1st session

Regional Development Cooperation: Energy Development in Russian Far East/Eastern Siberia

Chairman
MAEDA, Tadashi
Head, Corporate Planning Department, Japan Bank for International Cooperation (JBIC),
Japan Finance Corporation (JFC)

This session consists of three items: (1) oil, (2) natural gas, and (3) coal.

There are two perspectives of energy security: One is the perspective of the supplier side and the other is the perspective of the consumer. The perspectives are closely related to the perception of the Japan-Russia energy cooperation. Firstly, it is very important to perceive the Japan-Russia energy cooperation from the perspective of whether Japan as a consumer will be able to secure a stable supply of energy in light of the recent conditions including price fluctuations. Secondly, the distribution infrastructure and logistics are very important for stabilization of the supply and prices.

Energy issues are an extremely important theme for the whole of East Asia and are always associated with the presence of Russia. With such perspective taken into consideration, ladies and gentlemen, we are ready to hear your speeches.

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Theme 1 Recent state of construction of the ESPO and coastal oil refining bases

IVANOV, Vladimir
Deputy Chief Representative, Asia-Pacific Region Representative Office, Rosneft

Rosneft is the largest company in the oil sector of Russia engaged in the production of petroleum products and petrochemical products from the exploration of oil and gas fields. The company is active chiefly in Western Siberia/Far East with 75% of shares held by the Russian Federation and 15% held by state-run listed companies as floating stock. The company purifies 49 million tons of oil at seven Russian refineries in Sakhalin under partnership with Japanese companies and has established distribution networks in 38 state administrative entities. The proven reserve is 22 billion barrels (3 billion tons) and the annual production is 110 million tons. The estimated recoverable oil reserves of 26 billion barrels (3.5 billion tons) constitute grounds for a potential increase in the annual proven reserve.

One of the world's leading rating agencies, Platts, assesses that Rosneft is highly evaluated on the operational and management aspects as the sixth largest company in the global energy sector. Rosneft has so far implemented the Project Sakhalin-1 in cooperation with the United States, Japan, and India and is expected to enter into partnership with SINOPEC (China Petroleum & Chemical Corporation) too in future in the Project Sakhalin-3.

The company plans to develop new oil and gas fields mainly in Eastern Siberia and the Sakhalin continental shelf with the aim of increasing the annual production by 60 million tons to 170 million tons in 2020. An advanced project in Eastern Russia is a major project at the Vankor Oil Field in the Krasnoyarsk region with production started in 2008 and with a prospective future production expected to mount to 25 million tons per annum. In the Eastern Siberia region, there are two major production areas: Verkhnechon oil and gas fields and Yurubcheno-Tokhom oil and gas fields. The output from the former is estimated to be 9 million tons per annum. Thus, it is safe to say that long-term oil supply for the "Eastern Siberia Pacific Ocean" (ESPO) oil pipeline is guaranteed.

Rosneft is expected to ship 48 million tons or more of oil in total to China from 2005 to 2011. After the SkoXorodino-Daqing crude oil pipeline is completed, the company is expected to ship 15 million tons per annum and 300 million tons in total in 20 years. Rosneft has two joint ventures in partnership with China National Petroleum Corporation (CNPC) — an oil mining/production company in Russia and a refinery in China. In addition, Rosneft has also jointly established a new form of company, Udmurtneft, with SINOPEC.

A mutually complementary relationship is recognized between Japan and Russia. I wish to pursue a comprehensive cooperation with Japan with a new technology incorporated into it in addition to the cooperation in terms of the raw material. For example, there

is a plan to construct a petrochemical plant and a refinery in suburban Nakhodka. Those facilities will have an oil refining capacity of 20 million tons in about five years from now. Participants in those projects will be selected by competitive bidding and corporate bidders are invited from Japan too.

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Theme 2 Gas development trend in Eastern Siberia and Sakhalin

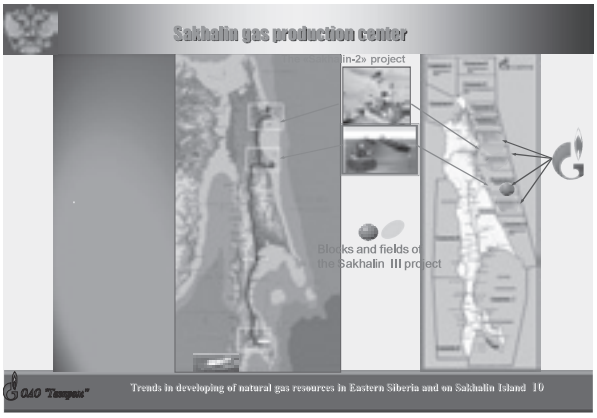
MASTEPANOV, Alexey
Advisor to the Deputy Chairman, Gazprom
(Read by Vladimir Simonenok)

Two important resolutions were made toward economic development through 2030. One resolution is a government ordinance on the Russian Federation Economic Society Long-term Development Plan dated November 17, 2008. In addition, the Russian government approved the proposed revision of the energy strategy through 2023 on August 27, 2009. With the energy consumption estimated to significantly increase in the Russian Far East region, emphasis is placed on the natural gas policy to compensate for the increased consumption and further to raise the export potential. Even in the midst of the global economic crisis, Gazprom is committed to continuing support of the Far East Project with all our strength. The investment amount in the Eastern Gas Program in 2010 is estimated to mount to 100 billion rubles.

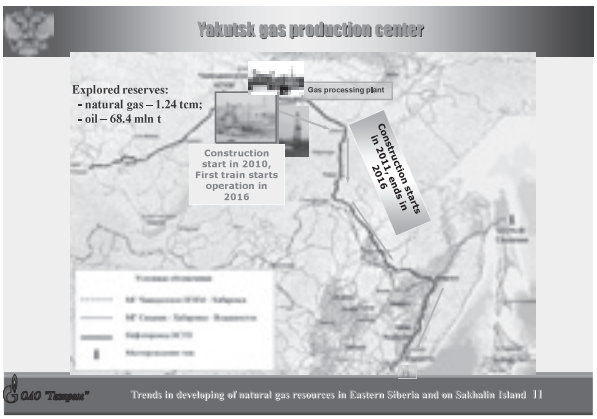
The underground resources in the Russian Far East represent 27% of the total domestic reserves or 67 trillion m^3. In the Eastern Gas Program, 200 billion m^3 of gas is estimated to be mined by 2030 at four large production areas in Eastern Russia. Those production areas will be incorporated into the Eurasian Gas Transportation System of the 21st century to newly establish a LNG export system.

This program prioritizes the construction of the Sakhalin-Khabarovsk-Vladivostok gas transmission system (total length of 1,800 km, gas transport volume of 47.2 billion m^3). Gas supply will start in the third quarter of 2011 in Vladivostok. It is expected to result in vitalization of the regional industries, gasification of the areas along the pipeline, and facilitation of the employment promotion in the region.

The development will start with the establishment of the Sakhalin Gas Production Center. The Sakhalin-2 gas will be sent to the Prigorodnoe LNG plant in Southern Sakhalin and the design gas production amount is estimated to be achieved in 2010 through the operation of the Russkaya A mine site. The production amount needs to be further increased in future construction of the third train LNG plant. At present, Gazprom is preparing for the development of the Sakhalin-3, and implemented boring for the initial investigation at the Kirensk gas field in July of this year. If Gazprom development advances in the Eastern Odoptu block, where the license was obtained, the energy supply in the Far East region will be able to be stabilized. The gas supply, however, is unlikely to be realized before 2015.

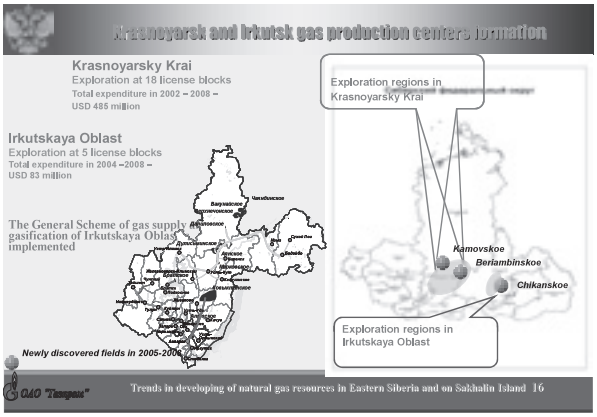


Secondly, the construction works in the Chayandinsk oil/gas condensate production areas of the Yakutsk gas production center are expected to start in 2010, mining of crude oil to start in 2014, and gas development in 2016. The Yakut-Khabarovsk-Vladivostok gas pipeline is expected to be brought into operation and connected to the Sakhalin gas transmission system in 2016. We wish to select the construction sites for gas treatment and inorganic chemical plants and to construct the physical distribution system through the research and study on the gas treatment system for helium extraction from Chayandinsk gas in cooperation with foreign corporations.



In addition, the Krasnoyarsk and Irkutsk gas production centers performed geological exploration at 23 mine sites and have already discovered oil-gas-condensate mine sites at Beryambinskoe and Chikansk. In addition, the Irkutsk gas production center provided gas

to consumers for the first time in Irkutsk Oblast at the end of 2007 in its gasification program. In terms of specific gasification projects, Gazprom is currently constructing the Krasnoyarsk gas treatment/gas chemical plant to treat the Sobinsk/Paiginsk oil-gas-condensate and is preparing for construction of the Irkutsk gas chemical plant to treat the Chikansk oil-gas-condensate. In addition, Gazprom is expected to construct an LNG plant in the Republic of Sakha (Yakutiya) and to construct a gas chemical plant in the Khabarovsk region associated with the development of the Sakhalin continental shelf.



As I discussed in my speech of last year that Gazprom keenly wished to invite financing and technology for the construction of gas chemical plants from foreign countries, Gazprom intends to implement natural gas chemical products and helium production business in cooperation with Japan toward the Asia-Pacific market.

SASAKI, Takashi
Deputy General Manager, Fuels Department, Thermal and Nuclear Power Division,
Tohoku Electric Power Co., Inc.

Tohoku Electric Power is engaged in electricity utility as its core business to seven prefectures including Niigata Prefecture as its distribution area. Its electric energy sales volume in fiscal 2008 was approximately 81 billion kWh. In terms of the power generation by power source in fiscal 2008, coal accounted for 35%, gas accounted for 23%, nuclear power accounted for 21%, and hydraulic power accounted for 13%. In the "Tohoku Electric Power Group Management Vision 2020," indicating the management direction for the next 10 years, Tohoku Electric Power expresses its intention to increase the ratio of non-carbon-dioxide-emitting power sources such as nuclear power, wind power, and solar light power towards realization of the low carbon society.

Tohoku Electric Power procures such fuels as oil, coal, and LNG by planning from the perspective of stability, cost efficiency, and flexibility with oil chiefly positioned as a secondary power source to cover the peak demand for electric power and with coal positioned as a base power source. In fiscal 2008, Tohoku Electric Power procured approximately 1 million kiloliters of oil and approximately 12 million tons of coal.

Tohoku Electric Power positions LNG as a power source to cover the middle to peak demand and secures the required amount by a long-term contract with spot contracts combined as needed. The procured LNG is received and gasified by Nihonkai LNG to be used by the Higashi Niigata Thermal Power Station, the Niigata Thermal Power Station, and the Shin-Sendai Thermal Power Station. Currently, Tohoku Electric Power has concluded a long-term contract with four nations, namely Indonesia, Malaysia, Qatar, and Australia, under five projects, for a contract quantity of approximately 2.75 million tons in simple total. In addition, with such new projects as Russia Sakhalin-2 added as new supply sources, the number of nations and projects concerned with long-term contracts for fiscal 2010 and beyond increased to five nations and six projects. Tohoku Electric Power expects that its supply stability will be improved through such decentralization/diversification of supply sources.

For the Sakhalin-2 Project, we concluded an LNG sales contract with Sakhalin Energy Investment in May 2006. During the contract term of 20 years from April 2010, the annual delivery quantity will be increased from approximately 120 thousand tons to approximately 300 thousand tons from fiscal 2010 to fiscal 2015, and finally to approximately 420 thousand tons per annum for fiscal 2016 and beyond.

Owing to its proximity to the Japanese market, the Sakhalin-2 Project is advantageous in many aspects including the reduced transport risks and cost competitiveness. For your reference, the nearest country to Niigata of our existing projects is Malaysia at a distance of approximately 4,600 km one way or approximately 7 days by sea. Whereas, it is approximately 900 km from Niigata to Sakhalin, or approximately 2 days by sea. We hope that the Sakhalin-2 Project continues to display its advantages associated with its proximity to the Japanese market.

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Theme 3 Coal development in the Russian Far East

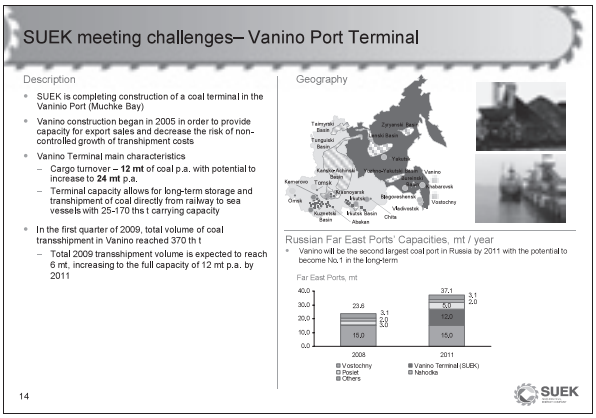
BELOVA, Anna
Deputy Director General and Strategy and Corporate Development Director, Siberian Coal Energy Company (SUEK)

SUEK has 31 mines, operates 8 electric power stations, and supplies electric power to 9 million consumers in Russia. It is ranked third in coal reserves, eighth in production, and seventh in export amount in the world. While Russia supplies 25% of the coal in European countries, it supplies only 6% of the coal in Asia. Japan imported 123 million tons of coal in 2008, of which 70% was Australian and Indonesian coal. Oligopoly of the energy market by supply sources is an extremely dangerous state for Japan in terms of energy security.

SUEK produced 96 million tons of coal in 2008. Its export amount increased from 18.7 million tons in 2005 to 28.2 million tons in 2008. Its capital investment amount for the past four years is 1.4 billion dollars. SUEK currently covers 43% of the domestic coal demand and chiefly supplies steam coal for power generation and households/ businesses.

Although SUEK's competitive edge is stagnant at present due to the aftereffects of the financial crisis, it is expected to improve after the natural gas price is revised associated with the start of the national energy strategy in 2015. In addition, the Russian strategy through 2030 is expected to control the domestic demand for natural gas and increase the ratio of coal.

The largest coal company in the Far East is Primorsk Ugol that produces 5 million tons of coal per annum with 3,000 employees. A major modern coal shipping terminal with a maximum capacity of 12 million tons is located at the Vanino Port in the Far East, which was included in the destinations for the field tour for Japanese users.



Tunguiskiy coal is mined open cast at present with 120 million tons of reserves proven. In order to produce coal with the highest quality, a coal washing plant with a maximum capacity of 5.8 million tons has been brought into operation. SUEK's other coal product is Urgalskiy coal with a proven reserve of 400 million tons. SUEK currently produces 2.3 million tons of the coal per annum and is expected to produce 4 million tons per annum in 2010. The Urgal coal is naturally expected to be assigned to the Asia-Pacific region.

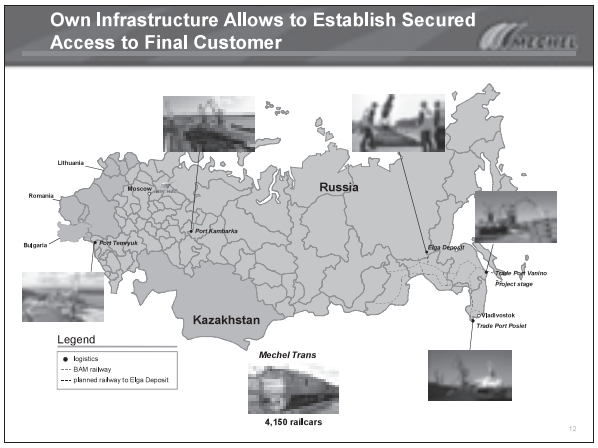
SUEK understands that most Japanese coal users are discontent with the quality of Russian coal. SUEK aims to secure production process efficiency improvement, quality improvement, pollution control, and work safety, with the ISO9000 and ISO14000 quality management certificates and OHSAS18000 work safety management system obtained in September 2009.

SOKOLOV, Dmitry
Director, Representative Office in the Republic of Korea, Mechel

Mechel is a Russian top-class mining/metallurgical company established in 2003. It posted a net profit of 1.1 billion dollars in 2008, consolidated sales of 9,950 million dollars, and 85,000 employees in 2008. Mechel enjoys an extremely significant competitive edge resulting from its established sales networks all over the world. Mechel supplies metallurgical coal or steam coal to Japan through its partnership with several Japanese companies. In October 2009, the Mechel Tokyo Office was opened. Mechel wishes to further increase its partners in Japan with this opportunity as a momentum.

Mechel is the third-ranked coal producer in Russia, is a leading company especially in the field of metallurgical coal production, and is also the largest company in the field of coal washing.

Mechel is preparing for mining activities at a new Eriga coal field developed by Mechel Mining. It has already completed the railroad extension work for 315 km from Raku Station and is in the process of developing secondary roads (270 km in total length). With a metallurgical coal reserve of more than 2 billion tons proven in the Eriga coal field, Mechel is expected to produce 30 million tons per annum with 1,640 million dollars invested by 2011. In addition, Mechel is expected to receive a grant of 30 billion dollars from the state.



Mechel faced great difficulties in 2009 but recovered financial balance to a level before the financial crisis owing to the partners of China, Japan, and Korea in response to the favorable turn of the international market.

TAKAHASHI, Kazuyuki
General Manager, Coal Department, Sumitomo Corporation

Looking back over the previous year, the new coal mine development including the Eriga Project and the reinforced infrastructure development progressed steadily because of the diligent efforts by Russia. The issues identified last year are approaching resolution. Conversely, what is characteristic of this year's energy scene is the sudden change of China from the thus far great supplier in the pacific coal market to that of a huge consumer, which hits the pacific coal market with what would be called the China Shock.

The Muchke coal terminal of SUEK located to the north of the Vanino Port was improved as a new coal export base in the Russian Far East to start shipment of coal for Japan in January 2009. The terminal is a major modern coal terminal with a capacity of 12 million tons per annum (170 thousand tons in the largest hull form), almost the same as the capacity of Vostochny Port located in the south of the Far East. This terminal is equipped with a system that removes foreign bodies contaminated with coal and the effects of the system are properly displayed in the cargo shipped for Japan. The capacity of the railroad train operated to Muchke, which is reported to be short of 12 million tons at 8 to 9 million tons at present, is expected to be reinforced in several years.

In terms of the coal export bases in the Far East, Mechel also plans to expand the capacity of the Posyet Port in operation from 2.5 million tons to 7 million tons. I heard that Mechel plans to construct a coal terminal of its own to the north of the Muchke Port in Vanino in preparation for their new huge coal field development project of Eriga in the Far East.

The above capacity expansion plans will result in the annual total capacity of those coal terminals in the vicinity of Muchke amounting to 50 million tons. This is very good news for coal consumers in Japan. On the other hand, with the present railroad transport capacity of the Bam railroad to the railroad to Muchke limited to only 15 million tons, the railroad capacity falls short in enabling the coal shipment to the Pacific market without being reinforced in parallel with the expansion of the port capacity. It is reported that the bottlenecking tunnels are under construction as the first phase of expansion work with the aim of expanding the capacity to 32 million tons. Given that the development of railroads, ports and harbors is highly public and requires huge capital, it needs to be implemented as a national project.

TAKEMURA, Yutaka
Vice President of Mineral Resources, Energy and Metal Division, Sojitz Corporation

China has a huge presence in the coal market. The largest topic in the coal market in 2009 was the export-import reversal in China, which resulted in, indeed, 85 million tons in imports over exports in annual equivalent terms. In other words, it is a demand and supply change of more than 160 million tons that arose in the Pacific market for the first time since the export from China peaked in 2003.

With the coal consumers in Japan increasingly dependent on Australian coal, Japan is in urgent need of diversifying the coal supply sources. There is an increasing sense of expectancy for coal exported from Russia as a candidate alternative from the perspective of coal property, shipping capacity of ports and harbors, and ocean transport distance. I would like to discuss the expectations of the Japanese side on the Eriga Coal Field Development Project.

In terms of industry sectors, considerable amounts of Russian coal have already been introduced/imported

to Japan in the steel and cement industries whereas the share of Russian coals in the electric power industry is extremely small due to the issue of nitrogen content. On the other hand, Eriga coal is characterized not only by a small nitrogen content, but also by high volatility, high heating value, and low sulfur content. Given that coal washing is also under planning, the foreign matter issue may be resolved considerably.

The project owner, Mechel, and ourselves have introduced the Eriga Development Project to Japan together with Sumitomo Corporation since 2004. Given the significance of the project, it is necessary to seek cooperation for the project in various aspects from the governments of Japan and Russia, related organizations, and consumer companies.

Chairman's Summation

TADASHI Maeda

In terms of the Japanese demand for natural gas, the supply of natural gas from Indonesia will rapidly decrease in 2011 or 2012 and beyond. Accordingly, Japan places considerable expectations on the supply of natural gas from Russia there in 2012 and beyond.

I have some questions. The first question. I have heard several times of the plan of converting natural gas mined from Sakhalin-1 to LNG in Vladivostok. Is that plan feasible? Is the LNG allocated for the domestic demand in principle? The second question. With regard to the projects of Sakhalin-3 and beyond, will the natural gas mined be transported to Vladivostok for export purposes in principle?

(Simonyonok)

With regard to the feasibility of exporting natural gas, I think that natural gas cannot be exported in 2011 due to a shortage of resources. Gazprom intends to start exporting natural gas by developing Kirinsky at a rapid pace to achieve some results by 2016. At the same time, the production from Sakhalin-1 and Sakhalin-2 will be increased. I would like to suggest that despite a certain extent of domestic demand, approximately 1 million tons of natural gas may be exportable.

(Saenko)

We have to, first of all, satisfy the supply for the domestic consumers in the Khabarovsk and coastal regions. That is why we place considerable expectations on the Sakhalin-3 project in the newly-developed region and we also have to develop gas fields in Sakha. Although the progress in the negotiation on the use of gas in Sakhalin-1 is never smooth, the project is very lucrative in terms of the probable resource reserves. At the present stage, it is theoretically viable to allocate the portion corresponding to the production sharing to export.

(Maeda)

There are considerable rising expectations for Russia to become a stable supplier of all resources □ oil, natural gas, and coal. For coal, related infrastructure and transportation/export logistics need to be developed in a timely manner as referred to in the speech on the Eriga Coal Field. It is important to share the same goal and information between Russia and Japan. In addition, because the project requires huge capital, the financial sources need to be diversified.

Secondly, there are rising expectations also for the presence of China that continues to maintain a high level of economic growth despite the economic crisis. Japan needs not only to compete with China, but also to make efforts toward the stabilization of the demand-and-supply balance in the whole of East Asia with China involved from a mid- and long-term perspective.

The energy cooperation between Russia and Japan will not only remain between the two nations, but will also contribute to the demand-and-supply balance of the region and beyond throughout the world. It is important to build a confidential relationship between the interested parties.