of their deals a more complicated and difficult process.

This paper examines how China's and Russia's interests concerning Sino-Russian energy ties and infrastructure development have evolved in response to changing external and internal political and economic factors. The report investigates the trajectory of their bilateral energy relations by dividing the analysis into three periods: before the gas deals were signed, the situation at the time of signing the agreements, and after the deals were signed. By tracking the ups and downs of the countries' bilateral energy relations, this paper aims to understand the fundamental nature of the Sino-Russian energy partnership and its regional and global implications.

Main Obstacles for Sino-Russian Gas Cooperation: Before the Deals Were Signed

Compared to Sino-Russian relations in the oil sector, which are being actively developed with the construction of the Eastern Siberia-Pacific Ocean (ESPO) oil pipeline and its spur line to China.² Sino-Russian relations in the natural gas sector were stalled until 2014. Sino-Russian gas cooperation showed very little tangible progress for more than two decades due to disagreements over prices, pipeline routes, and China's equity investment in the Russian upstream market, as well as distrust between the two countries.3 Recognizing these

impediments is crucial to understanding the fundamental nature of Sino-Russian strategic energy ties.

The first obstacle that delayed the deals involved settling on a pricing formula for the Russian gas deliveries. While Russian negotiators wanted China to pay the same high price for gas as its European customers (whose longterm contracts link gas prices to oil prices), Chinese negotiators found Gazprom's price offer unattractively

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The pipeline spur to China (the Skovorodino-Daging line), which the two countries had discussed for more than fifteen years, was finally put into operation in January 2011. In 2010, China National Petroleum Corporation (CNPC) and Rosneft. Russia's stateowned oil company, agreed to build the spur line to transport 300,000 barrels of oil per day from Russia to China.

high, especially in comparison to its domestic gas prices, which are strictly controlled by the National Development and Reform Commission (NDRC). The fundamental differences between oil and gas as commodities also help explain why Sino-Russian gas deals took much longer than oil deals to conclude. While oil is an international commodity, natural gas is a regional commodity and its pricing mechanism, therefore, displays regional differentiation. Outside of North America (where spot indexation reigns), countries typically sign contracts for natural gas trade that are linked to oil prices and have long-term (usually thirty-year) "take-or-pay" clauses.4 In this respect, the gas pricing mechanism requires direct and long-term relationships between supplier and

> consumer. This trading relationship is then vulnerable to political relations, as well as the regional and geopolitical issues between the two countries, thus making it more difficult and complicated to reach agreement than it would be for the oil trade.⁵

> The next obstacle involved pipeline routes. While Gazprom prioritized the development of the Altai pipeline via a western route, the Beijing authorities preferred buying Russian gas via an eastern route by developing the Power of Siberia pipeline. China needs gas from East Siberia and Sakhalin because regional capacity in the three northeastern provinces-Heilongjiang, Jilin, and Liaoningis relatively small. China was also

fully aware that Russia's "swing supplier" strategy through the Altai project enabled Gazprom to easily switch its West Siberia gas exports over to China from Europe, should the European demand for Russian gas shrink.⁶ In addition, without access to Russia's Far East

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

[&]quot;Take-or-pay" clauses require the buyer to take an annual minimum volume of natural gas or to pay for that volume whether or not it is taken.

Miyeon Oh, "Cross-Border Oil and Gas Pipelines: The Intersection of Politics, Geography, and Energy Markets," PhD dissertation, Johns Hopkins University, 2015.

The Chinese authorities apparently had no interest in inviting any criticism for dividing up the share of European gas and preferred buying Russian gas from East Siberia rather than West Siberia. Keun-Wook Paik, "Sino-Russian Gas and Oil Cooperation: Entering a New Era of Strategic Partnership?" OIES Paper WPM 59, Oxford Institute for Energy Studies, April 2015.



region provided by the Power of Siberia, but not the Altai pipeline, China would have to rely on the more expensive liquefied natural gas (LNG) imports.⁷

Until recently, Russia refused to allow any foreign companies to acquire equity in its oil and gas fields.8 This obstacle motivated China to construct the West-East Pipeline II in order to accelerate gas imports from Central Asia. Beijing chose to develop Turkmenistan gas as an

equity supply source, which was to compensate for the burden of the high border price and fit with its plans to develop its own domestic gas grid. In addition, China diversified its import options by building a gas pipeline to Myanmar and by increasing LNG volumes. While Russia has invited Chinese participation in less significant oil upstream projects, Rosneft, Russia's state-owned oil company, has consistently tried to open the Russian upstream sector to Chinese national oil companies (NOCs); however, there have been no major Chinese equity acquisitions in Russia's oil and natural gas sector, nor have China and Russia formed any joint ventures in the development of cross-border oil and gas pipelines. This is not just because Russia allows only limited foreign

⁷ LNG prices at that time were much more expensive than they are now since natural gas prices are linked to oil prices, which were as high as \$100 per barrel.

⁸ In October 2013, Rosneft and the China National Petroleum Corporation (CNPC) agreed to set up a joint venture for upstream developments in East Siberia, with Rosneft holding 51 percent and CNPC holding the rest (after the third loan-for-oil deal from China; for more on China's loan-for-oil deals, see footnote 38). The deal gives China access to the Srednebotuobinsk field in Siberia, which has an estimated 2.05 million barrels of oil and equivalents. In addition, in September 2014, it was announced that CNPC will obtain up to 10 percent in Russia's Vankor oil-fields, Rosneft's biggest production asset after the Sino-Russian gas deal in May.

The major breakthrough was Turkmenistan's decision in 2006 to allow CNPC to take an upstream position in Turkmenistan's gas exploration and production, together with the related gas pipeline development. The price that CNPC accepted for Turkmen gas was not cheap, but the equity gas option allowed the CNPC planners to cushion the financial burden of the high import price. See Paik, Sino-Russian Oil and Gas Cooperation, op. cit., pp. 378–379.

Table 1. Russia's and China's Share of Central Asian Countries' Total Trade (2000-12)

		Kazakhstan		Kyrgyzstan		Tajikistan		Turkmenistan		Uzbekistan	
		Export	Import	Exports	Import	Export	Import	Export	Import	Export	Import
2000	Russia	25.5%	46.3%	24.8%	23.4%	57.9%	31.8%	4.29%	14.8%	33.1%	19.6%
	China	11.3%	3.3%	19.1%	25.0%	2.56%	3.9%	N/A	1.38%	N/A	2.85%
2008	Russia	9.6%	41.0%	27.9%	5.9%	20.8%	26.0%	1.4%	28.4%	19.0%	24.8%
	China	12.1%	15.0%	3.5%	65.7%	2.0%	48.6%	0.4%	28.0%	4.72%	15.4%
2010	Russia	5.6%	16.9%	19.4%	21.7%	20.3%	26.5%	6.0%	22.8%	25.6%	25.1%
	China	24.5%	48.7%	10.2%	50.0%	5.3%	54.3%	38.9%	17.7%	21.9%	17.8%
2012	Russia	10.0%	31.8%	15.5%	17.9%	4.4%	16.6%	1.5%	13.1%	13.4%	21.2%
	China	21.2%	26.8%	7.4%	56.5%	9.6%	43.2%	66.5%	20.2%	19.2%	17.8%

Source: Slavomir Horak, "Challenges from the East: China," in Starr and Cornell, eds., Putin's Grand Strategy: The Eurasian Union and Its Discontents (Central Asia-Caucasus Institute & Silk Road Studies Program, 2014). (Original data sources: EU Commission Trade Statistics, Observatory of Economic Complexity).

participation in the development of its strategic oil and gas assets, but also because the two countries are still suspicious of each other along other dimensions.

Sino-Russian relations lack political trust, and a range of tensions still exist particularly in regional affairs. In Central Asia, China has eroded Russia's oncedominant presence by emerging as the leading trading partner and source of foreign investment in the region (see table 1). Policy goals are also at odds: Russia established the Eurasian Customs Union to slow down the region's reorientation toward China as well as to deepen the integration of the economies, politics, and security and culture spheres of the territories of the former Soviet Union; China has instead promoted the idea of a Silk Road Economic Belt, which Beijing sees as linked to the Shanghai Cooperation Organization. Furthermore, tensions between the two countries have been exacerbated by the widening demographic imbalance between the Russian Far East and China's northeastern provinces; by Russia's more generalized demographic crisis; and by China's growing economic influence in eastern Russia.¹⁰ Moscow fears that as the gap between a rising China and a declining Russia widens, increasing dependence on China as an energy

Drivers for Sino-Russian Gas Cooperation: When the Deals Were Signed

Notwithstanding these major obstacles, Sino-Russian cooperation in the natural gas sector has moved forward. This report examines developing external geopolitical and economic factors as well as the changing internal dynamics in each country, which impelled both sides to sign the long-delayed deals.

Geopolitics and External Factors: The Ukraine Crisis and Falling Oil Prices

Changes in the geopolitical and economic environment due to crisis situations have profoundly shaped Sino-Russian energy relations.¹¹ Shifts in the geopolitical

export destination will eventually constitute a threat to Russia's national security. Beijing, meanwhile, is suspicious of Russian reliability as a trading partner. In sum, lack of political alignment between the two countries, notable especially in regional policy aims, fosters mutual distrust, which was one of the key elements that negatively impacted the finalization of gas deals.

¹⁰ Bobo Lo, Axis of Convenience: Moscow, Beijing, and the New Geopolitics (Washington, DC: Brookings Institution Press, 2008).

¹¹ Miyeon Oh, "Cross-Border Oil and Gas Pipelines: The Intersection of Politics, Geography, and Energy Markets," PhD dissertation, Johns Hopkins University, 2015.

underpinnings due to the Ukraine crisis drove both Russia and China to approach their bilateral energy relations from a different angle and for different reasons. In the wake of Russia's annexation of Crimea and the resulting implementation of Western sanctions, Russia faced the new reality of increased isolation from the United States and Europe. As Russia has found its choices limited, it has become more desperate to transition toward a more Sino-centric approach to Asia. Some arque that the geopolitical implications of the Ukraine crisis on Russia-China relations should not be overstated and that powerful drivers to bridge the price gap and make the gas deals happen were already in place long before the crisis.¹² However, the Ukraine crisis changed the pre-existing bargaining context for Sino-Russian energy relations and opened opportunities for change.

"[Russian President Vladimir] Putin has long talked about shifting east. . . . The Ukraine crisis provides the ideological justification for moving ahead faster," said Fyodor Lukyanov, chairman of Russia's Council on Foreign and Defense Policy.¹³

For more than a decade, Chinese and Russian negotiators failed to agree on a pricing formula. During that time, Russia would not allow China to make equity investments in the Russian upstream gas market. However, compromises have suddenly become possible; clearly, Russia was under more pressure

to make concessions, given that Russian President Vladimir Putin was struggling to prevent the Russian economy from falling into recession amid western sanctions and plunging oil prices. While the precise terms of the gas deal (including the price) were not disclosed, ¹⁴ Putin had to compromise on the conditions that Moscow had previously pursued with Beijing.

Changes in the geopolitical and economic environment due to crisis situations have profoundly shaped Sino-Russian energy relations.

Falling global oil prices have had an impact on Sino-Russian energy relations, but the oil price decline began after the two countries had signed the deal to build the Power of Siberia pipeline and before the second deal to develop the Altai pipeline. Structurally linked to Ukraine-related sanctions, as well as the decline in oil prices, it is the collapse of the ruble that has pushed Russia into crisis mode.¹⁵ Early in 2016, some analysts projected that it was very likely Russia would run out of cash by the end of 2016 if oil prices did not rise and sanctions were not lifted. As of August 2016, the Russian economy was certainly more stable than it was during the oil rout and directly after the annexation of Crimea, as evidenced by the recovery of the ruble currency. However, some analysts still maintain that the strong ruble does not mean a recovery of the Russian

economy, and it is still in limbo.¹⁶ In this context, Russia may find itself even more reliant on China both financially and politically.

Internal Changing Dynamics in Russia: Rosneft's Maneuvers and Gazprom's Concessions

Demand for oil and gas in the European market, Russia's major export destination for energy, has stagnated in recent years, while the Asian market is driving future global hydrocarbon growth. Sluggishness in European oil and gas demand, as well as the liberalization process following

Tatiana Mitrova, "Russia-Northeast Asia Energy Trade and Investment: Opportunities and Challenges," North Pacific Energy Dialogue in the Shale-Gas Era Conference Paper, East-West Center, 2014; Morena Skalamera, "The Sino-Russian Gas Partnership: Explaining the 2014 Breakthrough," Belfer Center, Geopolitics of Energy Project Paper, Harvard Kennedy School, November 2014.

¹³ Kathrin Hille, "Russia Looks East as It Seeks to Rebalance Trade Interests," *Financial Times*, April 3, 2014, http://www.ft.com/cms/s/0/3035cb28-bb47-11e3-8d4a-00144feabdc0.html#axzz-4K9LAvIm5.

¹⁴ Press reports indicate that the contract is linked to oil prices and has a "take-or-pay" clause. Although the contract price was not officially disclosed, the average price is estimated at \$350-\$380

per 1,000 cubic meters. The base price for CNPC is about \$360. According to Russian officials, Gazprom's China gas price will be close to what Germany pays for Gazprom's gas—an average of \$366 in 2013. This was one of the lowest prices in Europe, given that Gazprom's average export price to Europe in 2013 was \$380. See Elena Mazneva and Aibing Guo, "Gazprom's China Gas Price Said to Be near German Level," *Bloomberg Business*, July 2, 2014. For more detailed explanations on the estimation of the border price, see Interfax, Russia & CIS Oil and Gas Weekly, 22-28 May 2014, pp. 4-10.

⁵ Standard & Poor's downgraded Russia's credit rating to BB+, one notch below investment grade, on January 6, 2015. Such pessimism by the rating agencies sent a clear signal that the country is facing a much more dangerous crisis than that of 2008–2009, given Russia preserved its credit rating in 2008 when global oil prices fell threefold to below \$40 a barrel, and in 2009, when Russia's GDP collapsed by 8 percent. See Sergei Guriev, "Russia's Downgrade Deepens Political Crisis with Europe," Financial Times, January 27, 2015.

¹⁶ Leonid Bershidsky, "The Strong Ruble Doesn't Mean a Russian Recovery," *Bloomberg*, August 12, 2016.

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the European Commission's adoption of the Third Energy Package in 2009, has created unfavorable regulatory and market conditions for Russia.¹⁷ In addition, Europe is now stressing its desire to lessen its dependence on Russian energy supplies as a result of geopolitical tensions between Russia and the West arising from the Ukraine crisis. In this sense, there has been an urgent need for Russia to diversify its energy export markets by developing its offshore and LNG production and pipeline gas exports to Asia. Moreover, the eastern vector of Russian energy policy is related to the necessity of securing economic and industrial

17 The Third Energy Package includes "unbundling" (the separation of gas supply from transportation businesses) and the new (national, but also—and especially) EU network codes that were created to regulate cross-border transportation of energy resources. Russia is now confronting new painful developments, such as changing gas pricing mechanism with a much higher share of spot indexation and buyers' pressure to review the contracts, shrinking refinery margins, European anti-trust investigations against Gazprom, and third-party access requirements for North European (NEL), and South Stream pipelines.

development in East Siberia and the Far East. This development could raise living standards and stop the outflow of population from the region, which have been among the most important tasks on the Russian national agenda.¹⁸

It is worth noting that competition between Gazprom and Rosneft helped compel Gazprom to sign its gas deal with China in May 2014.¹⁹ Given the declining significance of Gazprom's and Rosneft's previously successful moves in the region, Gazprom must have agreed to the deal knowing that Rosneft would otherwise have taken it. Gazprom had been reluctant to sign the deal with China because it was not interested in the deal's low margins, was tired of long

¹⁸ Nina Poussenkova, "Russia's Eastern Energy Policy: A Chinese Puzzle for Rosneft," *Russie.NEI.Visions* 70, French Institute of International Relations, 2013.

¹⁹ Pavel Baev, "Rosneft, Gazprom, and the Government: The Decision-Making Triangle on Russia's Energy Policy," Russie Nei Visions, French Institute of International Relations, 2014.

negotiations, and generally does not fully understand Chinese culture. However, Gazprom made a strategic decision not to lose its window of opportunity in the Asia-Pacific market where Rosneft has already taken the lead.²⁰

Changing Dynamics Involving Chinese NOCs and Air Pollution Issues in Chinese Domestic Politics

We must examine both the increasing salience of air pollution as a domestic political issue and the implications of the government's efforts to open up the energy sector to fully understand China's motivations in the space. A key driver for Chinese Premier Xi Jinping's initiative for an "energy revolution" has been combating China's extreme levels of air pollution. The Chinese government, which previously had focused on growth at all costs, has suddenly become sensitive to its environmental challenges.21 The government has realized that it must take measures to rein in pollution or face significant social discontent. Natural gas, in this respect, seems to be the most feasible and accessible energy option that will also decrease levels of domestic environmental degradation. In 2013, the Chinese leadership implemented a radical reform of its gas pricing system to bolster investment in the gas sector and make domestic gas more competitive with other fuels and imported gas.

China's government is pursuing major changes in its energy sector as Xi's anticorruption campaign has targeted high-ranking energy technocrats.²² Chinese NOCs have been scrambling to satisfy the government's demand for "opening up" the energy sector. The China National Petroleum Corporation (CNPC), for instance, announced that it would open its oil and gas pipeline network to suppliers other than its PetroChina

20 Author's interview with Tatiana Mitrova, head of oil and gas research at the Energy Research Institute of the Russian Academy of Sciences. See Miyeon Oh, "Cross-Border Oil and Gas Pipelines: The Intersection of Politics, Geography, and Energy Markets," PhD dissertation, Johns Hopkins University, 2015.

subsidiary and existing customers after the National Energy Administration issued a plan to partially de-monopolize China's pipeline system. The China Petrochemical Corporation (Sinopec), meanwhile, announced restructuring plans for its distribution business that would allow private investors to buy up to a 30 percent stake in its chain of filling stations.²³ Clearly, the Chinese energy sector is undergoing a difficult time both at home and overseas.²⁴ Chinese NOCs will likely focus on the domestic front at least in the short term, given that these companies are distracted by anticorruption investigations and that large overseas energy deals are less attractive at the moment due to low oil prices.²⁵

After the Deals: Delaying Pipeline Projects?

Industry experts have speculated that Russia may postpone the Power of Siberia pipeline project—instead of prioritizing it over the cheaper Altai pipeline route from existing western Siberian fields to China's western fields—because the project would not be profitable for Gazprom given how oil prices have plunged since the May 2014 gas deal was signed (the gas price under the contract is linked to the price of oil).²⁶ As a matter of fact, the Altai route has been a longtime Russian priority in negotiations with China. Russia pursued the Altai

²¹ The level of smog in Beijing and Shanghai has made the government realize that it must take measures to rein in pollution to avoid social discontent. See "Xi Jinping's Green Pledge Will Require an Economic Revolution," South China Morning Post, November 22, 2014; Zhao Shengnan, "Xi Tackles Pollution on Two Fronts," China Daily, March 7, 2015.

²² After the Central Committee meeting of November 2013 (the Third Plenum), the Xi administration stated its intention to "comprehensively deepen reform" and has created a group to do so. The need for such a body signals that many policy disputes remain and that the central government intends to stay focused on change until at least 2020. David M. Lampton, "How China Is Ruled," Foreign Affairs, Jan/Feb 2014, vol. 93, no. 1.

²³ Michael Lelyveld, "China's Oil Giants Face Probes Amid Mounting Anti-Graft Drive," *Radio Free Asia*, July 14, 2014, http://www.rfa.org/english/commentaries/energy_watch/probes-07142014105656.html.

²⁴ Derek Scissors, "China's Outward Investment Healthy, Puzzling," American Enterprise Institute (AEI) Research, 2015.

²⁵ Since President Xi unleashed a wide-ranging anti-corruption drive in September 2013, China's government has pursued major changes in its energy sector and launched targeted investigations of high-ranking energy technocrats. National prosecuting departments investigated twenty-four high-ranking officials in 2014, including former Chinese Communist Party security chief Zhou Yongkang and CNPC's former chairman Jiang Jiemin. During the same period, over one hundred officials were dismissed from employment, the majority of whom were from the National Energy Administration, CNPC, State Grid, and Shanxi Province, China's major producer of coal. The arrest of Mr. Zhou in December 2014 had huge symbolic implications, as he was arguably the most powerful man in China after building up patronage networks that spanned the oil, mining, and security industries, as well as regional support bases. See David M. Lampton, "How China is Ruled," Foreign Affairs, Jan/Feb 2014 Vol. 93 Issue 1; Zhang Yan, "Two Dozen Top Officials Investigated," China Daily, January 23, 2015; Yue Qi, "Corruption in Macroeconomics," The Beijing News, December 12, 2014. Jamil Anderlini and Lucy Hornby, "Captured in a Chinese Tiger Hunt," Financial Times,

²⁶ Denis Pinchuk, Svetlana Burmistrova, and Katya Golubkova, "Russia Could Postpone Gas Pipe to China Touted by Putin," Reuters, March 18, 2015.

option until it finally accepted both China's preference of the eastern gas supply route (and the Power of Siberia pipeline) as well as China's loan-for-oil deals between Rosneft and CNPC in 2009, and between Rosneft and Sinopec in 2013.27 Given all the factors that are pushing Russia into crisis mode, including the collapse of the ruble resulting from extended Crimearelated Western economic sanctions and the recent dip in global energy prices, the Altai option might be the most effective strategy and probably the only way for Russia to simultaneously accomplish the following goals: 1) be a swing producer in both the European and Asian natural gas markets; and 2) strengthen economic and strategic ties with China, which has been a major source of financing for Russian energy projects.

However, despite the challenges China is currently facing, it is unlikely that it will be willing to prioritize the

Altai route. The western Altai route is considerably less attractive to China as it already has surplus supplies in the west, but is short of gas in the industrial east. The Altai route would require a huge new pipeline system within China to bring gas from the Yamal Peninsula to China's remote far western border, which might even require a serious change in China's five-year plan. As a matter of fact, the contract between Russia and China for gas supplied via the Altai

gas pipeline is being delayed mainly because China is reviewing its energy needs. China's growth in gas demand is decreasing due to the economic slowdown²⁸ and access to LNG is becoming more available due to the fall in oil prices. Moreover, low international oil prices, if sustained for a prolonged period, may add more complications even to the first Sino-Russian gas deal and the Power of Siberia pipeline development. According to industry analyses, Gazprom may be forced to delay or cancel its largest project, which is the \$55 billion proposal to develop two new fields in eastern Siberia and build the Power of Siberia pipeline to ship gas to China. Due to a clause in the contract,

Energy is fundamental to the rise of China and Russia as (re-) emerging powers

but in different ways.

first deliveries of gas, which were originally anticipated in 2019, could happen as late as 2021, and Gazprom has halved its plans for construction of the pipeline this year, from 800 kilometers to 400 kilometers.²⁹ Not surprisingly, Putin announced in June 2016 that Russia is considering selling a 19.5 percent stake of Rosneft to China and India as a means to cover its budget shortfalls, expecting to raise at least \$11 billion (700 billion rubles) from the sale.³⁰ Russia is becoming more desperate in seeking strategic partners to bring in capital investment in the midst of prolonged periods of sanctions and low oil prices.

Conclusion

Sino-Russian energy cooperation is the result of different motivations and interests in each country. Russia and China appear to be ideal, complementary partners: one is the holder of enormous hydrocarbon

> reserves and a leading exporter (Russia),31 and the other is a fastdeveloping economy and world's largest consumer importer of hydrocarbons (China).32 In spite of this supply-demand complementarity, however, these countries' bilateral energy relations have gone through ups and downs during the last two to three decades. The trajectory of ups and downs tends to track periods when one or the other country has been in a

more advantageous bargaining position.³³ Moreover, the trajectory of their energy relations reflects a convoluted set of factors shaping each country's energy-related policies, including divergent internal

²⁷ See footnote 38 for more on the "loan-for-oil" deals.

²⁸ According to the BP Statistical Review of World Energy 2015, gas consumption in China grew by 12-13 percent in 2013, but the growth fell to 8.5 percent in 2014. See BP Statistical Review of World Energy, BP, June 2015, https://www.bp.com/content/dam/ bp/pdf/energy-economics/statistical-review-2015/bp-statisticalreview-of-world-energy-2015-full-report.pdf.

²⁹ Jack Farchy, "Russia's Gazprom Left Wounded by Gas Price Plunge," Financial Times, May 22, 2016.

³⁰ Elena Mazneva, Ilya Arkhipov, and Anna Baraulina, "Putin Said to Weigh \$11 Billion Rosneft Sale to China, India," Bloomberg, June

Russia was the third-largest producer of petroleum and other liquids (after Saudi Arabia and the United States) in 2014, and the second-largest producer of dry natural gas (after the United States) in 2013. Oil and natural gas revenues accounted for 50 percent of Russia's federal budget revenues and 68 percent of total exports in 2013. See "Russia," US Energy Information Administration, 2015.

³² China is the world's second-largest oil consumer (behind the United States) and became the largest global energy consumer in 2009. "China," US Energy Information Administration, 2015.

³³ Vidya Nadkarni, Strategic Partnership in Asia: Balancing without Alliances (New York: Routledge, 2010).

dynamics between the government, national oil and gas companies, and private interest groups.

Energy is fundamental to the rise of China and Russia as (re-)emerging powers but in different ways. Energy for Russia has not been just an instrument of influence in itself, but has impacted other dimensions of power, including military, political, economic, and technological, as Kremlin officials speak of Russia as an "energy superpower." ³⁴ Energy is no less vital to China, just from a different standpoint. For Beijing, energy is not an instrument of geopolitical ambition, but the principle rationale for an assertive foreign policy to facilitate its global quest for energy resources, as well as a policy tool to fuel its economic development and modernization. In particular, due to China's rapid increase in demand for oil, China has been eager to diversify the sources of its oil imports, given that more than 85 percent of China's crude oil imports currently come from the politically unstable Persian Gulf and through strategically vulnerable sea lanes.

Energy certainly has served as a key element in the development of the Sino-Russian economic partnership and the evolution of their relationship from the largely political partnership of the 1990s to their "pragmatic and business-like" interaction today. This china and Russia in the 2000s were not only engaged in bilateral and regional military contacts, finally settling all pending boundary demarcations, but also started to consider energy and trade as key elements in the further development of bilateral economic ties. However,

34 Fiona Hill, "Russia the 21st Century's Energy Superpower?" Brookings Review, vol. 20, no. 2, 2002; Vladimir Milov, "How Sustainable Is Russia's Future as an Energy Superpower?" paper presented at the Carnegie Endowment for International Peace, March 2006.

With the formal strategic partnership agreement in 1996 and the 2001 Treaty of Good Neighborhood and Friendly Cooperation between the two countries, Sino-Russian bilateral relations have yielded significant dividends. In 2003, when the Chinese leadership changed to President Hu Jintao and Premier Wen Jiabao from Jiang Zemin and Zhu Rongji, the two countries recognized the importance of economic considerations, and addressed the need to boost trade and energy ties. Moreover, border delimitation agreements allowed China and Russia to stop viewing each other as imminent threats. See Lo, Axis of Convenience, 2008, op. cit.

Among the books that contribute to an in-depth understanding of Sino-Soviet and Sino-Russian relations are Thomas Hart, Sino-Soviet Relations: Re-examining the Prospects for Normalization (Aldershot, UK: Gower Publishing Company, 1987); Lowell Dittmer, Sino-Soviet Normalization and Its International Implications, 1945-1990 (Seattle: University of Washington Press, 1992); Elizabeth Wishnick, Mending Fences: The Evolution of Moscow's China Policy from Brezhnev to Yeltsin (Seattle: University of Washington Press, 2015); Sherman W. Garnett, Rapprochement

progress in bilateral energy cooperation has been slow despite substantial and clear economic incentives both countries would enjoy given their supply-demand complementarity. Although energy has become a central plank in China and Russia's bilateral economic relationship, energy is still a weak link to bind the two countries together due to the following impediments: lingering historic distrust, Russia's perception of China's demographic threat in the Russian Far East, strategic competition over neighboring regions such as Central Asia, and the widening power gap between a rising China and a declining Russia. Given such obstacles, China and Russia were not willing to compromise on fundamental disagreements over oil and gas prices, nor on China's equity participation in the Russian upstream sector, 37 until changes in the geopolitical environment drove both countries to approach their bilateral energy relations from a different angle.

The lack of political will in the two countries was one of the key elements delaying the finalization of both oil and gas deals, and changes in the geopolitical-economic environment have caused both Russia and China to alter their approaches to bilateral relations. Bilateral deals for a cross-border oil and gas pipeline were signed only when

- Russia-Western relations were at odds, due to Russia's invasion of Georgia in 2008 and Russia's annexation of Crimea in 2014; and
- unexpected external factors such as the global financial crisis in 2007-2008 and collapsing global oil prices since the summer of 2014 compelled Russia to search for funding sources overseas.

or Rivalry? Russia-China Relations in a Changing Asia (Washington, DC: Carnegie Endowment for International Peace, 2000); Lo, Axis of Convenience, 2008, op. cit.; James A. Bellacqua, ed., The Future of China-Russia Relations (Kentucky: University Press of Kentucky, 2010).

37 Although Russia has invited Chinese participation in less significant oil upstream projects, and Rosneft, in particular, has consistently tried to open the Russian upstream sector to Chinese national oil companies, there have been no major Chinese equity acquisitions in Russia's oil and natural gas sector. In addition, China and Russia have not formed any joint ventures in the development of oil and gas pipelines. The Eastern Siberia Pacific Ocean (ESPO) oil pipeline is owned by Transneft, Russia's state-owned pipeline monopoly, except for the Chinese sector of the spur line from Russia. As Russia did not allow Chinese NOCs to take equity positions in Russia's upstream sector, China instead financed the target supply source through loans to ensure long-term energy security. Although the financing arrangements for the construction of and gas supply for the Power of Siberia gas pipeline have not been disclosed, they are likely similar to those of ESPO.

Russia tends to sign agreements with China only when Russia's relations with the West are complicated or have deteriorated, and Russia has not been willing to compromise on price or equity investments, until it desperately needs China's help. Without a doubt, the inflow of Chinese capital has served as a key driver for the finalization of cross-border agreements between the two countries.³⁸ Moreover, Russia decided to make concessions with China so as not to lose its geopolitical leverage at critical historic junctures. On China's end, there are strong market and strategic incentives to diversify its energy import portfolio through Russian oil and gas. China's decision to import and invest in Russian oil and gas captures how government concerns about securing supply and the country's domestic political agenda (e.g., air pollution issues and Xi's anticorruption campaign) are interlinked with the commercial interests of national oil companies.

Energy still seems to be a weak link binding the two countries together due to the transactional nature of Sino-Russian energy relations.³⁹ At the nexus of the Sino-Russian strategic partnership lies energy and trade, and Chinese and Russian political leaders have sought to transcend a contentious history over the past two decades. While historical suspicions have softened, they have not disappeared. Bilateral cooperation efforts have left a mixed and ambivalent legacy of mistrust and anxiety on the one hand, and accommodation, calculation, and pragmatism on the other, which has created the basis for Sino-Russian energy relations. Geopolitics in the region have changed rapidly since the major gas deals were signed. particularly the Ukraine crisis and resulting economic sanctions on Russia, the collapse of the ruble, low international oil prices, and the Chinese economic slowdown. These factors have impacted the agreed-upon Sino-Russian gas deals. Gazprom's contract with China to develop the Power of Siberia gas pipeline offers no protection against low oil prices, whereas progress on the Altai gas pipeline project seems to have stalled due to China's economic slowdown.⁴⁰

In closing, the strategic energy partnership will likely remain transactional for the foreseeable future. given that the overall Sino-Russian relationship has both competitive and cooperative elements and that the Sino-Russian power dynamic is not equal but asymmetrical, due to the widening gap between rising China and declining Russia. Perhaps the key is to consider how the Sino-Russian strategic energy partnership and surrounding geopolitics are reshaping Washington's energy security goals. The changing landscape of geopolitics and energy markets are different from the late 1990s and the early and mid-2000s, when the United States more actively sought to influence the scale and direction of oil and gas supplies to Europe and Asia from Russia. China's strengthening energy ties with Russia and its rising political and economic power in the Caspian region will increasingly orient the direction of energy supplies toward the East, which will likely weaken the US position in the region. Moreover, low oil prices and China's economic slowdown will likely decrease the prospects of US shale oil and gas imports. By understanding the fundamental nature of the Sino-Russian energy partnership and its geopolitical and energy market implications, the United States would be better prepared to deal with Sino-Russian strategic moves as it develops new forms of bilateral energy diplomacy.

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³⁸ The Chinese Development Bank has made three major "loan-for-oil" deals with Russian companies. The first loan-for-oil deal of \$6 billion (which helped finance Rosneft's \$9.4 billion purchase of Yuganskneftegaz) in 2005 provided the precedent for China's second loan-for-oil deal of \$25 billion in 2009 for the construction of the ESPO oil pipeline and the twenty-year contract of oil delivery between Rosneft and CNPC. The third loan-for-oil deal of \$270 billion in 2013 to allocate maximum crude for China over twenty-five years seems to make the terms of bilateral oil cooperation more favorable to China.

³⁹ James Henderson and Tatiana Mitrova, "Energy Relations between Russia and China: Playing Chess with the Dragon," OIES Paper WPM 67, The Oxford Institute of Energy Studies, August 2016.

⁴⁰ Growth in oil and gas demand is slowing as the Chinese economy decelerates, and the increases in demand growth for both oil and gas will likely halve by the end of the decade. See Mark Magnier and Brian Spegele, "Forecasting China's Oil Buying Grows Harder: Purchases for Stockpiles Appear to Skew Figures," Wall Street Journal, February 25, 2015.

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