An Interview with President Masayoshi Kitamura

The Great East Japan Earthquake has had a profound effect on Japan's economy and society. How and in what way is the J-POWER Group going to accomplish its mission of meeting people's needs for energy without fail and playing its part for sustainable development of Japan and the rest of the world? In light of the "Direction of Management and Near-Term Managerial Policy of the J-POWER Group" announced in April 2011, we asked President Masayoshi Kitamura about the J-POWER Group's future direction and strategies.

Question

First, please tell us about the effects the Great East Japan Earthquake had on the business environment in which the J-POWER Group operates.

Answer

As an electric power provider, the J-POWER Group takes seriously its mission of assisting in the stable supply of electricity and first and foremost contributes to ensuring its electricity supply capabilities.

The J-POWER Group possesses power generation facilities throughout Japan and supplies the electric power it generates to regional power companies. After the earthquake hit, I instantly issued instructions to all companies in the J-POWER Group, asking them to confirm the status of the facilities in the eastern Japan area. Fortunately, only a few J-POWER facilities had suffered any damage, and most were back in full operation soon afterward, as a result of efforts to promptly check and restore equipment through such measures as emergency shutdowns. However, facilities belonging to the regional electric power company in eastern Japan suffered major damage in the earthquake and tsunami, and a series of accidents at the Fukushima Daiichi Nuclear Power Plant complex culminated in a critical situation.

In addition to a significant loss of regional electricity supply capabilities in eastern Japan, nuclear power plants in western Japan that were undergoing periodical inspections had their shutdown periods extended, and electricity supplies throughout Japan fell to low levels. It will require a considerable length of time to restore supplies to their previous levels. Furthermore, these accidents at the Fukushima Daiichi Nuclear Power Plant complex have seriously undermined public confidence in efforts to ensure the safety of nuclear power.

Thus, as the prospects for Japan's economy and energy supply were extremely uncertain, we disclosed the "Direction of Management and Near-Term Managerial Policy of the J-POWER Group" in place of the J-POWER Group Management Plan we normally present.

In the face of the current unprecedented electric power crisis, the J-POWER Group—in its capacity as an electric power provider that develops its business throughout Japan—is taking seriously its mission of assisting in the stable supply of electric power. Because of this, what the J-POWER Group primarily has to do is contribute its utmost to ensuring supply capabilities in regions where these are restricted.

Strengthening Capabilities for Stable Electricity Supply

Please tell us about the immediate measures and J-POWER's medium- to long-term policies for strengthening its capabilities for providing stable supplies of electricity.

Answer

Ouestion

In the short term, J-POWER is conducting a general mobilization of all the power stations at its disposal and taking every precaution in the stable supply of electricity throughout the country. In the medium-to-long term, we are steadily moving ahead with plans for the Ohma Nuclear Power Plant and the replacement of an aging thermal power plant.

Focusing on hydroelectric and coal-fired thermal power plants but also engaged in wind and geothermal power, the J-POWER Group possesses electricity generating facilities throughout Japan with a total output of around 18 million kW. We also operate transmission trunk lines and frequency converter stations that enable the comprehensive supply of electricity. Take, for instance, the Kitahon HVDC link facility that connects two of Japan's main islands, Hokkaido and Honshu, via undersea cables. Accommodating the electricity between Hokkaido and eastern Japan, the HVDC represents vital infrastructure. The Sakuma Frequency Converter Station that connects the differing frequencies between eastern and western Japan also plays an important role. Over the next one or two years, we will be paying close attention to the maintenance of these kinds of J-POWER facilities across Japan and endeavoring to supply electricity in an even stabler manner.

In addition, we will be working to ensure the medium- to long-term supply of electricity, which we are looking at closely. We are steadily implementing the Ohma Nuclear Power Plant construction project and replacing the aging No. 1 and No. 2 units at the Takehara Thermal Power Plant.

Direction of Plans for the Ohma Nuclear Power Plant

Since the series of accidents at the Fukushima Daiichi Nuclear Power Plant complex, Japan's energy policy has been unclear; this includes its policy on nuclear power. Under these circumstances, how do you view the progress made in the construction of the Ohma Nuclear Power Plant?

Answer

Ouestion

Consistently and properly reflecting the necessary measures, based on government guidelines, as well as endeavoring to seek the full understanding of the local community and all those concerned, we remain heavily committed to building a safe power plant.

The area in Aomori Prefecture where construction of the Ohma Nuclear Power Plant is under way recorded an earthquake intensity of 4 on the Japanese scale on March 11, with a 0.9meter tsunami making landfall at the port of Ohma. Fortunately, neither the earthquake nor the tsunami caused any damage at the construction site. However, with the exception of the works necessary for environmental protection and facility maintenance, main construction has been at a standstill since the March 11 earthquake. In addition to a power outage caused by the earthquake, this was due to the restrictions on the transportation of power supplies used at the site and on the fuel for heavy machinery and equipment as well as the priority given to disaster assistance in the aftermath of the earthquake.

In addition, since the accidents, the Nuclear Industrial Safety Agency has been issuing all electric power companies with nuclear power facilities with directives to implement emergency safety measures and comprehensive assessments (stress tests) related to the safety of existing nuclear power reactor facilities.

The electricity business involves continuing to produce electricity over the long term, for 20 or 30 years after completion

Overview of the Ohma Nuclear Power Plant (under construction)

of the power plant. For that reason, it is necessary to—as far as possible—obtain the understanding of all the local communities for progress to be made. While consistently and properly reflecting the necessary measures to enhance safety, based on the previously mentioned government guidelines, J-POWER works in unison to build a safe power plant in which all parties can have confidence.

Content of Nuclear Industrial Safety Agency's Directives Issued to All Electric Power Companies with Nuclear Power Facilities March 30

Prevent damage to the core and spent fuel even when all equipment functions are lost: equipment that supplies Alternating Current (AC), that uses seawater to cool the reactor, and that cools the spent fuel storage pool. Implement emergency safety measures to recover reactor facility cooling functions while inhibiting the release of radioactive material. Upgrading of safety regulations in accordance with revisions to the Rules for Commercial Power Reactors concerning the Installation, Operation, etc.

June 7

Implementation of measures to enable a speedy response in case a severe accident occurs (such as severe core damage), from the issues out of intense efforts made to restore the situation (response to severe accident).

July 22

Covering power reactor facilities, implementation of evaluations (stress tests) of the safety margin (the ultimate limitations of strength) will be assessed by evaluating the scale of events that an NPS can withstand without significant damage to the fuel, assuming the occurrence of events beyond the design basis.

For more information on the specific measures for reinforcing safety at the Ohma Nuclear Power Plant construction project, please see pages 22–23.

Overview of the Ohma Nuclear Power Plant Construction Project:

Ohma-machi, Shimokita-gun, Aomori Prefecture

Enriched uranium and uranium-plutonium mixed oxide (MOX)

ABWR (Advanced Boiling Water Reactor)

Status of the Ohma Nuclear Power Plant construction project (photographed in August 2011)



Construction started
May 2008

Start of commercial operations
Planned for November 2014

J-POWER believes that, when appropriately managed, nuclear power an indispensable and important energy source from the perspectives of providing a response to the global warming issue and the securing of resources—can be utilized as an effective form of energy. In this way,
1976. Permission to build a nuclear reactor was granted by the Ministry of Economy, Trade and Industry in April 2008, and construction commenced the following month. The nuclear power plant is a project that forms part of the pluthermal plan being advanced by the Japanese gov

1,383 MW

nuclear power generation is thought necessary to cover a certain percentage of Japan's portfolio of future energy sources. Having been building up its expertise in research and studies related to the development of nuclear power since 1954, J-POWER has

been advancing its Ohma Nuclear Power Plant construction project since

of Economy, Trade and Industry in April 2008, and construction commenced the following month. The nuclear power plant is a project that forms part of the pluthermal plan being advanced by the Japanese government. Japan decided on mixed uranium-plutonium oxide (MOX) fuel, which results from the use of uranium fuel, and is promoting pluthermal MOX fuel for reuse in light-water reactors. The plan calls for the nuclear power plant to utilize a full MOX-ABWR capable of loading MOX fuel into the reactor core.

Location

Capacity

Fuel

Type of nuclear reactor

Promotion of Overseas Power Generation Business

Question

J-POWER is redoubling its engagement in overseas power generation business, such as the new, large-scale projects in Thailand and the new IPP project in Indonesia. Please tell us about your future policy with regard to overseas development activities.

Answer

As in the past, at the same time as assuredly conducting new gas combined cycle projects that are being implemented in Thailand, J-POWER has its sights on bringing to fruition new coal-fired thermal power projects that leverage the technologies and expertise accumulated in coal-fired thermal power in Japan.

I want to reshape the J-POWER Group into a global energy company. For more than 50 years, the J-POWER Group has conducted its consultancy business related to technical collaboration to develop power generation and environmental preservation overseas. Leveraging that track record and knowhow as well as investing capital and technology, we are active in overseas electric power generation business that involves participation in projects. Further expanding this activity in the years ahead, we want to make it grow into J-POWER's second major area of business.

New gas combined cycle projects in Thailand currently involve two IPPs and seven SPPs that are either under construction or planned. Each having a total capacity of 1,600 MW, the two IPPs are large-scale projects that are being completed on schedule. At the end of June 2011, the J-POWER Group was operating power generating facilities in Thailand with an owned capacity of 3,690 MW. When these nine Thai projects are added, the owned capacity will be nearly doubled.

Furthermore, also in June of this year, a consortium led by J-POWER acquired a letter of intent in international bidding for a new coal-fired thermal power IPP project being undertaken in Indonesia. In October, the companies involved in the project signed a long-term power purchase agreement with Indonesia's state-owned electricity company, PLN. Located in Indonesia, which has vast coal resources, this project covers one of Asia's largest coal-fired IPPs and will realize clean, high efficiency coalfired thermal power generation by the use of ultra-supercritical (USC) technologies. The plan is for operations to start in 2017. This is the first time for J-POWER to be involved overseas in a greenfield coal-fired thermal power project, and we are involved throughout, from the design and construction of the power plant through to its post-completion operation and maintenance. Leveraging the technologies it has accumulated over many years in high-efficiency, coal-fired power generation in Japan, J-POWER can expect to contribute to the stable supply of electricity and reducing the environmental impact in Indonesia as well as to the transfer and spread of advanced technologies. It is thought that this project will serve as a model for the future development of high-efficiency, coal-fired thermal power in Asia.

The business model that J-POWER is aiming for in its overseas power generation business is not confined to the building of power plants; the model also involves managing plants and supplying electricity over an extended period of time. This necessitates the technical operational capabilities to correctly operate the plant and generate electricity over the long term as well as the management capabilities to increase profitability as a business corporation and to attract employees. J-POWER is aiming to offer a package of such management capabilities and plants to countries and to thereby contribute to the enhancement of their infrastructure, their economic development, and their transition to a low-carbon society. The Indonesian project could be called the first step along that road.





Initiatives toward a Low-Carbon Society

J-POWER has been addressing the development of coal-fired thermal power that emits little or no CO₂ and renewable energy under guidelines that have been progressively introduced. What are your thoughts on future activities?

Answer

Question

In aiming for higher efficiency in coal-fired thermal power generation, J-POWER is focusing on the replacement of its existing power plants and the development of next-generation technologies. Enterprising progress is being made in such areas as biomass fuels, wind, and geothermal power generation as well as renewable energy.

In the case of coal-fired thermal power generation, J-POWER will leverage the know-how it has accumulated over many years to undertake the development of highly efficient leading technologies. The thinking is that it will be necessary for us to continue to use coal to a certain extent due to its abundance as a resource and superior cost-effectiveness. The amount of CO₂ that coal emits, however, makes activities designed to increase generation efficiency and reduce CO₂ emissions an absolute necessity.

Currently focusing on replacing existing power plants, J-POWER is continuing with the Isogo Thermal Power Plant, which was reactivated as a state-of-the-art coal-fired thermal power plant in 2009, and is moving ahead with plans to commence operation of the new replacement No. 1 unit at the Takehara Thermal Power Plant in 2020. As part of the technical developments toward higher efficiency, J-POWER is reflecting the results of pilot testing, carried out at its Wakamatsu Research Institute, of the multipurpose coal gasification technology development program known as EAGLE. In collaboration with Chugoku Electric Power, we are also making progress with the Osaki CoolGen Project, a large-scale demonstration test designed to enable the commercialization of integrated gasification combined cycle (IGCC) technologies.

For more details on the technical developments in coal-fired thermal power generation, please see the special feature on page 24.

J-POWER is actively engaged in activities related to renewable energy. The plan is to double the wind power generation capacity from the current 350 MW in Japan. In addition, Japan possesses a lot of unutilized biomass resources, such as unused waste lumber from forests and sewage sludge. Mixing and burning these biomass fuels in J-POWER's existing coal-fired thermal power stations will result in their effective utilization. J-POWER is also investigating new sites for generating geothermal power.

Question

Financial Strategy

What are your thoughts on J-POWER's future financial strategy and shareholder returns?

Answer

In view of the nature of its business, J-POWER works to secure returns on its capital investments through the operation of its facilities over the long term, and seeks to enhance profit distribution to shareholders, reflecting the results of development and growth.

The most prominent characteristic of our business model is that we recover the large amounts of capital we have invested by securing returns on our investments in power plants and other infrastructure through the operation of these facilities over the long term, ranging from 10 to 20 years. To aim for continuing, long-term growth by implementing steady investments in our facilities, we require substantial funding. To secure the necessary funding, stably and over the long term, one of our principal management issues is to continue to strengthen our financial position. We work to continuously increase equity capital by strengthening the profitability of our business activities through securing stable income and endeavor to improve our shareholders' equity ratio. Because of the nature of our business, our policy for providing returns to shareholders places strongest emphasis on maintaining stable and sustainable dividends. In addition, our policy calls for further enhancing profit distribution, reflecting the results of growth. What we want to do is to maintain the stable level of dividends we have promised to shareholders, continue to make steady investments in electric power generation facilities, and strive to further increase the return to shareholders in keeping with the development of our business and the results of growth.

Question

For Our Shareholders and Investors

Lastly, do you have any messages for shareholders and investors?

Answer

Returning once again to our corporate philosophy, we will meet people's needs for energy without fail, and play our part for the sustainable development of Japan and the rest of the world.

Due to the recent earthquake and tsunami, all at the J-POWER Group have supported society's very foundations and been made more keenly aware of the crucial nature of electric power supply as infrastructure and of the importance of the sustainability of supply systems. This forms our corporate philosophy.

"Meeting people's needs for energy" changes with the times. But the needs of the times, such as value, quality, and safety, have to be met. It is thus necessary to make effective use of limited resources with technology and knowledge and to continue supplying people's energy needs without fail. As J-POWER's mission, this is indicated in our corporate philosophy. Returning once again to this corporate philosophy, we will carry out our mission to supply electricity to those who need it in Japan and throughout the world.

We'd like to thank our investors and shareholders for their continued support.