
Masses of vehicles crawl slowly through heavy smog 1 December 2015 during a traffic jam in Beijing. Subsequently, the number of cars in China has expanded due to a growing economy that now enables the purchase of cars by citizens for whom cars were once out of reach. The increasing pollution caused by increasing number of cars together with that generated by new coal-fired power plants to support China's need for electricity is making air pollution and the availability of fuel among the most challenging standard-of-living issues it faces. (Photo by Imaginechina via Associated Press)

# Russia's China Gamble

## Strategic Implications of a Sino-Russian Energy Economy

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Since the trade war between the United States and China began in 2018, the president of the People's Republic of China, Xi Jinping, has directed an increase in domestic investment and self-reliance for energy sources to hedge against foreign political interference.[1] However, all indicators show Chinese reliance on foreign oil has increased, rising from 9.2 million barrels per day in 2018 to 10.1 million barrels per day in 2019.[2] Despite the public statements by Xi about more domestic self-reliance, there is clear Communist Party support to increase energy imports from Russia. In May 2021, Russian President Vladimir Putin and Xi participated in a virtual groundbreaking ceremony for a nuclear energy cooperation project to celebrate the upcoming twentieth anniversary and renewal of the Russia-China Treaty of Good-Neighborliness, Friendship and Cooperation.[3] The first treaty, signed in July 2001 by Putin and General Secretary of the Chinese Communist Party Jiang Zemin, represented a new explicit strategic partnership between the two nations not seen since the Sino-Soviet split in 1961.[4] The treaty reinforces a commitment to China's widely touted Five Principles of Peaceful Coexistence for guiding foreign policy relationships—these are specifically iterated in article one of the treaty.[5] While not specifically mentioned in the treaty, both sides employ the popular slogan "Win-Win" to characterize the nature of their partnership. Given that China and Russia have a poor track record of cooperation with one another, and both maintain an increasingly shrinking list of partners they consider allies, how realistic is it for this partnership to last into the future?

The slogan "Win-Win" justifiably generates optimism in the context of the ongoing relationship between China and Russia; they share many potential areas for mutual benefit, most of all in the energy sector. As of 2020, China is the leading consumer of hydrocarbon imports globally, and Russia is the third largest producer of hydrocarbons. Furthermore, both value economic partners who will not leverage economic sanctions for human rights violations or discreet annexations of neighboring states.[6]

Russia is increasingly finding itself with few options other than closer economic ties with Beijing. However, the same cannot be said of China, which maintains a diverse source of hydrocarbon imports globally.[7] Russia's growing reliance on Chinese capital to increase capacity in its hydrocarbon export market is making it increasingly vulnerable to global market shocks and political exploitation. Russia should be concerned by the example of China's other "Win-Win" partnerships such as Angola, which has increasingly become dependent on energy exports to China and has fallen into a sovereignty-stealing debt-trap.[8] Unless Russia makes rapid moves to diversify its economy away from hydrocarbons and expand its export markets from China, it will find itself financially and politically vulnerable to the whims of the Chinese Communist Party in the emerging multipolar global hierarchy.

## China's Energy Security Strategy: China as a Leading Consumer

No other country has achieved the rapid levels of modernization, industrial growth, and poverty reduction that China has accomplished during the post-Mao period beginning in 1978.[9] Average Chinese gross domestic product (GDP) growth has been approximately 10 percent a year on average, and more than eight hundred million Chinese have been lifted from poverty (living on $1.90/day or less).[10] The major limiting factor on Chinese growth has been access to energy sources. China became energy independent in 1961 with the discovery of the *Da Qing* (Great Celebration) oil

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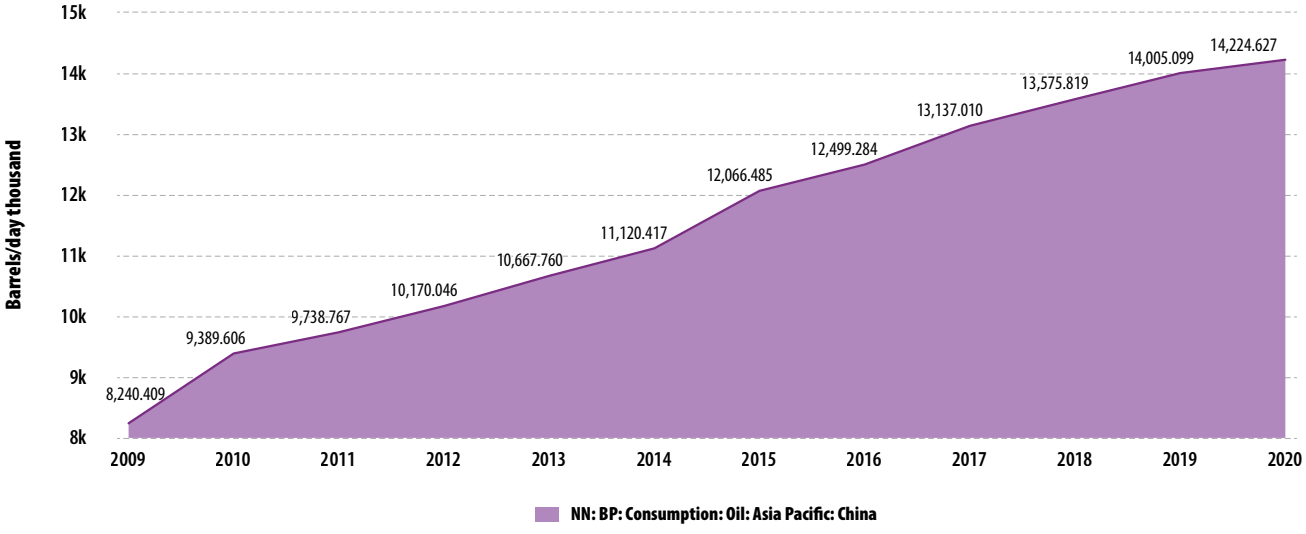
field in Manchuria but later became a net importer of hydrocarbons in 1993 when domestic consumption outstripped production.[11] Since then, China has risen to become the world's leading consumer of energy.[12]

With such a large energy demand, China must rely on foreign energy exporters for its needs. In terms of strategy, relying on foreign nations for energy resources is a huge liability, but the Chinese Communist Party has found useful ways to limit risk to its political objectives. Chinese state institutions, affiliated with the Communist Party, invest heavily in energy markets like Russia and Africa traditionally ignored by the international super-majors.[13] They also engage in commodity-backed loans (loans repaid with oil) and/or controlling share buyouts of foreign energy firms to gain reliable sources of imports. The diversity of sources and limited ties between partner nations like Russia and the West provide China a conflict-resistant source of energy imports.

The bulk of China's energy demands are for electricity generation, which is satisfied by its abundance of coal; coal comprises 58 percent of all Chinese energy consumption.[14] However important keeping the lights on for 27.5 percent of the world's manufacturing output is, coal-generated electricity has caused environmental problems such as air quality in major urban centers like Beijing.[15] China's growing middle class and elite view the pollution as a dark cloud over the nation. In the last three energy security strategies, the Chinese Communist Party has committed itself to replacing urban coal-generated electrical plants with natural gas and alternative energy electrical plants.[16] Because of the 2001 signing of the Russia-China Treaty of Good-Neighborliness, Friendship and Cooperation, China has increased from the eighteenth leading consumer of liquid natural gas to the third largest consumer between 2012 and the present.[17] While exact numbers for each specific pipeline are not reported, according to the U.S. Energy Information Administration's "China" analysis report, Russian and Central Asian pipeline imports comprise 38 percent of China's total natural gas consumption (about 5 percent of total Chinese energy consumption).[18] Russian pipelines are currently generating cleaner electricity in the large metropolitan centers of China like Beijing, and reliance on Russian gas to replace coal electricity is anticipated to grow.[19]

Oil and other hydrocarbon liquids comprise 20 percent of total Chinese energy consumption, second

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## China's Oil Consumption


Smoke belches from a coal-fueled power station 19 November 2015 near Datong in China's northern Shanxi Province. For decades, coal has been the backbone of Shanxi, providing livelihoods for millions of miners, while private-jet-owning bosses became notorious for their nouveau riche lifestyles. (Photo by Greg Baker, Agence France-Presse)

only to coal. In 2020, despite being the world's fifth largest producer of oil (4.931 billion barrels per day) China only maintained the capacity to satisfy 34 percent of its own oil energy demands.[20] Oil remains strategically the most important resource to the Chinese Communist Party. Not only have the Chinese middle class grown accustomed to driving vehicles (currently 27 percent of petroleum goes toward vehicle fuel), but most of China's military arsenal also runs on petroleum.[21] In March 2021, the thirteenth National People's Congress released its fourteenth Five-Year Plan (2021–2025); this is the first Chinese Communist plan that directly connects energy security strategy and the national defense security strategy.[22] The clear anxiety driving Chinese energy security strategy can be connected to potential sanctions or embargoes from the United States over the many issues of sovereignty in the South China Sea, Taiwan, and/or domestic human rights issues.[23] Russian pipeline oil (currently 15 percent of total Chinese oil imports) provides an embargo-resistant alternative source of oil that cannot be blocked by the United States financially or with military power.[24]

The initial Sino-Soviet split in 1961 occurred shortly after China achieved energy independence from the Soviet Union and was no longer subject to the Soviet's use of hydrocarbons as political leverage.[25] In a twist of irony, China now finds itself in a position of strength over Russia as a leading consumer and investor in Russian energy development. As of April 2019, China ranked as Russia's second largest export market behind only the combined economies of all of the European Union.[26] Of the $57.32 billion in Russian exports to China, 72 percent were in energy-related resources. While China generates 14 percent of all Russian export revenue and remains the second largest supplier of crude oil to China behind Saudi Arabia, Russia is only 3.3 percent of China's total import expenditure.[27]

As previously shown in the data points above, Russia represents a partnership of strategic convenience for China versus an absolute necessity for trade. While neither is fully dependent on the other at the moment, Russia has started down a path of reliance on Chinese capital that promises to be difficult to return from.

In his recent book *Klimat*, Thane Gustafson outlines the serious problems facing Russia's oil industry. Headlining this list is the depletion of oil fields inherited from the Soviet Union and a current lack of new, equivalent fields to replenish its well stock. As the older wells age, production costs climb and profit margins shrink. These issues are compounded by Arctic offshore oil deposits, which are technically challenging and costly to develop, and made worse by Russia's technological lag and a weak service industry that forces continued reliance on outside help and material inputs. Lastly, the need to develop new fields places incredible financial strain on the state, which paradoxically derives most of its revenue from the very industry that now requires support.[31] In lieu of these complications, the Russian Ministry of Energy has laid out a plan to carry the hydrocarbon industry forward for the next fifteen years.

> "Within the web of connective tissue currently binding Sino-Russian energy cooperation, the financial transactions themselves are benefiting China in a lopsided manner."

## Russia's Hydrocarbon Sector: An Industry and a Country in Need

Russia's hydrocarbon sector has long stood as its primary economic engine, and rents from the oil and gas industry provide the lion's share of state revenue underwriting the federal budget. In 2019 alone, oil and gas exports made up 56 percent of total exports and accounted for 39 percent of the federal budget.[28] This disproportionate reliance on hydrocarbon exports consequently places Russia at the mercy of energy markets prone to consumer-driven fluctuations. For example, in 2020, the combination of Russia's oil-price war with Saudi Arabia and the pandemic-induced downturn in oil consumption translated into a substantial loss in state revenue; the Russian budget experienced a decrease of $20 billion, even though revenue from other economic sectors improved by about 10 percent from the previous year.[29]

These numbers illustrate the immediate downside of such an acute dependence on oil and gas rents. However, a closer look at Russia's federal budget betrays a more concerning dilemma. In the year-end budget report published by the Ministry of Finance, the existence of two separate line items for calculating the deficit—one including hydrocarbon rents and one with hydrocarbon rents removed from the equation–demonstrates that Russia is incapable of running a surplus without cash flows from the hydrocarbon sector.[30] This situation would be concerning even if Russia's oil and gas industries were experiencing healthy growth and strong profit margins, but unfortunately, that is not the case.

## Looking to 2035: Arctic Goals

In June 2020, the Russian government approved the Ministry of Energy's new energy strategy titled "The Energy Strategy of the Russian Federation for the Period up to 2035" (hereinafter Energy Strategy 2035). While the document acknowledges the problems facing Russia's hydrocarbon sector, it nevertheless projects that fossil fuels will continue to dominate energy markets for the next fifteen years and reaffirms the state's ambitions of prolonging the lifespan of the hydrocarbon-rent economic model that has predominated for decades.[32] To this end, Energy Strategy 2035 sets the goal of maintaining oil output at 490–555 million tons per year.[33] However, aware of the limitations specific to the oil sector, as well as global energy policy trends emphasizing decarbonization, the new strategy calls for strong efforts to accelerate natural gas production to 860–1,000 billion cubic meters per year by 2035, amounting to a 27–47 percent increase from

2019. Moreover, special attention will be paid to the production of liquefied natural gas (LNG), with a goal of 80–140 million metric tons per year by 2035, set to meet a projected increase in global demand.[34]

Although Energy Strategy 2035 provides a clear diagnosis and list of goals, there is a noticeable lack of any substantive discussion concerning the critical aspect of funding. Therefore, to understand the trajectory of the hydrocarbon sector and to gain greater insight into the source of capital driving new development, it is important to examine Russia's ongoing efforts in the Arctic. Depletion in the West Siberian oil and gas fields has compelled Russia to turn to its Arctic reserves in order to prop up export volumes, and Energy Strategy 2035 stresses the importance of developing Russia's untapped north.[35] Thus far, the private firm Novatek has been spearheading this effort, but it is clear that much of its success is owed to readily available Chinese capital and cooperation.

Due to U.S. sanctions that strongly inhibit cooperation with Western firms and deny access to long-term loans denominated in U.S. dollars, Chinese partnership has been crucial for Novatek's success in developing the Yamal-Nenets Autonomous Region.[36] For example, two loans from the China Development Bank and the Export-Import Bank of China totaling EUR 9.3 billion (~USD $11.2 billion) and RMB 9.8 billion (~USD $1.5 billion) comprised the largest source of funding for Novatek's $23 billion Yamal LNG Project.[37] Furthermore, the Chinese National Petroleum Company (CNPC) and China's Silk Road Fund acquired a 20 percent and 9.9 percent equity respectively in the enterprise. While the cost of CNPC's shares is unknown, the EUR 1.09 billion (~USD $1.3 billion) price that the Silk Road Fund paid for its shares allows us to estimate that CNPC paid twice

The Russian fossil fuel company Gazprom Neft is building a massive oil production center to develop the Chayandinskoye oil-rim deposit in Eastern Siberia. Scheduled to begin production in 2022, it will be at the center of a cluster of other development sites in the region. Much of the oil produced will be piped to China. (Photo courtesy of Gazprom Neft)


Russian President Vladimir Putin (*left*) and Chinese President Xi Jinping witness the groundbreaking ceremony of a bilateral nuclear energy cooperation project, the Tianwan nuclear power plant in Jiangsu Province, China, and the Xudapu nuclear power plant in Liaoning Province, China, 19 May 2021 via internet videoconference. (Photo courtesy of Xinhua)

as much.[38] With CNPC and the Chinese National Offshore Oil Corporation each acquiring 10 percent stakes in Novatek's upcoming Arctic LNG 2 project, it appears that Chinese capital is set to continue expanding its role in the Russian Arctic.[39]

## Win-Win?

On the surface, the emerging Sino-Russian energy partnership appears to be mutually beneficial to both parties. While Chinese involvement in the Arctic is particularly revealing, it is by no means the only example of cooperation. CNPC's thirty-year, $400 billion import contract with Gazprom, along with a twenty-five-year, $270 billion contract with Rosneft, both signed in 2014, represent a clear commitment to long-term energy trade with Russia.[40] Furthermore, Sino-Russian energy partnership opens new pathways to pursue China's stated goal of growing the technical and industrial capacity of its own service companies on a global scale. This is best illustrated by deployment of the *Nan Hai Ba Hao* oil rig to help Gazprom explore its Kara Sea holdings in 2018.[41] Beyond this, access to Russian oil and gas provides China, the world's largest single importer of hydrocarbons, with options to hedge against the U.S. Navy's ability to shut down strategic choke points such as the Straits of Malacca, staunching the flow of oil and LNG to China's industrial core.[42]

However, in comparison to China's actions, which display a certain strategic calculus aimed at improving its energy security while growing its own companies, Russia's interaction with China illustrates a process of decision-making arising from *need* and the troubles listed above. Aside from the crucial influx of Chinese capital in the Russian Arctic, the recently completed Power of Siberia pipeline that carries east Siberian gas to northeastern China further showcases China's

leverage. Coming online in December 2019, Power of Siberia is the culmination of roughly two decades of negotiations in which Russia largely acquiesced to Chinese demands. For example, China demanded that Gazprom use a new East Siberian resource base as opposed to connecting the pipeline to its west Siberian fields. This prevented Gazprom from linking China to its existing grid feeding Europe, making China the monopsonist customer for the pipeline. Further delaying completion of the project, China demanded that gas prices be linked to global oil prices, putting Russian gas at even odds with the global market and placing the burden of price downturns on Russia.[43] The willingness of Gazprom to concede these key aspects of the deal shows that the *need* to access new market share and prop up exports eclipsed deeper strategic concerns.

Lastly, within the web of connective tissue currently binding Sino-Russian energy cooperation, the financial transactions themselves are benefiting China in a lopsided manner. For example, aside from the substantial loans given to Novatek, Russia also received $31 billion from China between 2007 and 2014 in the form of energy-backed development loans.[44] For China, this has the dual benefit of enabling it to grow the international prestige of its financial institutions while also ensuring its own energy security. However, Sino-Russian energy transactions are taking on an even greater significance insofar as they facilitate China's ambition of developing the prestige and convertibility of the yuan.[45] Russia's willingness to conduct energy transactions in yuan, as illustrated by the fact that Gazprom Neft has conducted all of its business with China exclusively in yuan since 2015, is an aspect of this relationship that uniquely benefits China.[46] In 2019, Russia doubled down on its commitment to yuan-based transactions when it dumped $101 billion worth of its U.S. dollar reserves and redirected about half that amount toward acquiring yuan.[47] In this manner, Russia is serving as a key instrument in China's efforts to recycle the yuan throughout the global economy.[48] For Russia though, the long-term tradeoffs of energy-backed loans and yuan-based transactions may become increasingly negative as it leads to increased dependence on Chinese purchasing power and greater reliance on Chinese goods and services.

"The long-term tradeoffs of energy-backed loans and yuan-based transactions may become increasingly negative as it leads to increased dependence on Chinese purchasing power and greater reliance on Chinese goods and services."

## China's Other "Win-Win" Partnerships: Angola's 2020 Crisis

Even though Angola is not a nuclear power or a great power like Russia, it does share some similar economic and trade relationships with China. Both share China as their largest trading partner for exports, both of which are primarily in hydrocarbon exports.[49] Angola and Russia have also both accepted massive energy development loans from China in the form of commodity-backed loans and equity shares in state companies, and for infrastructure construction.[50] Both are also more reliant on China as a market for their exports than China is reliant on their resource imports; Russian oil makes up 15 percent of total Chinese consumption and Angolan oil makes up 9 percent.[51] At the moment, Angola is much more reliant on hydrocarbon exports for its overall financial stability (90 percent of its exports), which makes it even more reliant on China as a steady consumer market for its exports to buffer against market shocks to global price indexes.[52] Angola serves as an important cautionary tale for how China's long-term "Win-Win" partnerships can end in massive power and trade imbalances.

The year 2020 was the playing out of Angola's worst-case scenario for its relationship with China. Prior to the global COVID-19 lockdowns and Saudi-Russian price collapse in 2020, Angola's public and policy guaranteed debt to China sat at 49 percent

(USD $19 billion), 70 percent of which were commodity-secured loans against oil exports.[53] In June 2020, Angola defaulted on oil payments to China; COVID-19 and the Saudi-Russian crude oil price war made delivering oil to China more expensive than cash payments for the original loan amount.[54] While China's EXIM bank has agreed to a three-year restructuring of the loan agreement, the details are yet unknown.[55] One thing is for certain though—China is in the dominant position in its relationship with Angola and is free to structure agreements any way it pleases. If Russia continues down its path toward greater borrowing from Chinese institutions and further dependency on energy exports for its state economy, a similar outcome far in the future is not impossible to imagine.

## Consequences of "Good-Neighborliness, Friendship, and Cooperation"

Signs pointing to Russia's precarious future are already surfacing as Sino-Russian energy cooperation and reliance on Chinese assistance creates trickle-down effects throughout other key economic sectors. This is especially the case with Russia's technology and service sector. For example, the increasing role of Chinese capital in building strategically sensitive technological infrastructure is a part of the broader trend in Russia. In 2012, the Russia-China Investment Fund started funneling investment capital toward the development of promising technologies and startup companies in Russia, relieving some of the burden on the overstretched federal budget, which is still the primary source of funding for scientific research in Russia.[56] Nevertheless, Russia's anemic knowledge economy is failing to keep pace with the state's needs, opening the door for Chinese tech giants to capture market share and grow China's influence within Russia.

The rapid expansion of Huawei's influence in Russia best encapsulates this phenomenon. Huawei currently dominates the Russian mobile phone market, even outcompeting global behemoths like Samsung.[57] However, Huawei's importance is now transcending basic tech consumer needs as it establishes itself as an irreplaceable partner in telecommunications infrastructure development. Faced with weak domestic tech companies and a shrinking budget, Putin turned to Huawei in 2019 to spearhead Russia's 5G rollout, with Huawei providing 5G technology to Russia's top telecommunications companies.[58] Both outside observers and some Russian international affairs specialists have noted the risk of relying on China for such a strategic element of state infrastructure and argue that Russia would better serve itself by keeping the 5G campaign in house.[59] However, Russia's budget concerns appear to be compelling the state to sacrifice strategic principles in favor of more pressing short-term needs.

As Russia's aging hydrocarbon reserves continue to generate increasingly smaller profit margins and induce costly development campaigns, it seems likely that the state will frequently be forced to weigh its own grand strategy against short-term economic demands. The troubles facing the hydrocarbon sector not only point to the likelihood of future energy-backed loans from Chinese financial institutions but also result in the diversion of federal funds away from other economic sectors that could decrease the path-dependent overreliance on hydrocarbon rents. Thus, even if Russia manages to avoid falling into a debt trap akin to the example of Angola, its hesitance to transition away from reliance on the hydrocarbon industry promises to result in more instances where Chinese companies outcompete domestic Russian firms across the economic spectrum.

The question of national sovereignty and the extent of Russia's willingness to cede influence to China should thus guide future studies of Sino-Russian energy cooperation. Understanding the limits of this partnership will have profound implications for strategists contending with a new multipolar world of renewed great-power competition. ■

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