3rd Session

Interregional Exchange: Local Communities and Energy

Underlying Report 1 Japanese Policies in the Area of Energy Conservation and Renewable Energy

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Energy conservation actually leads to energy generation. By combining the reduction of the dependence on fossil fuels and the increase of energy efficiency CO_2 will be reduced even with economic growth. Energy conservation will become the very keywords for energy generation and economy strengthening.

Japan's energy conservation measures are rated the highest in the world. The energy consumption rate of Japan is approximately one 17th that of the energy efficiency of Russia. Japan faces a problem, however, of stalled energy saving at home, at work, and for vehicles. Japan sets its target at how energy saving should be promoted in the transport sector and in the civilian sector.

To that end, Japan obliges business establishments and manufacturing plants to appoint an "energy management officer," and introduces a unique system called the "Top Runner Program" based on the energy management obligation. In this policy, for example, a car with the best energy conservation efficiency at the present stage will be set as a minimum standard for five years, with which automakers will be encouraged to catch up within five years. Such top runner products are appointed in 25 items including televisions, videos and vehicles. The recently introduced "Eco Point System" was also enabled on such a basis.

While energy conservation is a measure on the energy demand side, new energy is a measure on the energy supply side. The two measures are thus two sides of the same coin. In Japan, there is a scheme of "RPS Law (Renewable Portfolio Standard Law)," that obligates electric utilities to purchase a certain volume of new energy. For example, the government aims to increase the introduction of photovoltaic power generation to approximately 20 times in 2020 compared with the 2005 level by promoting the dissemination with subsidies, tax incentives, RPS Law, and so forth combined. In addition, a system of buying back electric power generated by photovoltaic power generation at a price approximately 2 times higher than the conventional price started in November.

Under the Kyoto Protocol, Japan is obliged to reduce emissions by 7% compared with the 1990 level. The Hatoyama administration set a very ambitious goal of reducing emissions by 25% in 2020 compared with the 1990 level under the Post-Kyoto regime. I am responsible for achieving this goal. However, it is not meaningful that only Japan achieves its goal. It is also important how the people in China, India, and Russia will reduce CO_2 through energy conservation and new energy development.

In April 2009, the framework for energy conservation dialogue was established for the first time between the Department of Energy of Russia and the Agency for Natural Resources and Energy of Japan. Japan regards Russia not only as a supplier of oil and natural gas, but also as partner to cooperate with in terms of nuclear power, new energy, and energy conservation. Japan at present is proposing that Russia use the technology of an energy conservation building of Japan for urban development in Moscow. Japan has also made a similar proposal to the Russian Far East.

Considering energy conservation earnestly and achieving it is advantageous for Russia itself too in that it can sell the emissions quota to foreign countries. Energy conservation is a very important factor for a miracle formula that will reduce CO_2 even if the economy grows.

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Underlying Report 2: The Study on Outlook on Energy Efficiency and Energy Saving of the Russian Federation

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In the global economic crisis, energy efficiency improvement and energy conservation are becoming increasingly important factors for the stability and the competitive edge of the Russian economy.

On June 18, 2009, President Medvedev set five strategic directions for priority technical development at the meeting of the commission for the Russian economy's modernization and technological advancement, of which energy efficiency improvement and energy conservation were ranked top.

On July 2, 2009, the extended meeting of the State Council executive meeting on the issue of energy efficiency improvement was held, where the following items were set forth as priority agenda in formulating the national energy policy for energy efficiency: Enhancement of energy efficiency and energy conservation in the housing/ public services and electric power/water supply system/ power supply systems of municipalities; production/ supply of energy resources using alternative fuels and modern facilities chiefly through innovative technologies; enhancement of economic efficiency of the water supply system and control of rise of rates for those services, etc.

In addition to the directives issued by the president to the Russian government, legislative bases of the program of energy-savings to the Russian Federation include the Federal law of 03.04.1996 No.28. FL "On energy saving" and the federal law of 27.12.2002 No 184. FL "On technical regulation" (revised on May 1, 2007). In addition, regulations issued recently include the Decree of the President of Russia No 889 of 04.06.2008 "On some measures for increasing the energy efficiency and eco-friendliness of the Russian economy."

Laws and energy conservation programs are also adopted at the regional level in the extension or addition to federal laws. A characteristic of local and regional energy conservation laws is that they promote companies to introduce energy conservation and energy efficiency improvement by setting forth concrete measures to be taken by individual firms to develop or introduce energy conservation and by providing economic perks and special preferences for the promotion of energy conservation.

For example, a subsidization scheme called TEKR (economic adjustment rate system) is adopted in the Khabarovsk region. During the period from 2004 to 2008, the number of projects supported by the TEKR mounted to more than 70 with the gross amount of 1.1 billion rubles or more (622 million rubles in the amount of TEKR subsidized). But, the scale of Khabarovsk cannot compare with the potential amount of resource saving of the whole of Russia.

According to evaluations by experts, in the proposed new energy strategy through 2030, the potential energy conservation is concentrated on fuel-energy-related facilities by 36%, which is followed by the industrial sector at 24%, the housing/heat&lighting/water system related sector at 18%, and the transport sector at 13%. The most effective industries, measures, and possible saving are as shown in the following table.

Industries	Measures	Possible saving
Ferrous metallurgy	Out-of-furnace steel processing technology	Decrease energy consumption by 30-40 %
Machine building	 New technologies Increasing share of assembling productions Labor productivity grows 	Decrease energy consumption by 20-30%
Chemical industry	Replacement of equipmentImplementation of new technologies	Annual decrease of electric intensity by 2%
Electric transport	New rolling stockNew equipment	Annual decrease of electric intensity by 2%
Pipeline transport fuel (natural gas)	 Improving the operation characteristics of gas-pumping units Consecutive connection of compressors 	Natural gas consumption decreased by 5-7% Decrease electicity consumption by 7-20%.
Heat supply system	 Replacement of worn heat networks; Application of advanced heatinsulating and waterproofing materials of foamed polyurethane 	Two-fold decrease in heat intensity by 2030, fuel saving - 40 mln tce
Domestic sector (service sector, residential buildings and households)	 Decreasing heat losses and introducing energy saving technologies in buildings Energy use accounting systems 	Decrease of : heat consumtion by 600 - 700 mlnGcal, electricity use by 70-75 bln kWh fuel use by 45 mln tce

In addition, the strategy suggests that it is possible to reduce the energy consumption rate per unit GDP value by 27% compared with the 2005 level during the 2009-2012 periods, by approximately 47% by 2020, and by approximately 62% by 3030. The strategy also suggests that it is possible to reduce the fuel consumption rate of thermal power plants by 6% during the 2009-2012 periods, by 10% by 2020, and by 20% by 3030.

The introduction of technologies to enhance energy efficiency and energy conservation are directly and indirectly inhibited by the insufficient legal infrastructure. The barriers to energy efficiency improvement can be classified into the following 5 items: shortage of motivation, shortage of information, funding shortages, poor operation, and technical constraints. In order to alleviate those barriers and constraints, positive national policies and practices are required.

The Decree of the President of Russia No 889 of 04.06.2008 "On some measures for increasing energy efficiency and eco-friendliness of the Russian economy" sets an ambitious goal of improving the energy consumption rate per unit GDP value by more than 40% compared with the 2007 level by 2020. As a measure to realize the above goal, the president recently proposed that the following project of introducing highly-efficient energy technology shall be implemented in the public project sector, the industrial sector, the social welfare sector, the housing sector, and so forth, on September 30, 2009 at the joint meeting of the commission for the Russian economy's modernization and technological advancement, and the State Council executive meeting on scientific and technological education.

Project	Measures	Possible saving
Count, save and pay	 providing of users the measuring of account; change in consumer behavior; increased production of modern measuring devices 	Decrease energy consumption in domestic and household sector by 20%
New light	- implementing new light equipment	Save 10% of electricity generating capacity. Reduction of light use electricity expenses by 40%
Power efficient district	-modernization of small districts and cities; -making of standard mechanism for financing energy efficiency measures and further implementation in all regions of Russia	Reduce municipal budget expenses by 25%.
Power efficient social sector	 implementation of energy efficient technology in public institutions; creation of typical long-termenergy service contracts 	Reallocation of funds received from energy saving in public sector
Small complex energy sector	 screening of the technically out-of-date and economically inefficient regional systems of energy supply; use of alternative solutions in small energy complex; creation of standard solutions for whole economy 	Reduce fuel consumption by 20 mln tce by 2020
Innovation energy sector	- implementation of innovation projects, related to superconductivity, use of biofuel	diversification of the fuel supply

The second deliberation is under way by the State Duma of the Russian Federation on the revision of the Russian Federal Law on energy conservation and energy efficiency improvement. The proposed revised law sets forth a national support measure for the implementation of projects included in energy efficiency programs at the level of local government units. A budget will be appropriated for a new federal special program, "Enhancement of Energy Consumption Efficiency of the Russian Federation for the 2010-2015 Period," within the framework of the proposed program expected to be prepared in 2009. A large-scale energy supply project is included in the local energy efficiency program and a small-scale energy supply project is included in the municipal program.

The energy efficiency management scheme is

expected to be revised. According to the proposed revision, local energy policies and energy conservation policies will be implemented by the federal body "Russia Energy Information Administration" and the Interagency Council for Energy Conservation and Energy Efficiency Improvement will be established to implement the measures of the respective administrative entities with the objective of protecting the interests of major players in production, transportation, and consumption markets of energy resources and coordinating their activities.

The measures recently taken by the government and the president are all prospective of achieving substantial results in this field and I hope that the measures will achieve the goals in international cooperation.

^{3rd Session} Underlying report 3: Promoting the development and usage of new energy in Niigata Prefecture

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(Yasui) Japan depends on overseas resources for most of its energy needs with a self-sufficiency rate without nuclear power of 4% and including nuclear power of 18%. In terms of the breakdown, the 4% power supply includes hydraulic power, industrial waste, and so forth. Niigata Prefecture is, however, a major domestic production area for natural gas, oil, and hydraulic power and supplies approximately 15% of domestic energy needs.

Under the Kyoto Protocol, Japan aims to reduce greenhouse gases by 6% from the 1990 level. The greenhouse gases emitted from Niigata Prefecture increased by 12% from the 1990 level in 2006. In terms of the sectors, CO₂ emissions from the Household, Business, and Transport Sectors accounted for 45%, which, worse still, increased by 23% from the level of the base year, 1990.

In terms of the type of energy chiefly consumed by demand sectors, the Industrial Sector consumes oil, coal, and natural gas; the Transport Sector consumes gasoline and light oil; the Household Sector consumes kerosene, electric power, and city gas; and the Business Sector consumes electric power. Partly because Niigata Prefecture is a production area for natural gas, the Industrial Sector and the Household Sector in the prefecture consume higher ratios of gas than the national average. The ratio of new energy such as photovoltaic power generation and wind power generation in Niigata is approximately 1 to 2%.

Niigata Prefecture has promoted the introduction of new energy since developing a 10-year new energy introduction plan in 2001. Although the snow and ice energy has exceeded the goal, the photovoltaic power generation and the clean energy vehicle have achieved only approximately 10% to 20% of the goals. The prefectural government aims to introduce new energy such as photovoltaic power generation, introduce new energy with regionality put into full use such as snow and geothermal heat, introduce clean energy vehicles including electric vehicles, and cultivate the incorporation of related industries with the national government, municipalities, NICO, etc. Niigata Prefecture wishes to contribute to the reduction of greenhouse gases, to the stable energy supply to Japan, and to the vitalization of prefectural industries.

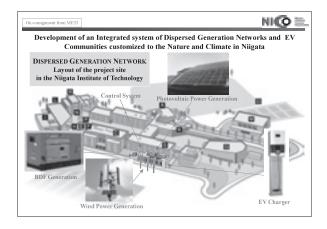
(Yokota) I would like to report our activities for the "Construction of the dispersed power source network and

electric vehicle communities by exploiting the nature and natural features of Niigata."

This project constructs a dispersed power source network appropriate for the climate and natural features of Niigata using photovoltaic power generation, wind power generation, and diesel power generation with biofuel on the power supply side, and verifies the design methods and efficient operation methods.

On the power demand side, in order to construct electric vehicle communities in snowy regions mostly consisting of farming and mountain villages, we are engaged in the development and demonstration of electric vehicles (EVs) equipped with a rapid charger with the objective of rescuing vehicles with depleted batteries, and in the development and demonstration of non-slip EVs provided with measures against slipping on snowy roads and mud. We call those vehicles "rescue EVs." Such EVs are unprecedented in the world.

Finally, I would like to explain about the layout of the dispersed power source network under development at the Niigata Institute of Technology. Photovoltaic panels, wind power generators, BDF (Bio Diesel Fuel) power generators are expected to be installed in the campus of the Niigata Institute of Technology, and control systems such as panel boards or battery accumulators are expected to be installed in the graduation school building. The power generated by this system is supposed to be supplied to the EV chargers as well as being used in the university.



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Prospects for distributed small-scale generation systems in the Far East of Russia

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Most of the Russian Far East region is not covered by the central power supply network. The technical possibility and economic feasibility for connecting to the central electrical power system depends on the distance between the connection point and the user. For example, 30% or more of the dispersed power system for Russia nationwide is concentrated in the northern area of the Russian Far East, the power for which is mainly generated by diesel.

Today, diesel power stations represent 12% to 15% in the power production in the Russian Far East. In other regions, the share of diesel power generation is less than 1%. The facilities of the diesel electric power stations have been deteriorated and they thus consume large quantities of costly fuel. Diesel fuel can be transported for limited seasons and financial support is difficult to obtain. Those issues need to be solved for stable power supply.

Potential renewable energy options include geothermal heat power generation, although its introduction remains limited. There are small-scale geothermal power plants at Paujetka, Mutonovskaya, and Verkhne-Mutnovsk in the Kamchatskaya region and in Sakhalin Oblast. There are few small-scale hydraulic power plants. Other power plants are the Anadyr Wind Power Station with a capacity of 2.5 MW in Chukchi Autonomous and the Belling Wind Power Station with a capacity of 0.5 MW in Kamchatskaya.

Major directions for the development of the distributed small-scale generation systems in the Far East of Russia include, first of all, the repair and modernization of the existing power sources. In addition, it includes the use of locally produced fuels and the expansion of the use of renewable fuels. According to the data of the Energy Systems Institute SB RAS, 80% or more of the gross amount of geothermal heat resources, approximately 60% of wind power, and approximately 70% or more of the small-scale river water power are concentrated in Eastern Siberia and the Russian Far East. This wide variety of renewable energy sources is not exploited sufficiently in the Eastern Russian region.

The proposed "energy strategy" of Russia expects to increase the output by introducing renewable energy and plans to introduce new renewable energy sources in accordance with related programs prepared in the respective regions. The Russian Far East generally estimates that the share of renewable energy in the Russian Far East will remain at 1% of the total power generation. However, the potential renewable energy is huge in some areas. For example, it accounts for 15% in the Kamchatskaya region.

In order to encourage such development, investment is important. According to statistical data, the total individual deposits by residents in the Russian Far East Branch of Savings Bank of the Russian Federation (Sberbank) are approximately 95 billion rubles (3 billion dollars). This sleeping capital may be collectively invested into the energy infrastructure.

From the above findings, three conclusions may be derived. First of all, it is important to exercise initiative at a local level to set forth concrete energy related projects. Local governments will positively work as advocates for the project, and the respective regional communities will formulate energy efficiency programs as autonomies.

The federal government needs to develop frameworks and environment to promote such direction.

In addition, it is important to expand Japan-Russia cooperation and develop the cooperation by direct exchanges between regional communities as in the case of the Wind Power Station on the Russky Island. Regional communities in the Russian Far East may be developed by making the most of the potential of the existing Japan-Russia cooperation in this field.

3rd Session

Gasification of the regions: an actual example of Primorsky Territory

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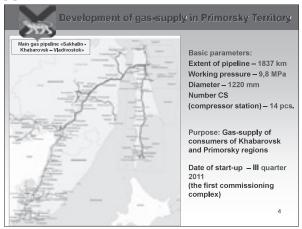
In 1999, a gasification program was formulated for Sakhalin Oblast, coastal region, and the Khabarovsk region. In this program, there was a track record of cooperation between the design institutes of Russia, engineering companies of Japan, Sumitomo Corporation, and Toshiba Corporation. I would like to point out that there was abundant experience of the joint study and use of gas between Japan and Russia.

Forming the foundation for gasification in the coastal region is the national program for the establishment of

an integrated system for exporting gas to Asia-Pacific countries from mining to transportation and supply in the Eastern Siberia and the Russian Far East. This project was approved by the Russia Federation Ministry of Industry and former Energy in September 2007. The federal government appointed Gazprom as a company coordinating this program. This program aims to promote progress in the development of the social economy, enhance the efficiency of energy resources in various regions, and encourage the gasification of municipalities.

Natural gas is not used in the coastal region. The ratio of liquid hydrocarbon gas consumption is 8.5%. The number of households in detached houses and condominiums actually supplied with gas is 117,090. The number of households supplied in agricultural communities is only 80,900. The sales quantity of liquid hydrocarbon is 11,150 tons, and the sales quantity of liquid hydrocarbon for household use is approximately 9,000 tons.

A major supply source of gas to the coastal region is the "Sakhalin - Khabarovsk - Vladivostok" main gas pipeline.



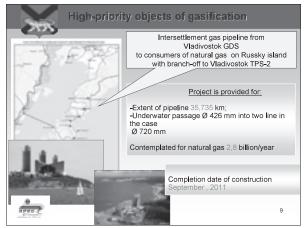
The coastal region gasification program is stipulated by the coastal region law on the development of social economy in the coastal region through 2020. This program aims to supply natural gas to consumers in the coastal region, improve the fuel energy balance, modernize the housing/public facilities, ensure power supply, and improve the labor/life/environmental conditions. Issues remaining for the program include identification of the demand and financial sources, ensuring the reliable supply of gas, replacement of boiler facilities for heating, and identification of the economic efficiency of the conversion system for gas use. The program items consist of ensuring a stable supply of gas, gasification of the entire local government units, and improvement of the gas supply system operation itself. The Gazprom institute will manage the actual implementation of the program. In addition, Gazprom also assumes the role of securing financial sources.

This program is supposed to supply gas to 502 residential quarters of 31 municipalities in the coastal region. This program especially prioritizes the conversion of fuel for means of transport to gas. Small- and medium-sized companies of Russia have been already seeking alignment with Japanese companies in this field for several years.

In terms of the prospective gas consumption, 17.4 billion m^3 of gas will be needed per year. The consumption of gas for the oil/gas chemical industries is estimated to be 10 billion m^3 , and the consumption for households is estimated to be 1.2 billion m^3 .

The projects of liquefied natural gas plants and gas chemical plants are also prospective.

Facilities with gasification prioritized include, first of all, the facilities on the Russky Island. Subsequently, the fuel for the second thermal power plants will be switched from coal to gas. Because the main gas pipeline extends as far as the Vladivostok Power Station, a branch pipeline needs to be further laid as far as Russky Island. This construction work is supposed to be completed in 2011.



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Prospects for the introduction of a cogeneration gas turbine system into the energy supply to the Russian Far East

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In Russia, the energy sector is divided into utility energy and local energy.

The utility energy consists of federal level large-scale

power stations and heat supply facilities. The utility energy in the Russian Far East belongs to the Energy System Vostok (ES Vostok). This company supplies electric power to citizens, companies, and facilities by way of the stateowned grid and distributes heat by way of the supply network of the heat supply stations.

The local energy is under the jurisdiction of the federal administrative entity and is operated by the budget. The local energy includes facilities located in municipalities such as local boiler facilities and distributed generation systems. The boiler facilities of the local government units supply heat to consumers that cannot be covered by the heat supply facilities of ES Vostok.

At present, there are 4,710 boiler facilities of autonomous bodies under the jurisdiction of the Far East federal district, most of which are fueled by coal or heavy oil. In addition, distributed power generation facilities include diesel electric power stations.

The operation efficiency of the boiler facilities of the local government units is extremely low. In addition, the diesel electric power stations are also old-fashioned and have deteriorated. The electric power generation cost of those power stations is so expensive that electricity charges are inevitably high, thus hampering the development of the real economy and exacerbating the discontent of residents.

All the areas of the local power generation will be gasified by realizing the Eastern Gas Program of Gazprom. In order to enhance the effects of the gasification, the local power supply system under the jurisdiction of the Far East Federal District must be modernized by innovative technologies in the near future.

Our center clearly recognizes this issue and has formed a plan of constructing a plant producing smalland medium-sized gas turbine cogeneration facilities in Khabarovsk City. Generating power by a turbine fueled by natural gas and using the heat and exhaust gas emitted from the turbine as thermal energy will meet the demands for both massive electric power and heat and, at the same time, contribute to the reduction of primary energy consumption and the saving of funds for power supply. The competitive relationship with ES Vostok will also contribute to the promotion of the lowering of electricity charge.

Khabarovsk Gas Turbine Construction Project LTD. (KGTZ) was established on March 31, 2009 as an operator to implement this project. In addition, the ministries and agencies concerned and Khabarovsk-related organizations jointly developed a plan for realizing the "Scientific Production Facilities - Khabarovsk Gas Turbine Plant" and obtained approval from the governor of Khabarovsk for the same. The plan includes preferential tax treatment and financial support from Khabarovsk Oblast. The State Corporation Bank for Development and Foreign Economic Affairs and the VTB have preliminarily agreed to guarantee for loans provided by the Japan Bank for International Cooperation to KGTZ. In addition, the construction of the Khabarovsk Gas Turbine Plant is planned to be included in the priority project list of the Russian Economy Modernization/Technical Development Subcommittee under the Immediate Control of the Russian President by arrangement of the Presidential Plenipotentiary Representative to the Far East Federal District, Mr. Ishaev.

The enhancement of energy efficiency in the Russia economy is firstly an urgent issue in housing/public works and also one of the most important political issues of the Russian government. I believe that the positive involvement of the Japanese people in solving this issue will result in increased amity and enhanced good-neighborly relations between the two countries.

3rd Session

The Goal of the Japanese Gas Industry in a Low Carbon Society Mid- to long-term scenarios

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Massive demand is predicted for natural gas with the least environmental load among fossil fuels and an annual growth rate of 1.6% or more is estimated worldwide. The effects of natural gas, however, on the reduction of greenhouse gases cannot be optimized for Japan, a country with such a high energy use efficiency to achieve an ambitious goal of -25% compared with the 1990 level, as previously manifested by the Hatoyama administration. Under such macroenvironment, in July 2009, a policy proposal was made on the medium-to-long term vision of gas utilities at the Urban Heat Energy Committee of the Ministry of Economy, Trade and Industry.

The "Goal of the Japanese Gas Industry in a Low Carbon Society" consists of four directions as mainstays. The first direction is further proliferation of the cogeneration system with higher total efficiency, the second is the establishment of a hydrogen society, the third is technological development and proliferation for the intensive use of natural gas such as high-efficiency combustion burners, and the fourth is the mutual supplement between natural gas and renewable energy. We suggest a vision of planning the best mixes of various energies on the axes of the above directions.

Specific strategic milestones to realize this vision consist of five elements. Speaking of the first element, namely the proliferation and intensive use of natural gas, mere fuel conversion from heavy oil to natural gas will result in the reduction of CO_2 by 25%. Furthermore, CO_2 emissions can be reduced mostly by half by disseminating high-efficiency burners and so forth. Thus, achieving zero

emissions is never a fantastic plan.

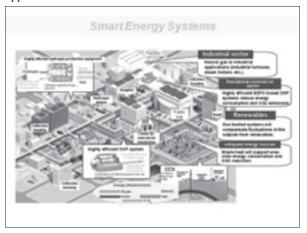
Secondly, the proliferation and spreading of the dispersed power system. In the case of the household fuel cell system, "ENE \cdot FARM," for example, the CO₂ reduction effect exceeds that of conventional systems by 45%. We wish to market not only the household type but also several types of high-efficiency dispersed power systems.

It is difficult to solve all the strict environmental restrictions by natural gas alone. Our concept for product development is to encourage CO_2 reduction by the entire system through the combination of solar heat with a high-efficiency gas water heater, a fuel cell system with photovoltaic power generation, and so forth.

In addition, we should not only consider utilization technology but also the anti-pollution technology for fuel itself. We also work on developing technologies for refining biogas from various kinds of biomass to start providing a wide range of solutions to clients possessing biomass with "Local Production for Local Consumption" basis.

Lastly, as a long-term vision, we develop elements for a technology of producing hydrogen from natural gas by using a special metal film. Speaking of the image of the hydrogen energy society, hydrogen generators will be allocated in local areas to produce hydrogen by reforming natural gas. The produced hydrogen will be supplied to consumers by way of hydrogen pipelines. The CO_2 emitted during the reformation will be transported to the final storage through a venous infrastructure called a CO_2 pipeline.

We will call the energy supply system, which uses future natural gas with the above strategic elements integrated, a "Smart Energy Network" and wish to disseminate its concept to the society by taking various opportunities.



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Overview of the Naoetsu LNG Receiving Terminal

NOMURA, Kazuo

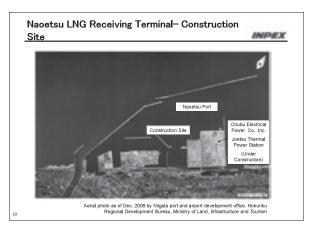
Senior Coordinator, Construction and Maintenance Unit, Domestic Project Division, and Naoetsu LNG Receiving Terminal Construction Office, LNG Receiving Terminal Construction Division, INPEX Corporation

Our company was born on October 1 last year through the merger with INPEX and Teikoku Oil. The two business units are engaged in overseas and domestic business respectively as their chief business fields. At present, the company branches out to 26 countries in the world and boasts the largest production and reserves in Japan.

In the domestic sector, the company distributes natural gas produced in the Minami-Nagaoka Gas Field within Niigata Prefecture through a pipeline approximately 1,400 km in total length to gas utilities and large-volume industrial consumers along the line. This pipeline has contained only domestic gas to date. It is, however, expected to start containing gasified LNG next year. In the first place, gas from the LNG terminal in Sodeshi of Shizuoka Gas on the Pacific Coast will start to be transported through this pipeline network in the following year. Later in 2014, LNG from abroad will be introduced into the pipeline at the Naoetsu LNG Terminal to further strengthen the supply stability.

Our own major overseas projects include the Ixus Project off Western Australian and the Abadi Project in Indonesian Arafura Sea. These two projects cover 20% of the annual LNG demand of Japan. We believe that we are the first company in Japan to independently handle the "gas supply chain" from start to finish with in-house developed overseas LNG and domestic gas utilities organically integrated.

The LNG Receiving Terminal in Naoetsu will be constructed in a landfill on the eastern side of the Naoetsu Port. Landfilling of the site of approximately 25 ha has just been completed. To the east of the site, the terminal of the



Joetsu Thermal Power Station of Chubu Electric Power Co., Ltd. is under construction. The gas production capacity is 7.5 million cubic meters a day (the equivalent of 240 tons of LNG per hour). There are two units of 180,000 Kl

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Chairman's Summation

ABE, Susumu

Advisor, Global Infrastructure Fund Research Foundation Japan

The low carbon society has shifted from the enlightenment stage to the concrete project implementation stage. I believe that we all shared such common views through these Plant Subcommittees.

It is important to introduce a technology and establish it in society without keeping it at an innovation stage. To that end, autonomous bodies and communities are expected to play important roles. It is necessary to develop the environment by encouraging a sense of values and guiding changes in society toward the reformation of new markets and resources. Likewise in Niigata, the Niigata Junior Chamber of Commerce made a proposal under the theme "for the construction of a recycling-based society." The development of such community activities indicates a shift from mere enlightenment to implementation. The current meeting became an unprecedented forum for the concrete exchange of information. I believe that the objective of this meeting is to discuss various issues associated with the embodiment of cooperation in the new stage in a manner of the second track setting toward solution.

non-elevated LNG tanks (one addition will be available in

the future). The investment is 100 billion JPY including

the land acquisition cost. The operation of the terminal is

expected to start in 2014.