

Modern Russian Approach to Energy Cooperation in NEA

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Dr. KALASHNIKOV Victor
Economic Research Institute
Khabarovsk, Russia
kalashnikov@ecrin.ru

Rationale of Northeast Energy Policy of Russia

In Russia the NEA countries are considered the most promising area for energy cooperation in Pacific region. Russia and NEA countries share common strategic interests in the energy field. The three most significant aspects among them are:

- currently and in future, the national production of primary energy resources in NEA economies (especially in China) is not sufficient to support economic development and satisfy total energy demand. The NEA countries develop nuclear power and renewable energy sources, promote energy efficiency programs. Nevertheless energy imports will be necessary and inevitable. Russian energy exports are important not only for satisfying the national demand for energy in NEA countries but also for diversifying fuels imports sources.

- The Russian Federation is currently one of the biggest energy exporter in the world, and will keep this position in future. But Russia is interested in diversification of energy supplies to international energy markets. For a long-time the biggest share of Russian energy exports has been supplied to European countries. Northeast Asia would be a reliable partner for diversifying Russian energy exports.

- In recent years the Government of Russian Federation has been emphasizing the importance of developing Russia's eastern territories and in particular the Far East region, and increasing financial support to basic infrastructure projects in the Far East. Economic development of the Russian Far East should be driven mostly by endogenous sources of economic growth, but through increasing cooperation between regional economy and East Asian markets. Developing energy resource projects meet such a concept of endogenous economic growth of the Far East.

Key Policy Initiatives of Russian Government for the Development of Energy Resources of East Siberia and the Far East

For the past few years, the Russian Federation put forward and started developing several important initiatives that will determine the policy of developing the energy potential of East Siberia and the Far East.

Enhancement of Pacific benchmarks in extraction and export of oil and natural gas

The strategic priorities launched by the Russian Government envisage the following benchmarks for the year 2015¹:

- Russia will extract nearly 530 million tons of oil per year and export about 310 million tons

- The extraction of oil in recently developed oil-and-gas fields of East Siberia, Yakutia, and the Sakhalin shelf is estimated at an amount of about 70 million tons per year

¹ Strategiya razvitiya neftegazovogo kompleksa Rossiya na period do 2010-2015 gg. // Prilozheniye k obshchestvenno-delovomu zhurnalu „Energeticheskaya politika” (Russian oil-and-gas sector development strategy for the period until 2010-2015 // Appendix to a socio-economic journal “Energy Policies”). M.: State enterprise of RF Ministry of Industry and energy, 2005.

- The Asian Pacific Region will provide 17-20% of the Russian crude oil export
- The extraction of natural gas will reach 740 billion cu m per year, with 75 billion to be extracted in eastern parts of the country.

Enhancement of the eastern areas' and the continental shelf's roles in national reserves of oil and gas

The Russian Federation is known to be rich in hydrocarbons. West Siberia and the Volga-Urals district are the major oil and gas bearing areas of the country. However, the structure and the quality of these resources are gradually deteriorating. Over 75% of oil and gas deposits have already been involved in the industrial development. The depletion of the major oil and gas bearing provinces constitutes 70-80% in the North Caucasus, 50-70% in the Urals and Volga areas, and over 45% in West Siberia.

In 2005 the Russian Government endorsed and in 2008 re-approved "The long-range state program of exploration and regeneration of raw minerals." In connection with this program and implementation of the East Siberia – Pacific Ocean pipe-line project, the Ministry of Natural Resources of Russia approved "The program of geological exploration and licensing of the oil and gas fields in East Siberia".

The highlights of these documents are the areas of the Timano-Pechorskiy basin, East Siberia and Yakutia, and the shelves of the Barents Sea, the Kara Sea and the Sea of Okhotsk are acknowledged to be the most promising in producing national oil and gas.

In 2006, the State Duma adopted the law on amendments to be made in the Tax Code, concerning the zero rate of the royalty for a number of deposits. The law determines a zero rate for oil-and-gas deposits located fully or partly in the East Siberia oil-and-gas Province (within the bounds of Sakha Republic (Yakutia), Irkutskaya Oblast, and Krasnoyarskiy Krai). The privilege is going to be valid until the accumulated volume of the extracted oil reaches 25 million tons.

A separate law is envisaged to be submitted, in which preferential rates on the royalty are proposed for geological prospecting and development of continental shelf deposits.

Strategic Principles of Prospecting and Developing the Oil and Gas Resources

In July 2006, during the St Petersburg G8 Summit, President Putin's administration proposed to put the energy security issue on the agenda. A keyed up dialogue Russia and the European Union carried on in the 2006-2007 revealed the pragmatic essence of Russia's approach to this issue in the context of international interests. This approach is referred to as a concept of "assets swapping" between the producers and consumers of energy resources.

Russia considers that the policy of diversification of energy consumption and energy supplies, prevailing today in the world, should be complemented by the strategy of diversification of mutual participation of the concerned countries-partners: suppliers and consumers of fuels. Russia is willing to develop her oil and gas deposits in collaboration with other countries concerned, but considers that the countries-partners should render the Russian companies an access to the partners' energy transmission and distribution infrastructure².

On the 5th of July, 2006, the State Duma adopted a federal law "On gas exports". The law stipulates the guidelines of the state regulations for exporting gas, and grants an exclusive right to export gas to an organization which is the owner of a national gas supply system (or to its subsidiary company), in whose authorized capital the share of the owner of the national gas supply system accounts for 100%.

The provisions of the law "On gas exports" apply to gas, extracted from all the kinds of gas deposits and transported in a pipe or liquefied state³.

² The North-European gas pipe-line (Nord Stream project) can serve as a pilot project within the "assets swap concept". In the frameworks of the Nord Stream project, Russia agrees to admit German companies to the joint development of the South-Russia gas bearing field. In return, the "Gazprom" receives a share of the German companies' gas sharing assets. The development of the Shtokman deposit in the Barents Sea will give another opportunity to maintain the "asset swap concept".

³ The provisions of the law do not apply to production sharing agreements on the Sakhalin-1 and Sakhalin-2 projects.

Thus the law “On gas exports” identifies the regime of a “unified export channel” (a single agent purchasing natural gas extracted or in transit in Russia), whose functions are going to be performed by the “Gazprom” company or its subsidiary company.

In 2008 Russian President signed the federal law that regulates relations on the development of the Russian continental shelf deposits, including passing for the development some sections of the continental shelf and other deposits of the mainland mineral resources (including oil and gas). According to this law some sections of the mineral resources of “federal importance” can be passed to Russian companies for exploration and development without any tenders and auctions.

Important Energy Resource and Infrastructure Projects in Eastern Russia

Among the large-scale projects aimed at investment and energy trade cooperation in the sphere of exploration and development of oil, gas, coal and electric power resources of East Siberia and the Far East, are the following:

- ✓ *Sakhalin-1 and Sakhalin-2 oil and gas projects.* By the end of 2007 the total investment in these projects amounted to US\$21 billion. In 2010 both projects will be operating at maximum capacity producing 20 million ton of oil and more than 19,5 BCM of natural gas a year.
- ✓ *East Siberia – Pacific Ocean oil pipeline (ESPO project).* The ESPO project consists of two construction stages. The first stage of the ESPO from the town of Taishet (Irkutsk region) and to Skovorodino (Amur region), 2700 km long and with capacity of 30 million tonnes a year, including construction of the oil marine terminal in the Kozmino bay (Primorsky region), will be completed in the 4th quarter of 2009. Currently the pre-feasibility study is being conducted for the second construction stage of the ESPO pipeline (Skovorodino-Kozmino), with expected capacity of 50 million tonnes a year.
- ✓ *Program on Unified Gas Supply System in East Siberia and the Far East (UGSS project; Gazprom is a national developer of the UGSS project)* ⁴. In September, 2007, the UGSS project was approved by Russian Government. Based on the main deposits locations the UGSS project includes construction of four new gas-extraction centers in the east of Russia: Sakhalin, Yakutsk, Irkutsk and Krasnoyarsk gas-extraction centers. The Project is expected to supply 44.9-88.2 BCM of gas annually by 2015, and 76.6-133.8 BCM annually by 2020.
- ✓ *Large-scale projects of Russian electricity exports to China.* In November, 2006 a pre-feasibility study of the project of large-scale electric power supply from Eastern Russia to China was prepared. The project is supposed to be implemented in three stages. Over the first stage, 2008-2012, the expansion of frontier electricity trade up to 4.5 bln kWh is provided. Over the second stage, 2012-2015, new power installed capacities of 3.5 GW are projected to be commissioned within southern part of the Far East in order to expand annual electricity supply up to 22.5 bln kWh. At the third stage of the project, after 2015, it is planned to build 6.0-6.4 GW in the Far East and Eastern Siberia so that to enlarge export volumes up to 60.0 bln kWh annually.
- ✓ *The South Yakutia development project.* The Project will be cofinanced from Russian Federation Investment fund ⁵. The construction and start of operation of the industry facilities is planned in 2009-2020. The energy related subprojects include: construction of Timpson group of hydroelectric power plants, development of uranium deposit in Elkonsk, development of Denisovsky and Chulmakan coal deposits and Chayanda gas field.

⁴ Programma sozdaniya v Vostovhnoi Sibiri i na Dalnem Vostoke edinoi sistemy dobychi, transportirovki gaza n gazosnabzheniya s uchyotom vozmozhnogo eksporta gaza na rynki Kitaya i drugikh stran Aziatsko-Tikho-okeanskogo regiona. Moscow. 2007.

⁵ In January, 2008, the Government of Russian Federation approved the inclusion of South Yakutia development project into the list of 16 projects to be cofinanced from the Russian Federation Investment Fund.

- ✓ Currently, investments are made to some oil-gas deposits intended for exports to NEA markets: Vankor (Krasnoyarsk region), Verkhnechonsk (Irkutsk region), Talakan (West Yakutia).

In 2008 Russian Government issued a special resolution and passed the license for development of large gas field in Chayanda (Yakutia, 1.26 trillion CM of reserves) to Gazprom without a tender. During this year, the Sakhalin-3 blocks (excluding the Veninsk block) will also probably be passed to Russian companies (Rosneft, Gazprom) without contest.

Current Status of Energy Cooperation between Russia and NEA Countries

Current status of “Russia- NEA” energy cooperation is still not as that as countries involved would like. The rate of the energy cooperative initiative implementation differs strongly among the countries involved and across energy subsectors. China is the country which succeeded in this most of the others.

Russia – China Energy Cooperation.

The Russian – Chinese subcommittee on cooperation in the field of energy of the Russian - Chinese commission on preparation of regular meetings of head of governments operates. There is a great number of framework agreements and memoranda of understanding that are currently in force in between Russian state-own companies and those of China as well as Chinese governmental bodies. The most significant are as follows:

- on supplies of Russian uranium fuel over 2010-2021 between JSC “Techsnabexport” and Chinese company of nuclear industry (November, 2007)
- on strategic cooperation between JSC “Lukoil” and China National Petroleum Company (CNPC) (September, 2007);
- on crude oil supplies between JSC “Rosneft” and China Petroleum & Chemical Corporation (Sinopec) (July, 2007);
- on aviation fuel supplies between JSC “Rosneft” and Chinese National Aviation Fuel (CNAF) (April, 2007);
- on enhancement of cooperation in the field of crude oil transportation between JSC “Russian Railways” and Ministry for Railways of Chinese People's Republic (March, 2007);
- on basic principles of joint venture establishment between JSC “Rosneft” and Sinopec (November, 2006);
- on comprehensive elaboration of the Feasibility Study of the electricity supply from Russia to China between JSC “RAO UES Rossii” and State Power Grid Company of China (March, 2006);
- on natural gas supplies between JSC “Gazprom” and CNPC (March, 2006);
- on basic principles of joint venture establishment between JSC “Rosneft” and CNPC (March, 2006);
- on studying the issue of design and construction of oil pipeline from Skovorodino to Russia – China border between JSC “Transneft” and the CNPC (March, 2006);
- on long-term cooperation between JSC “RAO UES Rossii” and State Power Grid Company of China (July, 2005);
- on crude oil supplies on terms of advance payment between JSC “Rosneft” and CNPC (December, 2004);
- on strategic cooperation between JSC “Gazprom” and CNPC (October, 2004).

These agreements underpinned the development of a Russia – China energy cooperation which is currently exhibited in the following.

Oil trade is undergone progress supplying through sea route (Tuapse, Novorossiysk ports at Black sea), railways (Zabaikal'sk at Chinese border and Naushki at Mongolian one), and Omsk – Atasu (Kazakhstan) – Alashankou oil pipeline (started in 2008).

Under the contracts concluded JSC “Rosneft” is obliged to supply 48.4 mln tones of crude oil over 2005-2010, or 8.9 mln tons annually, for CNPC, as well as 2.5 (and after reconsidered up to 1.65) mln tones of oil annually for Sinopec.

In 2006 the shipments totaled 15.9 (incl. 10.3 by railway), in 2007 did 14.5 mln tones of crude oil (incl. 9.0 by railway).

In 2007 JSC “Russian Railways” announced that it plans to invest more than \$1.0 bln the project of oil transportation to China. It supposes to reconstruct of the railway lines in order to expand its throughput for oil deliveries to China up to 28 mln tones of oil annually.

As mentioned above, construction of the 1st phase of ESPO oil pipeline is currently underway. Its capacity is planned to be 30 mln tpa, length is 2.69 km. A half of proposed capacity is supposed to be supplied to China through the ESPO tapping running from Scovorodino to Daqing (China) with the length of 1.09 thousand km. Branch project is still under discussions between JSC “Transneft” and CNPC.

Joint ventures and strategic participation. In July, 2006 CNPC conducted strategic investments in JSC “Rosnest” having bought under IPO a share of latter at the amount of \$500 mln.

JSC “Rosneft” and Sinopec cooperatively fulfill the exploration works within Vininskii block of Sakhalin-3 project. In 2006 the 3D survey was completed, first prospect well was drilled. In March, 2007 companies concluded the corporate agreement on establishing Venin Holding Ltd., (74.9% – “Rosneft”, and 25.1% – Sinopec) which is suppose to be an operator of the Project.

Over July – December, 2006 through its joint venture (51% – Russian share, and 49% – Chinese one) JSC “Rosneft” and Sinopec set up a control for another Russian oil and gas company JSC “Udmurtneft” (Privolzh’e region).

In October, 2006 JSC “Rosneft” and CNPC established a joint company “Vostok Energy” with the Russian share of 51%, and Chinese one of 49%. It will be engaged in upstream activities within East’s Russia. In July, 2007 the company won the auction for the development of two hydrocarbon fields in Irkutsk region (Eastern Siberia).

Another company JSC “Rosneft” and CNPC was established in December 2007 in order to be occupied in Chinese downstream sector (Russian share is 49%, Chinese one is 51%). It is reported that the joint company currently prepares the feasibility study of large oil refinery to be built in Tyanjin area (processing capacity is 10 mln tpa).

Russian and Chinese oil & gas companies cooperate in the territories of other countries. In Kazakhstan JSC “Rosneft” and Sinopec jointly develop Adaiskiy bloc, as well as JSC “Lukoil” and CNPC develop Kumkol’ and jointly participate in oil & gas project “North Buzachi”.

Natural gas supplies. Under the protocol signed, JSC “Gazprom” and CNPC settled the time-frame, volumes, routes and price setting principles on natural gas supplies from Russia to China. It is destined to construct two gas pipelines from Russia to China (so-called “Western” and “Eastern” routes) so that to secure supplies into China 68 BCM of natural gas by 2020 annually.

Electric power supplies. Three inter-state power transmission lines is currently exist in Unified Power Grid “Vostok” delivering electric power from the Amurskaya Oblast to isolated demand areas of Northeast China (as of 2006 – 0.5 bln kWh). In November, 2006 a Pre-Feasibility Study of the project of large-scale electric power supply from Eastern Russia to China was prepared (see above).

Russia – Japan Energy Cooperation.

Due to energy consumption stagnation, good results achieved in development of both Sakhalin oil & gas projects and ensuring Russian oil pipeline to run up to Pacific coast of Russia there was a period of Japan’s coolness in promoting energy cooperation with Russia. However, in recent years Japan again gives the evidence of resuming of concern on the Russia – Japan

collaboration within the energy field. In January and June, 2007 two meetings of officials took place within the framework Russian – Japanese strategic dialogue established. One of the major issues of the meetings is ensuring energy security in the region. The contacts of executives of Russian energy companies and Japanese officials become more frequent.

The Russia – Japan energy cooperation overarched by a number of strategic documents between Russian energy companies and Japanese governmental bodies as well. Among them is worth to mention as follows. The agreement on general cooperation between JSC “Rosneft” and Ministry of trade of Japan was concluded in March 2008. The framework agreement on the development of cooperation in nuclear energy between Toshiba and JSC “Atomenergoprom” was signed in March, 2008. In November, 2005 an agreement on cooperation between JSC “Gazprom” and Agency of natural resources and energy of Ministry of Economy, Trade and Industry of Japan was adopted. In October, 2005 a memorandum of understanding between JSC “Gazprom” and Mitsubishi Corp. was signed.

The most successful and considerable case of Russia – Japan energy cooperation is a realization of two large-scale oil & gas projects on terms of production sharing agreement ***Sakhalin-1*** and ***Sakhalin-2*** projects.

Russia – Republic of Korea Energy Cooperation.

The strategy of Republic of Korea towards cooperation with Russia in the field of energy replicates in general terms that of Japan.

In May, 2003 JSC “Gazprom” and Korea Gas Corp. (Kogas) signed an agreement on cooperation for the period of five years. In October, 2006 the agreement between national companies was supplemented with an agreement between the governments of Russian Federation and Republic of Korea on cooperation in the field of the gas industry. Based on these agreements it is negotiated to supply 10 bln cubic meters of pipeline natural gas annually since 2012-2013. In the case of keeping political problems with North Korea Gazprom’s executives do not rule out an LNG deliveries from new gas field of Sakhalin to South Korea.

LNG trade. Kogas has a contract with Sakhalin Energy Investment Company on supplies of 1.5 mln tons of LNG annually for the period of 20 years.

Oil trade. Russian oil exports to Republic of Korea is progressing year be year. It peaked in 2007 having achieved 5.2 mln tones (in 2006 it totaled 1.9 mln tones).

Russian – Korean Consortium was formed to run exploration work within offshore area of Western Kamchatka. It came into reality thanks to a memorandum of understanding between JSC “Rosneft” and Korea National Oil Company (KNOC) which was adopted in September, 2004. Consortium consists of JSC “Rosneft” (with a share of 60%), KNOC (20%) and several other Korean companies such as GS-Caltex, SK, Daewoo International, Kumho Petrochemical and Hyundai (totally 20%).

Area space under exploration works covers more than 60 thousand km. Probable reserves estimated are 1.8 bln tones of crude oil and 2.3 trillion cub. m.⁶.

Problems of Development of “Russia – NEA” Energy Cooperation Projects

It is currently evident that in general there have been not any insuperable constraints or obstacles for establishing energy cooperation projects between Russia and NEA. Nevertheless there is a number of difficulties and problems related to energy resource project development.

These problems are not financial or technical in nature. As it follows from capital intensive Sakhalin-1, Sakhalin-2, or Nord Stream projects, money is important issue but not crucial one and an insurmountable barrier in the path of project development.

⁶ “Rosneft” and KNOC concluded the contract for lease of Korean drilling rig for works within Kamchatka shelf // *Neft i Kapital Bulletin*. 11.10.2007.

Cross border projects in NEA are not ordinary commercial ones like timber, ferrous metals, foods etc. They are strongly related to regional and national issues. The main regional and national issues that hinder development of Russia-NEA energy cooperation projects are:

- thus far the region has neither common energy market nor joint institutions to organize energy cooperation or general institutional agreements and unions. Leading NEA countries declaring the interest in the multilateral energy cooperation in the region still prefer contacts with Russia on bilateral basis;

- So far there have not been consistent, non-contradictory schemes and mechanisms of specific forms and areas of the energy cooperation on bilateral basis. One of the serious problems of cross border project development is price disagreement and price regulation (in particular in gas and electric power sector);

- in Russia energy projects are evaluated from the point of general strategic partnership policy and strengthening Russian presence in global markets. Actual priorities of Russia's energy policy still put more weight to conventional European and Central Asian areas compared to Pacific area. One can say that Russia exploits NEA oil and gas export opportunities as a "strategic resource" in her complicated relations and negotiations under Russia – European Union energy dialog;

- there is essential divergence in approaches (paradigms) of Russia and the countries of NEA to ensure energy security. Russia appeals to mutual participation of energy companies in energy sectors of countries concerned on the "assets swapping" approach. In the NEA countries priorities of national independence in energy supply operations still dominate;

- there is still no single opinion in Russia on how to conduct energy cooperation policy in Pacific. In Russia there is competition between businesses, governmental bodies, and regional administrations for extracting strategic benefits from the energy resource projects: competition for preferable scheme of electric power exports (*HydroOGK vs. Siberian Coal & Energy Co. (SUEK)*), competition among transportation companies (*Transneft vs. Russian Railroads*), competition between regional governments for preferable scheme of formation gas infrastructure facilities;

- it is often stated that there are immense energy resource deposits in Eastern Russia. But in reality, the oil, natural gas and hydro reserves in Siberia and Far East are rather limited (in particular if to compare them with growing energy needs of NEA). Regional governments are strongly concerned about possible deficits of energy resources for internal use because of energy export priorities. Experience with Sakhalin-1 and Sakhalin-2 has made it clear that there is almost no natural gas available for internal markets in the Far East (Sakhalin region, Primorie region);

- the attitude of NEA countries towards the development of Russian energy resource projects has a conventional "resource extraction" nature. But in Russia on the whole and eastern regions in particular, there is no clear understanding or mechanism on how to use energy export revenues for development of East Siberia and Far East territories. The experience with Sakhalin-1 and Sakhalin-2 shows that energy resource projects lead to high technological specialization and have little multiplier effect for economic development of the region.

For successful development of cross border energy resource projects, the project profiles should match regional and national conditions in order to positively affect the economic development. The possible approaches to Russia – NEA energy project development stimulation could be on the basis of:

- a comprehensive format of cooperation simultaneously involving issues of oil, natural gas, coal, electricity, fuel processing;

- establishment of strategic alliances for joint exploration and development of oil & gas fields in East Siberia and the shelf of Sea of Okhotsk;

- construction of joint infrastructure for energy resource transportation;

- following "assets swapping" approach;

- multilaterally advocating the DPRK's participation in the “Russia – Korean Peninsula” energy cooperation;
- joint participation in the Russian Far East regional economic development projects, first of all, in the projects of oil and gas processing facilities construction, electricity-intensive plant building, and of the other industrial development activities.