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Article

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International Journal of Energy Economics and Policy

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International Journal of Energy Economics and Policy (IJEEP)

Reference: Baboshkin, Pavel (2020). Strategic energy partnership between Russia and China. In: International Journal of Energy Economics and Policy 10 (5), S. 158 - 163. https://www.econjournals.com/index.php/ijeep/article/download/9032/5271. doi:10.32479/ijeep.9032.

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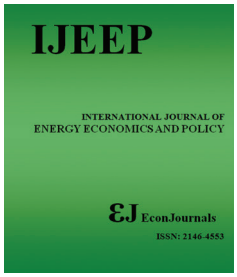

International Journal of Energy Economics and Policy

ISSN: 2146-4553

available at http: www.econjournals.com

International Journal of Energy Economics and Policy, 2020, 10(5), 158-163.

Strategic Energy Partnership between Russia and China

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Received: 26 November 2019 **Accepted:** 13 May 2020 **DOI:** https://doi.org/10.32479/ijeep.9032

ABSTRACT

During recent years the role of energetic security in Russia steadily increases. After deterioration Russian relations with West countries in energy sector stay single stable economic tool, which Russia use for the maintenance of impact in surrounding region. Instability of the importers market which is priority for the country, bounded with excitements about use by Russia theirs position on the energetic, markets for reaching political goal through the development of projects such as Nord Stream 2 and Turkish stream. In its turn in latest decade, Russia aspires to ensure solid positions in Siberia and Far East. American companies refuse to participate in the execution of orders for Russia due to the unstable political situation and stricter restrictive and regulatory measures, which makes the level of risk of cooperation unacceptable. Using alternative sources of electricity, Russia and China can extract many positive effects: financial income, employment, energy security for the domestic market, etc. For example, in the Far East, the import of fuel can be reduced by 40% after the implementation of RAO UES plans to build 178 renewable energy sources with a total capacity of 146 mW.

Keywords: Strategic Partnership, Economic Development, Energy Cooperation, Asian-Pacific Region, Energy Security
JEL Classifications: C30, D12, Q41, Q48

1. INTRODUCTION

Taking into account, that demand for petroleum products in Asian-Pacific region, will probably exceed worldwide demand on 25%, and, according to predictions, demand for natural gas by 2025 will exceed it almost on 50%, Asian energy importers market is promising for Russia.

Most of all, this is reflected in the expansion of energy cooperation between Russia and China. The danger of China's dependence as one of the world's largest energy consumers on imports of Russian energy carriers (57% of the total world energy consumption) is that Beijing, preferring to export raw materials, will seek to exploit the far East as a "resource appendage" and avoid significant trade and financial obligations. This problem is repeatedly exacerbated by the uneven economic development of both countries.

Analyzing the development program of the border regions of Russia and China, some authors have identified a discrepancy between the economic strategy of Russia and China in the field of Economics, but have not proposed ways to equalize this discrepancy. Many researchers are supporters of the neorealist paradigm in international relations, but the ways to improve energy security in North-East Asia are insufficiently studied by them. Foreign experts, as a rule, do not consider the interests of Russia's national and regional security, citing the current weakness of the Russian economy and the heterogeneity of Russian-Chinese cooperation.

The purpose of this study is to analyze the problems of Russian-Chinese energy cooperation in the context of the development of the Russian Far East and the possibilities of increasing its efficiency through new forms of energy cooperation between the two countries in the Far East.

2. LITERATURE REVIEW

Russia's energy security strategy is committed to maintaining state control over oil and gas developments, concluding long-

term contracts for joint development of natural resources with foreign companies, and directly regulating foreign access to them (Nyangarika et al., 2019b; Nyangarika et al., 2019a).

Management practices are dominated mainly by the centralization of decision-making and the support of large industrial and financial groups such as Gazprom, Rosneft or Transneft, as a result of which technologies and infrastructure for the energy market are developed within a limited group of linear-functional corporations (Denisova, 2019; Denisova et al., 2019).

For example, in the oil sector, Russia has signed contracts for joint development of fields with such large foreign companies as Exxon Mobil; BP; Total; Royal Dutch Shell; Sodeco; Mitsubishi, Mitsui etc. In the field of liquefied natural gas (LNG), the total reserve of which in Russia is about 165 trillion cubic meters. Moscow pays special attention to the gas pipeline "Nord stream-2," which will connect Russia and Germany via the Baltic sea by the end of 2019 (Mikhaylov et al., 2018; Nyangarika et al., 2018).

Finland, Sweden and Denmark are among the interested participants in this project, and the total annual volume should reach about 55 billion cubic meters. Another Russian project, The Turkish stream LNG project, will link Russia and Turkey via the Black sea by 2019 (Moiseev, 2017c; Moiseev and Akhmadeev, 2017).

As European States show their willingness to act as independent geopolitical players in the global energy market, the demand for Russian energy resources will increase in the future (Mikhaylov, 2018a; Mikhaylov, 2018b).

The actions of Russian state monopolies are responding to this forecast: in 2018, Gazprom placed 750 million euros in 8-year bonds in Europe to raise up to $ 5.5 billion for the construction of the Nord stream-2, Turkish stream and LNG terminal network (An et al, 2019b; Moiseev, 2017a; Moiseev, 2017b).

Russian energy Minister Alexander Novak said that Moscow will provide supplies under existing contracts to European consumers with partial use of LNG after 2019. However, due to the external geopolitical and diplomatic crisis between Russia and the West, the future of Russian-European energy projects is uncertain (Morgan and Yang, 2001; Gura et al., 2020).

Since 2011 Moscow has been pursuing a targeted policy of diversifying European energy cooperation by seeking alternative investors in Asia (Lopatin, 2019a; Lopatin, 2019b).

According to the Energy strategy of Russia-2035, Moscow is expanding energy supplies beyond the European market in northeast Asia and the Russian Far East (Mikhaylov, 2019a; Mikhaylov et al., 2019).

Gazprom and Rosneft are the only companies entitled to conclude agreements in this industry with the Amur region of Russia, Primorsky and Khabarovsk territories (Morris and Barlaz, 2011; An et al., 2020a; An et al., 2020b).

For example, Rosneft has built an oil refinery in Komsomolsk-on-Amur for the oil, gas, automotive and other petrochemical industries (Meynkhard, 2019; Wustenhagen and Bilharz, 2006).

At the same time, there is no independent oil market in Russia, so at the moment it is almost impossible to build a completely independent oil refinery (Moiseev and Sorokin, 2018; An et al., 2019a; An et al., 2019c).

3. METHODS

Thus, the channels for improving welfare at the expense of the state budget and the growth of domestic investment in the region are narrowing.

With oil prices falling, the energy sector has also had to face an urgent need to improve efficiency and at the same time find sources of larger-scale financing. Thus, Russian, Japanese and American companies invested in Sakhalin I and II projects in order to exploit oil and gas fields located on the northeastern coast of Sakhalin island. As a result, the Sakhalin – Khabarovsk – Vladivostok gas pipeline was built, gas exports through which began in 2009, when Gazprom began selling LNG to Japan and Korea under the Sakhalin-II project». This helped Gazprom initially to enter the markets in the far East, and subsequently, relying on the Sakhalin-3 LNG project, together with China's Sinopec, to expand supplies to domestic and foreign consumers (Zubakin et al., 2015; Tryndina et al., 2020; Yumashev and Mikhaylov, 2020).

After the introduction of Western sanctions, the US energy agenda in the far East has significantly narrowed, leaving only a limited share of us investment in Sakhalin projects. Currently, American companies refuse to participate in the execution of orders for Russia due to the unstable political situation and stricter restrictive and regulatory measures, which makes the level of risk of cooperation unacceptable.

South Korea provides more than 10% of its energy needs domestically, mainly through nuclear and renewable energy. The national oil company of Korea (KNOC) and the Korean gas company (KOGAS) are the two largest state-owned companies in the ROK that buy the rights to produce and deliver oil and gas worldwide. Japan followed the same path until 2011, but the Fukushima reactor accident halted the development of Japanese nuclear power. At the same time, Japan is heavily dependent on imports of oil, gas and coal and relies on large state-owned companies such as Sodeco, Mitsubishi, Mitsui, etc., which are also involved in Sakhalin LNG projects with Russia. Sakhalin projects are the only ones in the far East focused on the Japanese market and receiving significant investments from Japanese companies.

However, in terms of total investment, both South Korean and Japanese companies lag behind Chinese ones. They receive less government subsidies and focus on making financial profits rather than losses, which is not the case for Chinese companies, which are mainly focused on maximizing the exploitation of natural resources, despite short - and medium-term financial losses. For several years, leading Chinese state-owned companies

(CNPC, Sinopec and CNOOC) have made major financial investments and signed long-term contracts in all regions of the world (about 200 projects in fifty countries) aimed at importing oil and gas through borrowing funds from Chinese state-owned banks. Over the past few years China has concluded major agreements on contracts with Russia on oil and gas, using the allocation of significant financial loans to ensure long-term supplies of Russian energy resources (Meynkhard, 2020).

For Russia strategic cooperation with China is one of the main factors for ensuring the success of the strategy in energy security in NEA. In 2009, Russia and China signed a cooperation Program between the Russian Far East, Eastern Siberia and the North-East of China until 2018. The main directions of this program are:

- expansion of Russian exports of non-ferrous metals;
- Expansion of border transit;
- Development of transport communications;
- Construction of a border trade center and attraction of Russian tourists to China;
- Export of Chinese labor to Russia.

4. RESULTS

The result was the construction of the Skovorodino–Mohe–Daqing oil pipeline, part of the Russian ESPO pipeline, which was completed at the end of 2017 with a capacity of 30 million tons.

An important package of bilateral agreements in the field of energy was signed in 2014-2015. The framework agreement set a timetable for the preparation of gas purchases and terms of sale, technical issues, as well as an intergovernmental agreement on the Western route. In addition, Russia and China signed a Memorandum of understanding on cooperation in the oil and gas sector.

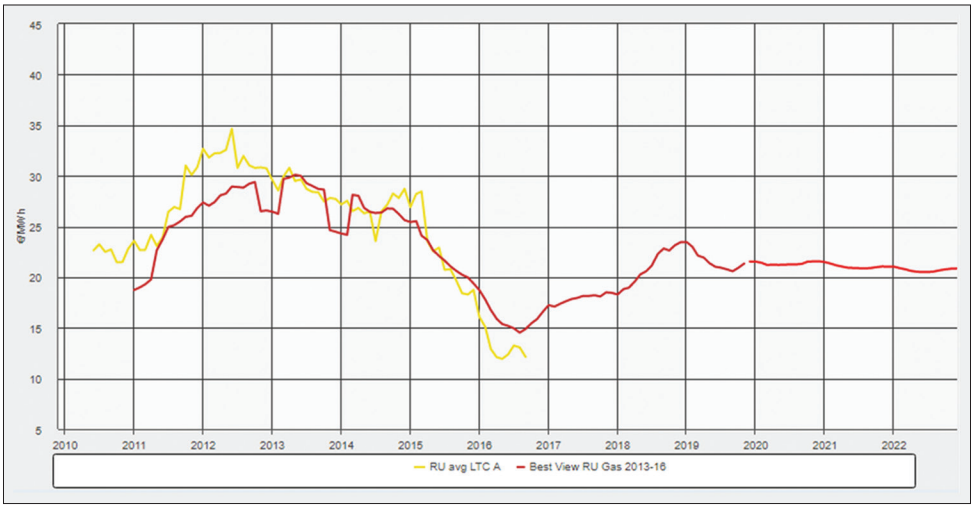
After sanctions were imposed on Russia in 2014, the coincidence of political decisions and economic initiatives of Russia and China on the development of regional projects played a role. In particular, this applies to the construction of the Primorsky energy complex, Vladivostok and Razdolnaya HPP, as well as the channel of river ports of the Khabarovsk– Vladivostok commercial ports for the delivery of electricity to China. Another project of energy cooperation between Russian and Chinese companies is a gas thermal power plant in the North-Western part of Ussuriysk (Primorsky Krai), which is planned to be built by 2019 by the Russian "RAO ES" and the Chinese energy Union Heilongjiang.

Some experts believe the investment forecasts are overstated, and the planned result is premature. Thus, in 2016, the negative dynamics of investment inflow to the Far East amounted to 82.8% compared to the previous year. In 2015, the volume of production was only 20%, and 80% was exported abroad in the form of raw materials. The increase in investment in gas contracts in 2014 was hampered by the discrepancy between the regional development programs of Russia and China. Russia accounts for just over 10% of China's energy imports, while China accounts for only about 15% of Russia's oil exports and even less natural gas exports (Figures 1 and 2).

As a result of the deal between Gazprom and CNPC, only about 1,600 kilometers of LNG pipelines (Power of Siberia and Altai) were built by 2018. Another promising project on the Eastern gas pipeline – Chayandinskoye field (Yakutia), where according to the forecast by 2019 it is planned to produce 38 billion m^3/year, is also far from implementation. About half of the far Eastern energy enterprises are physically and technologically obsolete, and a significant part of the investment projects is aimed at restoring the technical base and supporting the current production volumes.

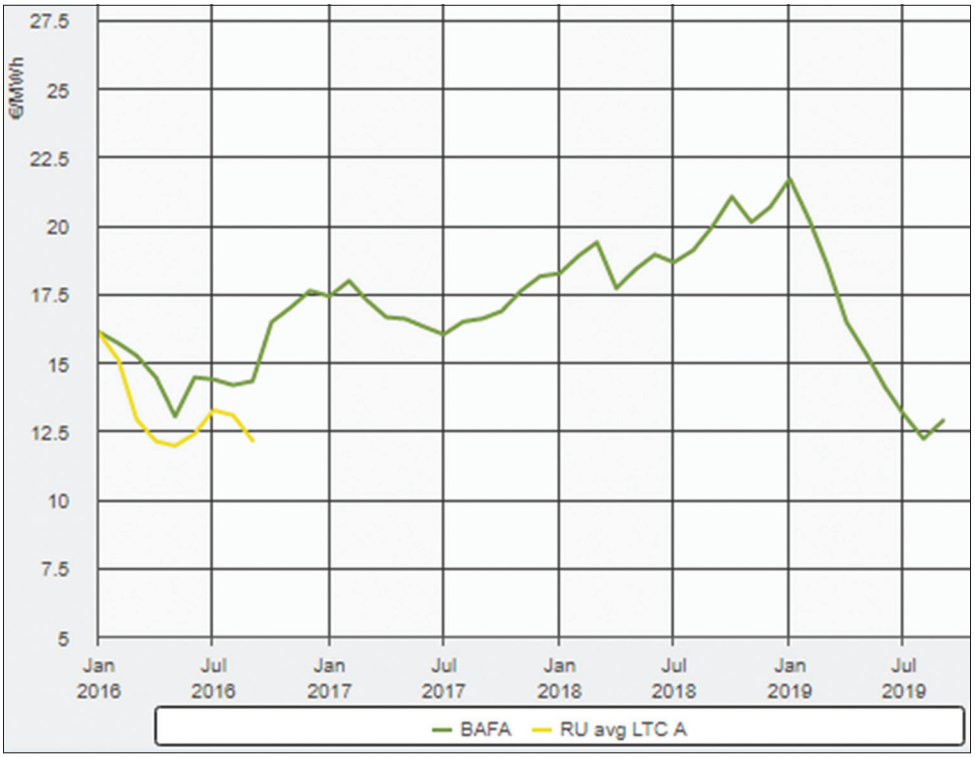
Meanwhile, in 2015-2016, China acquired a 9.9% stake in Russia's major energy holding SIBUR, and a 9.9% stake in Yamal LNG (northeast of the Yamal Peninsula). This suggests that for China, Russian LNG is an important element of energy security, but its price remains a critical factor. China is struggling to cope with the environmental impacts of its economic growth and is seriously considering switching from coal to clean LNG projects. It is obvious that China needs a long-term partnership with Russia as one of the largest energy producers.

Figure 1: Natural gas price



Source: Author calculation

Figure 2: Natural gas export from Russia



Source: Author calculation

Dale Copeland's theory of interdependence and war explains that, with future expectations of trade relative to each other, and guaranteed access to the country's resources, the States involved in such trade will seek to maintain good relations. Russia provides China with guaranteed access to energy resources, but does not yet guarantee their timely delivery, since the modernization of the energy sector in Siberia and the Far East is far behind plans. This may prevent China from further investing in the Far East, while existing projects implemented with the help of Chinese investments will be aimed only at the extraction and transportation of natural resources to China.

In addition, as a result of the regional economic downturn in 2010, China faced painful closures of obsolete and unprofitable state-owned enterprises in the northeast. For Russia, this means that it can rely only on its own resources, and China's border areas are unlikely to become a catalyst for economic growth in the Far East.

In the current situation, Russia needs to guarantee long-term investments in LNG projects establishing state regulation of electricity tariffs and accumulate strategic oil and gas reserves to ensure regional energy security. An alternative to accelerating the implementation of this process is to attract foreign companies not only as consumers of gas, but also as direct investors, if we consider Gazprom, LUKOIL or Rosneft as partners. Small enterprises in China (China Drilling Corporation, etc.) are interested in developing energy infrastructure in Russia, as well as in expanding borders to create a competitive environment with state monopolies.

The result should be the development of local production, simplification of the process of state regulation and long-term financing of energy projects.

4. DISCUSSION

In addition, according to a report by the Lawrence Berkeley National laboratory, Asian countries depend on imports of oil from the Middle East and natural gas from Australia and Oceania and are therefore vulnerable to political escalation. As these countries, including China, are either on the verge of a technological breakthrough or are fast-growing markets, they are gradually moving towards renewable energy, slowly but surely reducing their dependence on fossil fuel imports. Taking into account that Beijing is looking for new technologies and high-quality extraction of energy resources, the Russian-Chinese development of alternative energy sources can develop in several directions (Mikhaylov and Tarakanov, 2020; Mikhaylov, 2020).

First, Russia has extensive experience in the production of power equipment and retains technological advantages in the equipment of nuclear power plants. In 2017, 10 Russian nuclear power plants produced 19% of the country's total energy. Since 2010, Russia and China have been cooperating in the field of nuclear energy, for example, in the development of water-water power reactors (VVER), exploration of uranium deposits, decommissioning of old plants, secondary processing technologies, etc. in 2017, the Vice-President for South Asia projects of the management company JSC "Engineering company "ASE" (part of Rosatom) A. Lebedev proposed to build a new nuclear power plant in China, which will consist of six power units.

Chinese oil companies are interested in the production of floating nuclear power plants, including with the participation of Rosatom. For example, the world's first floating nuclear thermal power plant (APEC), Akademik Lomonosov will arrive in Chukotka in June 2019, replacing the capacity of the Bilibino nuclear power plant, which currently generates 80% of Chaunbilibino's electricity and will become the world's northernmost nuclear power plant. Floating nuclear power plants can further become the main objects of life support in the Northern regions of the Russian Far East and attract Chinese investment here.

Secondly, advanced technologies of renewable energy sources (solar and wind energy), the development of which is already actively underway in China, will be of great importance for Russia and China in the foreseeable future. The fact is that if China refuses to switch to energy-saving production or alternative sources of renewable energy, over time it will inevitably face serious environmental problems and high energy prices on world market (Mikhaylov et al., 2020).

The growing scale of emissions produced by coal-fired power plants, the dumping of industrial waste have always been a serious problem in China, and recently have become an acute problem for the ecology of the Far East: the promising gas pipelines "power of Siberia" and "Altai" will increase the industrial load and have a significant impact on the environment.

The difficulty with renewables is that it takes a lot of space to create an industrially significant amount of energy from the sun and wind. In megacities, such as Beijing or Shanghai, it is practically absent, which makes the vast territories of the Russian Far East attractive for projects in the field of alternative energy development. The sunniest region is Primorsky Krai, where the level of solar radiation, according to NASA, is about 4.5 kW/h/1 m2/day (Dayong et al., 2020; Dooyum et al., 2020).

In 2012-2015, RAO UES mastered eight solar stations and three wind turbines, which allowed reducing the company's fuel costs and subsidizing regional budgets for local energy. The solar power plant in the Republic of Sakha (Yakutia) has become the most powerful in the world beyond the Arctic circle (capacity 1 mW), while the project involves increasing its load to 4 mW with a maximum winter of 5 mW.

As for wind energy, in the coastal regions of the Far East, the average annual wind speed is 6-7 meters per second, while in Denmark (the world leader in the use of wind energy a little more than 5 m/s). The most promising areas for the installation of wind farms in the far East are coastal areas in the Kamchatka territory, the Sakhalin region, Chukotka and Yakutia. In addition, Kamchatka has geothermal capacity for electricity production, developed jointly with RusHydro and estimated at 5000 mW.

6. CONCLUSION

Using alternative sources of electricity, Russia and China can extract many positive effects: financial income, employment, energy security for the domestic market, etc. For example, in the Far East, the import of fuel can be reduced by 40% after the implementation of RAO "UES" plans to build 178 renewable energy sources with a total capacity of 146 mW. China, which suffers heavily from air pollution caused by fossil fuels, will be able to improve its environmental performance and reduce fossil fuel consumption if it gains access to renewable sources in Russia.

At the same time, China is vulnerable to trade because of its dependence on other countries to stimulate its economic growth. This can be used by Russia to attract China to the above projects through other investment incentives: tax cuts for corporations, grants to private companies and General deregulation in the Far East market. It is necessary to master forms of cross-border cooperation and interaction with regional business, which, in particular, are developing and accumulating the necessary potential in the maritime territory. This supports in the Far East a more global task of development of the Russian Eastern territories, population growth, economic recovery and overcoming its imbalance.

Thus, for China, which is subject to a trade war with the USA, energetic partnership with Russia is the most important resource for investments in underdeveloped far eastern region. Moscow is interested in creating intergovernmental organizations for energy cooperation throughout northeast Asia, as evidenced by the successful multinational cooperation between States, including China, Japan, Korean republic, etc., which not only reduces the economic burden of these projects, but also deters China from playing with the "zero sum" regarding the unilateral exploitation of energy projects in the Far East. Moscow must actively seek various levers in its increasingly unequal relationship with Beijing to protect its national interests, and one of these levers could be the development of alternative energy to meet China's energy needs.

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