## **Interview With President Masayoshi Kitamura**



The J-POWER Group faces an increasingly challenging business environment, given the weak global economy and the accelerated shift to a low-carbon society. In this section, J-POWER's new president, Masayoshi Kitamura, explains how the J-POWER Group is working to achieve sustained growth in a difficult environment based on its mission of "harmonizing energy supply with the environment."

QUESTION 01	Fiscal 2008 was the first year of the five-year J-POWER Group management plan. How much progress did you make with measures based on the "Five Key Approaches" of the plan?
QUESTION 02	The J-POWER Group posted declines in consolidated ordinary income and consolidated net income for fiscal 2008. What is your assessment of current conditions, including the business environment?
QUESTION 03	J-POWER has revised some of its five-year management targets in the fiscal 2009 management plan. Could you please explain the background to this change?  >>> see page 09
QUESTION 04	You have positioned a "strong commitment to measures to combat global warming from a long-term perspective" as a key priority for fiscal 2009. Could you please elaborate?
QUESTION 05	J-POWER is actively developing business overseas. Could you please explain your activities abroad?   ≫ see page 12
QUESTION 06	Finally, what is your personal vision for the J-POWER Group, and how will you reshape this group of companies through your leadership?

Fiscal 2008 was the first year of the five-year J-POWER Group management plan. How much progress did you make with measures based on the "Five Key Approaches" of the plan?

#### ANSWER 01

In fiscal 2008, the plan's first year, we made steady progress and strong achievements based on each of the "Five Key Approaches" to achieving sustained growth. In terms of "Steady Growth in Power Generation Facilities," the Isogo New No. 2 Thermal Power Plant began trial

commercial operations
Feature se details.) Mr.
Nuclear Powill continut work with

operations as planned, ahead of the start of commercial operations in fiscal 2009. (Full-scale operations began July 15, 2009. Please see the Feature section beginning on page 14 for details.) Meanwhile, construction of the Ohma Nuclear Power Plant began in May 2008. We will continue to steadily advance construction work with the aim of starting commercial operations in 2014.

In terms of "New Project Development Using Innovative Technology," we conducted preliminary studies on a demonstration project for integrated gasification combined cycle (IGCC) technology with The Chugoku Electric Power Co., Inc. Progress was also made with trials and research into carbon dioxide capture and storage (CCS) technology. Here, we launched a CCS demonstration project using the OxyFuel method at the

Callide A Power Station in Australia, in which J-POWER is a project participant.

In terms of "Enhancing Value of Business

**Assets,"** we continued working to raise the reliability and economic efficiency of existing facilities, mainly by systematically conducting comprehensive upgrades of main machinery and equipment at aging large-scale hydroelectric power plants.

In terms of "Global Business Expansion," we acquired new interests in IPP projects in the U.S. and Vietnam, while steadily pressing ahead with existing projects. (Please see Question 05 for further details.)

Finally, in terms of "Power Generation as the Core of a Diversified Business," we steadily ramped up the generating capacity of our facilities with the launch of commercial operations at the Zajaczkowo Wind Power Plant in Poland and the acquisition of three existing wind farms in Japan, among other initiatives. The effective utilization of biomass resources was another key priority. Here, we have decided to move forward with plans for a wastewater sludge fuel conversion business in Hiroshima. (See page 11 for further details.)

#### "Five Key Approaches": Business Strategies and Investment Steady Growth in Began commercial operations at the Isogo New NO. 2 Thermal Power Plant in FY2008-FY2012 Power Generation July 2009, and will steadily advance construction of the Ohma Nuclear Power Approx. ¥300 billion **Facilities** Plant. **New Project** Upgrade aging coal-fired power plants over the medium term, while aiming for Development Using next-generation coal-fired thermal power generation through the development of Innovative Technology innovative technologies over the long term. Enhance our ability to ensure a stable supply of electric power by making invest-**Enhancing Value of** Approx. ¥270 billion **Business Assets** ments in upgrades and internalizing technologies. **Global Business** Ensure stable operation of power plants currently in operation, and refine and Approx. 250 billion\* expand business strategies for driving market expansion centered on Asia. **Expansion Power Generation** as the Core of Focus on reinforcing priority areas such as CO₂ emissions reduction businesses Approx. ¥100 billion a Diversified Business including those using wind power and biomass resources.

Note: The above figures were calculated on a consolidated asset basis (updated to fiscal 2009 version of investment plan).

<sup>\*</sup> J-POWER plans to use project financing for overseas projects, and this will limit J-POWER's exposure to an amount equivalent to project capital multiplied by our investment ratio (expected amount of direct contribution: about ¥90 billion).

The J-POWER Group posted declines in consolidated ordinary income and consolidated net income for fiscal 2008. What is your assessment of current conditions, including the business environment?

#### ANSWER 02

In fiscal 2008, earnings certainly dropped at the consolidated ordinary income and net income levels. However, weak stock prices triggered by the global economic downturn and the yen's appreciation against foreign currencies were primarily to blame. The J-POWER Group's businesses themselves performed steadily in Japan and other countries.

Operating revenues rose 19.9% year on year mainly due to an increase in unit sales prices at thermal power plants in Japan, while operating income increased 12.6% year on year, mainly as a result of lower fuel costs. However, ordinary income was down 7.6% year on year. This was mainly due to the absence in fiscal 2008 of a gain on the sale of a wind power generation company in Spain that was recorded in fiscal 2007, and a drop in equitymethod earnings in the overseas power generation business principally reflecting the yen's appreciation. Net income decreased 33.6% year on year largely because of a loss on valuation of marketable securities in response to weak stock prices.

In the prevailing external environment, J-POWER faces a complex web of inter-related factors defined by three major themes. One is "increasing uncertainty in the markets," by which we mean the ongoing weakness in the global economy and volatility in resource prices. The second is "declining electricity demand in Japan," reflecting the nation's flagging economy and shrinking

population. The third is "global warming," for which society is making stronger calls for a solution. What's more, the susceptibility of the J-POWER Group's business activities and



performance to these factors is gradually increasing. Our corporate philosophy is "We aim to ensure constant supplies of energy to contribute to the sustainable development of Japan and the rest of the world." Under this philosophy, I'm keenly aware that the J-POWER Group must do more to strengthen its resilience to these changes in the business environment and build a corporate foundation for ensuring sustained growth. Accordingly, our fiscal 2009 management plan sets forth two key management priorities: one is the need for "thorough strengthening of the corporate structure to enable us to adapt to changes in the environment and pursue stable growth," and the second is a "strong commitment to measures to combat global warming from a longterm perspective." Based on this plan, our current five-year management plan has been reformulated and repositioned. Guided by the plan, we will work to surmount the issues that lie before us on the road to long-term, stable growth.

J-POWER has revised some of its five-year management targets in the fiscal 2009 management plan. Could you please explain the background to this change?

#### ANSWER 03

The current five-year management plan, devised with fiscal 2008 as the first year, will reach an interim milestone in the third year, fiscal 2010. In the initial plan, numerical targets had been established for consolidated ordinary income and the consolidated shareholders' equity ratio for both fiscal 2010 and fiscal 2012, the final year.

However, we have now reduced the consolidated ordinary income target for fiscal 2010 from ¥55.0 billion to ¥50.0 billion. In terms of the background to this revision, after J-POWER's fiscal 2008 performance was impacted by exchange rate and share price movements, as well as the drop in electricity demand in Japan in line with the global economic downturn, we determined that the original forecast would no longer be achievable due to very little prospects for short-term improvement in these market conditions. Despite some lingering uncertainty about the business environment, we have not revised our current ordinary income target of ¥60.0 billion for fiscal 2012, and we will do our best to achieve it.

Turning to the shareholders' equity ratio, shareholders' equity declined significantly due to the acquisition of our own shares equivalent to 9.9% of the total number of outstanding shares, following the exercise of a stock purchase demand by a certain shareholder in October

2008. Factoring in worsening market conditions such as share prices and exchange rates as well, we have determined that it is no longer very meaningful to maintain our initial share-



holders' equity ratio target. Consequently, we have decided to retract this numerical target for the time being.

J-POWER is now in a "Facilities Formation Phase" in preparation for sustained growth, and plans to invest a total of nearly ¥1 trillion worldwide over the next five years. One priority for J-POWER's financial strategy remains unchanged: we must enhance our financial position and increase our risk buffer to ensure that we can raise funds in a stable manner on competitive terms to meet our huge demand for funds. Therefore, we will continue to focus on improving the shareholders' equity ratio going forward. Additionally, we will consider a wide range of options for utilizing the treasury stock we have acquired, based on a comprehensive range of factors such as the outlook for the business environment, J-POWER's financial position and future capital structure policies.

#### **Progress With Five-Year Management Targets**

**Consolidated Ordinary Income** Consolidated Shareholders' **Equity Ratio** Over ¥50 billion 2011/3 Retracted numerical Reduced from initial target of over ¥55 billion Over  $\frac{460}{100}$  billion 2013/3 Maintained initial target

\* Actual result as of March 31, 2009: 19%

#### **Management Index**

Return on assets (ROA)

2009/3-2011/3 2.4%

2012/3-2013/3 2.5%

You have positioned a "strong commitment to measures to combat global warming from a long-term perspective" as a key priority for fiscal 2009. Could you please elaborate?

#### ANSWER 04

The J-POWER Group continuously strives to reduce CO2 emissions to combat global warming through a combination of the following four measures: "Maintenance and improvement of the efficiency of energy use," "Development of low CO2 emission power sources," "Development, transfer and diffusion of new technologies," and "Utilization of the Kyoto Mechanisms." However, as fullfledged international discussions begin on a medium- and long-term post-Kyoto framework, we will need to address even stronger calls for converting fossil-fuel derived power sources, including coal-fired thermal power generation, into low-carbon power sources. Recognizing this, we have adopted a "strong commitment to measures to combat global warming from a long-term perspective" as a key priority to address global warming, which requires a global and long-term solution. Accordingly, we have decided to clarify the roadmap and enhance our activities along the lines of different timeframes. Specifically, we will step up measures over short-, medium- and long-term horizons, as we closely monitor global developments such as technological advancement, new climate change frameworks and the introduction of new laws and regulations. Through these measures, we hope to seize on new business opportunities.

Over the short term, our first priority will be to press ahead with the Ohma Nuclear Power Plant project (1,383 MW), for which construction work is now under way.

Based on its large power output, the Ohma Nuclear Power Plant will be able to achieve a significant reduction in CO<sub>2</sub> emissions. In other areas, the development of renewable energy such as wind power is an active priority, along with the systematic acquisition of CO<sub>2</sub> emissions credits based on the Kyoto Mechanisms.

Over the long term, we aim to commercialize two groundbreaking technologies—IGCC and integrated coal gasification fuel cell combined cycle (IGFC) technologies. Ultimately, our goal is to achieve zero emissions of CO<sub>2</sub> by incorporating CCS technology. (Please see the article titled "Research and Development" on page 18 for details on these activities.)

However, the commercialization of these sorts of technologies will require a long timeframe. In the meantime, that is, over the medium term, we will pursue solutions based on today's leading-edge technologies, such as by converting aging thermal power plants into highefficiency facilities, making effective use of biomass fuels, and upgrading equipment and enhancing the operation of hydroelectric power plants. Specifically, we aim to raise the power generation efficiency of existing aging thermal power plants through facility replacements utilizing state-of-the-art ultra-supercritical (USC) power generation technology. In addition, we will promote the mixed combustion of biomass fuels with coal at existing coal-fired thermal power plants, which are uniquely positioned

#### **Commitment to Long-Term Global Warming Measures**

Enhance activities along the lines of different timeframes (short, medium and long terms)

Present

#### Short term

- Press ahead with the Ohma Nuclear Power Plant project
- Promote development of wind power and other forms of renewable energy
- Utilize the Kyoto Mechanisms' emissions credits and domestic emissions credits

#### Medium term

- Convert aging thermal power plants into high-efficiency facilities
- Make effective use of biomass fuels
- Upgrade equipment and enhance the operation of hydroelectric power plants

#### Long term

 Substantially boost coal-fired thermal power generation efficiency through technological innovation

Future

Establish carbon dioxide capture and storage (CCS) technology

# Overview of the Ohma Nuclear Power Plant (under construction)

Location: Ohma-machi, Shimokita-gun,

Aomori Prefecture

Capacity: 1,383 MW
Type of nuclear reactor: ABWR

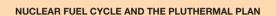
(Advanced Boiling Water Reactor)

Fuel: Low enriched uranium and

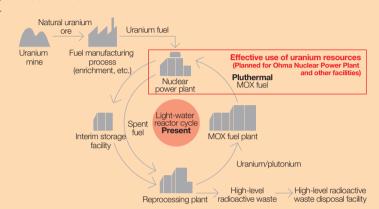
uranium-plutonium mixed oxide (MOX)

Start of

commercial operations: Planned for November 2014



(Architect's rendering)



#### >> Ohma Nuclear Power Plant and Japan's Pluthermal Plan

Nuclear power currently accounts for approximately 30% of all electricity generated in Japan. Nuclear power generation is thus playing an important role in ensuring the stable supply of electric power in Japan. It also has the advantage of producing no CO<sub>2</sub> emissions during the power generation process.

As Japan imports more than 90% of its energy resources from overseas, it is essential for us to promote the reuse of plutonium and uranium from spent fuels to maintain a stable supply of energy for the future.

Heading toward the establishment of this nuclear fuel cycle, the government is promoting the pluthermal plan in order to reuse plutonium as MOX fuel in light-water reactors.

J-POWER's Ohma Nuclear Power Plant, as a full MOX-AWBR in which every reactor core can be operated on MOX fuel alone, is able to use roughly 25% of the MOX fuel produced at sites in Japan. As such, the plant is expected to play a vital role in Japan's pluthermal plan.

#### >> Effective Use of Biomass Fuels in Coal-Fired Thermal Power Generation

J-POWER believes that the mixed combustion of biomass fuels with coal during the coal-fired thermal power generation process is the most effective technological means of utilizing Japan's biomass resources, including wastewater sludge, wood, and non-industrial waste, on a large scale and in an economically efficient manner. Going forward, J-POWER will work hard to effectively use biomass resources as part of the development of low CO<sub>2</sub> emission power sources by conducting a series of research studies into technologies for producing biomass fuels and combustion trials to raise the percentage of biomass resources burned with coal.

#### **Wood Biomass Fuel**

Long-term combustion trials have commenced from fiscal 2008 at the Matsuura Thermal Power Plant in Nagasaki Prefecture, aimed at the full-scale use of wood biomass fuel. (Trials are planned for completion in fiscal 2009.)

In fiscal 2008, J-POWER conducted mixed combustion of approximately 2,500 tons of wood biomass fuel with coal. In fiscal 2009, we have been conducting trials of simultaneous mixed combustion with wastewater sludge.



Wood biomass handling facility (Matsuura Thermal Power Plant)

#### Wastewater Sludge Fuel

From 2012, J-POWER will launch the operation of Japan's first wastewater sludge fuel conversion business using low-temperature carbonization technology at the Hiroshima City Seibu Water Resources Reclamation Center. This business will produce fuel from wastewater sludge, a biomass resource, and burn the fuel with coal at J-POWER's Takehara Thermal Power Plant in Hiroshima Prefecture.



Architect's rendering of wastewater sludge fuel conversion facility

# Carbonized Fuel From Non-Industrial Waste

In collaboration with Saikai City in Nagasaki Prefecture, J-POWER is conducting research and testing into the possible use of alternative non-coal-based fuels, as well as developing technology for producing carbonized fuels derived from non-industrial waste.

\* NEDO (New Energy and Industrial Technology Development Organization) field test project on biomass and other untapped energy sources. to utilize Japan's biomass resources on a large scale and in an economically efficient manner. This will entail making effective use of biomass fuels, particularly wood biomass from forest-thinning activities. (Please see the

article on page 11 for further details.) We are also enhancing hydroelectric power generation facilities and operations, and boosting their efficiency.

#### QUESTION 05

### J-POWER is actively developing business overseas. Could you please explain your activities abroad?

#### ANSWER 05

One of the "Five Key Approaches" of our five-year management plan is "Global Business Expansion." J-POWER is strengthening its hand overseas so as to develop the overseas power generation business into a second pillar of earnings that can raise the earnings power of the entire J-POWER Group.

Even as growth in electricity demand in Japan weakens, there are many countries around the world that are projecting increased electricity demand, particularly China, India and Southeast Asian nations.

We have built up a wealth of technologies and experience through our wholesale electric power business in Japan, and have developed expertise, business contacts and organizations, and other assets through our technological consulting services in more than 60 countries and regions over nearly half a century. Taking full advantage of these strengths, we intend to play a part in supplying electricity, especially in the countries I

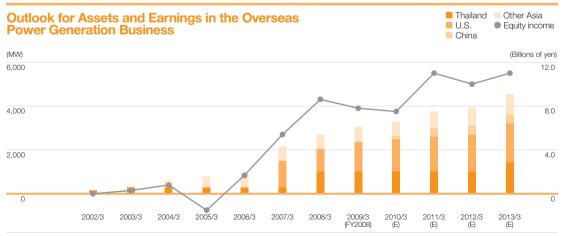
just mentioned, and lay the groundwork for the next phase of growth.

In particular, we take pride in being one of the world's top companies in high efficiency conversion and



Birchwood Coal-Fired Thermal Power Plant (USA)

environmental protection technologies for coal-fired thermal power plants, and believe that these technologies give us a powerful edge in developing business overseas. We are looking to utilize J-POWER's clean coal technologies to help mitigate global warming in countries such as the U.S. and China, where coal-fired thermal power accounts for a large share of the national fuel source mix and where there is considerable room for improving power generation efficiency



[Left axis] Owned capacity (in operation): Capacity reported at fiscal year-end calculated by multiplying total capacity of project by J-POWER's investment ratio (equity ratio) [Right axis] Equity income: Amount reported for the fiscal year calculated by multiplying total project income by J-POWER's investment ratio (equity ratio).

and environmental performance. From medium- and long-term perspectives, we will work to capture these sorts of business opportunities.

In fiscal 2008, we acquired interests in four existing IPP projects, including our first coal-fired thermal power project in the U.S. at the Birchwood Coal-fired Thermal Power Plant (240 MW) in the U.S. In addition, we became a participant in the Nhon Trach 2 Power Plant (750 MW) in Vietnam. Although our stake in this project is small, the project represents significant progress with measures in this area because it marks our entry into a new market.

At present, earnings generated by overseas projects currently in operation have grown to account for

approximately 20% of consolidated ordinary income (fiscal 2008 result), and are expanding to a level commensurate with a second pillar of earnings. By driving further expansion, our next step will be to develop this business into a second core business alongside the wholesale electric power business in Japan, instead of just another pillar of earnings.

Given the global economic recession and equipment problems encountered in certain power plant projects, our present situation is not necessarily ideal. Nonetheless, we are determined to achieve our goals for the overseas power generation business over the space of five to ten years by overcoming obstacles one by one, while successively expanding into key markets and phasing in new business models.

#### **QUESTION 06**

Finally, what is your personal vision for the J-POWER Group, and how will you reshape this group of companies through your leadership?

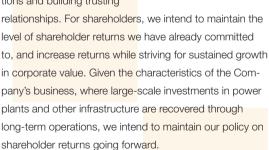
#### ANSWER 06

I want to reshape the J-POWER Group into a global electric power company—an enterprise that provides services centered on electricity not only in Japan but in many other countries as well. Key to realizing this vision will be our technological prowess, especially technologies that help to solve the problem of global warming.

Our main business is to generate power, but we cannot do so without impacting the natural environment to some extent. Therefore, the J-POWER Group has constantly given thought to how best to tackle the challenge of ensuring a stable supply of energy while at the same time minimizing its environmental impact. The J-POWER Group's business activities have gone hand in hand with our history as a pioneer in "harmonizing energy supply with the environment" by driving technological innovation in clean coal technology and other areas.

I hope to further hone the technological prowess we have developed by uniting the frontier spirit of all J-POWER Group employees to realize our vision for "harmonizing energy supply with the environment" around the world.

We also intend to distribute the fruits of these achievements to stake-holders in an appropriate manner in recognition of their support, with the view to fulfilling their expectations and building trusting



I invite each one of you to expect great things from the J-POWER Group as we seek to become a truly global electric power company.

