## Session A: Gas and Oil Summaries of Report Contents

Session A took the theme of oil and gas, the supply of which has been increasing in recent years from Russia to Japan, and in the future also are expected to play a major role for energy cooperation between the two countries. There were presentations from two persons from the Russian side, and five from the Japanese, and afterwards they undertook a question-and-answer session. Below, I shall introduce the key points of the statements in order.

Nikolay Lovygin of the government of Primorsky Krai placed emphasis on the problems concerning the utilization of oil and gas, and made an explanation of the regional electricity-generating situation. Primorsky Krai is not able to supply itself with energy and is reliant on the import of energy from outside. Currently in the region, besides the "Vostochnaya Power Plant" (139.5 MW) which is under construction, there are renovation plans and replacement plans for a number of thermal power plants, including Vladivostok Thermal Power Plant 2. In addition, the government of Primorsky Krai is promoting a program to convert diesel-run generators in remote settlements to generating facilities which use renewable energy.

The report of Igor Svetlov of the Far Eastern Center for Strategic Research on the Fuel and Energy Complex was read on his behalf by Aleksandr Gulkov. He made a presentation on Japan–Russia cooperation on the fuel shift to natural gas in the Russian Far East region. Gas-turbine cogeneration is effective for the district heating supply and regional electricity supply in the Far East. Moreover, mini-LNG of an envisioned annual production volume of 200,000–1,000,000 tonnes and transportation distance of 1,000 km is being investigated. Other than that, the government of Primorsky Krai has begun to examine the use of natural-gas-powered cars, and the Center is also cooperating on that. There is a variety of technology related to these things in Japan, and there was the desire to explore potential for cooperation.

Takashi Komura of Tohoku Electric Power Company Inc. delivered a report on such matters as the situation and characteristics of the electricity supply after the Great East Japan Earthquake. Amid the halting of nuclear energy generation, the generation of electricity by thermal power plants including LNG electricity-generation plants has increased. The company, in the future, is planning joint procurement with other buyers and the introduction of North American shale gas, and has a direction of attempting fuel cost reduction. He stated the hope that Russia, which possesses abundant amounts of resources and is also geographically close to Japan, would go on playing a major role, even more than to date, in Japan's LNG supply, while taking account of the moves of Japan's buyers affected by the changes in the market from shale gas.

Toshihisa Sato of Chubu Electric Power Co., Inc., made an introduction of the Joetsu Thermal Power Plant, which among the company's power plants is uniquely located on the Sea of Japan coast. With the total output of the power plant at 2,380 MW, they are aiming for the world's highest level for thermal efficiency of over 58%. The LNG procurement for the Joetsu Thermal Power Plant has increased from 170,000 tonnes in 2011, to 1.3 million tonnes in 2013, and from 2014 on they plan a procurement of 1.88 million tonnes annually. The LNG received, other than being used as fuel for electricity generation, will also be supplied to ordinary industries by tanker lorry.

Kuniharu Tsukada of INPEX Corporation made an introduction of the oil and natural gas development projects the company is promoting in Russia. The company is developing 79 projects in 28 countries around the world. In the CIS area the company is participating in the Azeri–Chirag–Guneshli (ACG) oil fields which produce a daily volume of 650,000 barrels and the Kashagan Oil Field which commenced production in September 2013. In Russia, it is participating in the exploration work in the Zapadno-Yaraktinsky block and the Bolshetirsky block. In addition, in May 2013 it concluded a cooperation agreement with the Russian state-owned oil company Rosneft regarding exploration in the Magadan II and Magadan III blocks in the Sea of Okhotsk. They are considering the potential in the future for the Arctic Ocean also.

Masumi Motomura of the Japan Oil, Gas and Metals National Corporation (JOGMEC) discussed the significance of cross-border pipelines. According to him, in the United States in particular a way of looking at pipelines is taken, using Mackinder's geopolitical analogy, as a means for resource countries to control consumer countries. In response to this he asserts that in supply via pipeline the benefits are important for both the supply and demand sides, and that pipelines have a "mutually-beneficial and reciprocal" nature. In addition, in the cases where there has been the political pressure of unilateral supply disruption by the supply country side, counteraction is possible in the form of a shift to other fuels for the demand country side. The price of pipeline gas from Russia to Europe from 2006 onward was mostly 20% lower than the import price of LNG for Japan and the ROK during the same period. In considering Japan's future energy supply, it will be necessary to take account of these facts.

Nobuaki Aoyama of Nippon Steel Sumikin Engineering Co., Ltd., remarked on the changes that have been occurring in the global natural gas market in recent years. He emphasized among other things that the diversification of sources of supply is progressing, via the appearance on the scene of US shale gas, etc. As a result, the natural gas market has changed from a sellers' market

to a buyers' market. What is important in such a situation is price competitiveness and stable supply. In the cases where they have considered transportation from Vladivostok to Niigata or from Sakhalin to Japan, for pipelines costs are lower than for LNG, and there are benefits for both Japan and Russia. In terms of results this will also be conducive to cooperative relations between the two countries.

After these presentations a question-and-answer

session and exchange of opinions took place, relating to the development of pipelines, including the possibility of construction of a Vladivostok–Niigata pipeline. Within that the importance of Niigata as a hub receiving natural gas was emphasized.

(Hirofumi ARAI, Senior Research Fellow, Research Division, ERINA) [Translated by ERINA]