

Growth by Business Diversification

– Eyes 20% of Profit with Overseas Business –

Interviewer: Okabe Hiroshi

In Japan's electric power industry, 10 regional power utilities have supplied electricity to their customers in their respective territories. As a national-policy wholesaler of electricity, Electric Power Development Co., better known as J-POWER, has performed the business to cope with a rise in demand for electric power and to help regional power utilities secure a stable supply of power. J-POWER has seen its mission change amid moves toward liberalization of the electric power industry. J-POWER became a full-fledged private firm after its stock was listed on the Tokyo Stock Exchange in October 2004. J-POWER is expanding its business fields and advancing into overseas markets, including China. J-POWER President Nakagaki Yoshihiko, who took the leadership in realizing J-POWER's privatization, is active in environmental preservation efforts for coal-fired power generation and also in the development of new energy sources. Nakagaki discusses his company's growth strategy in an interview with *Japan SPOTLIGHT*.



Growth Strategy in Times of Shrinking Population

What change has J-POWER made since its privatization?

Nakagaki: First of all, J-POWER has got free from legal and administrative restrictions in principle, becoming an independent organization that can create and develop a variety of businesses autonomously. J-POWER is now undertaking various business fields only two years after privatization. Employees feel this and have become willing to launch and promote original businesses. This is the biggest change for us.

Wholesaling of electric power to utility firms is a highly stable business. The market hopes J-POWER will achieve higher growth.

Nakagaki: Basically, shareholders expect higher returns for their investment. The market would not appreciate J-POWER unless it met those expectations. There can never be the idea of balanced contraction, at least in our relations with the market. I have keenly felt this through dialogue with shareholders, and we must pursue



J-POWER President Nakagaki Yoshihiko

highly promising and potentially growing businesses. It is clear that demand for electric power will not grow so much in Japan in the long run because a decline in the population has become evident. Therefore, the strategy of achieving growth through a boost in domestic power supply will not stand. But domestic demand for electricity is expected to increase for some time to come, though at a slow pace. During the period of such slow growth, we are required to boost our share of the domestic power market. Our business would taper off if we

depended only on our traditional business of power wholesaling to utility firms as conducted while J-POWER was a national-policy company. We need to diversify our business fronts.

Challenging to Diversify Power Supply

What kind of growth strategy are you considering taking amid slow growth in demand for electric power?

Nakagaki: We want to expand our traditional power wholesaling business, too. So we are beefing up our power generation facilities. We are building a second power generator at the Isogo Thermal Power Station in Yokohama and promoting a project to construct a nuclear power station in Oma, Aomori Prefecture. We are also holding talks with power utility firms to increase power supply under existing contracts with the utilities. But there are some limitations to such a strategy as an increase in sales basically needs growth in demand. We are required to catch new business chances. One is the development of new types of electric power, and another is the pursuit of a new market. We would like to sell

electric power not only to the 10 regional power utilities but to newcomers, called Power Producers & Suppliers (PPSs). We also plan to expand wholesaling of power to the Japan Electric Power Exchange that was launched in April 2005. As part of business diversification efforts, J-Power has established a joint venture with Chugoku Electric Power Co. The power-marketing venture, Setouchi Power Co., has already begun supplying power to customers. We can increase our overall market share by pursuing diversified business activities.

Increased Investment in Vietnam, the U.S.

In terms of growth, J-POWER has put its major focus on overseas businesses.

Nakagaki: No major growth is expected in the pie itself – total demand for electric power – in Japan even if we acquire new customers. Given such a constraint, we cannot stay in Japan alone. That is why we have made active overseas investment since five or six years earlier to achieve sustainable growth. We have so far given priority in overseas business to Southeast Asia, notably Thailand. We have conducted smooth business activities in Thailand, with which we have maintained close relations in the engineering field. We have also poured funds into the Philippines and Taiwan. But our investment has been disproportionate geographically. It is insufficient from the viewpoint of risk management. We are currently considering including Vietnam in our overseas strategy for Southeast Asia. We have set up an office in Hanoi and launched studies on investment in the electric power business there. The United States has few risk factors and has shown the largest growth in power demand among developed countries. J-

POWER USA Development, an R&D company for North America, signed a contract to acquire a major stake in a combined cycle gas turbine power plant in Texas in April 2006. It is expected to acquire a stake in another US power plant in Illinois. In China, we acquired a major interest in a thermal power plant about five years ago. Talks are under way to launch a bigger-scale power generation project in China. We would like to realize a second investment in China soon and make it a stepping stone for our continued investment in the long run. China is a major power in the world and its demand for electric power is sharply growing. We believe China will achieve annual economic growth of 6-7% from now on. We see China as a key base for our future investment business.

J-POWER is planning to cover 10% of its group pretax profit with overseas operations.

Nakagaki: We would like to raise the share of overseas business in our total earnings, partly to cover slow growth in domestic business. We have made it our target to post more than ¥55 billion in consolidated pretax profit. We are sure we can cover 10% of the targeted profit with overseas business in the near future. It is time by now to set the next target. Personally I expect overseas business to be profitable enough to achieve an earnings share of 20%. We are planning to continue pushing up earnings with overseas business even if domestic business levels off, posting steady growth in pretax profit as a whole.

Environmental Preservation Top Priority in China

Environmental preservation is a major policy challenge in China. How is J-POWER planning to tackle this issue?

Nakagaki: We would like to make J-POWER's identity clear by searching for investment projects that involve environmental preservation. As the only company in this field, J-POWER will do what other companies cannot. J-POWER is the leader in technology for environmental preservation in coal-fired thermal power generation. Our basic China strategy is to use this technology to expand coal thermal power business there. China is trying to diversify sources of power supply. But coal thermal power still accounts for 70-80% at present. Coal is China's biggest natural resource and its prices are stable. Coal thermal power will remain advantageous. Environmental preservation for coal thermal power will therefore be a major theme of importance. China has so far placed priority on the expansion of facilities to increase power output while neglecting environmental preservation measures. But China will have no other choice but to tackle the environment issue given the spread of coal thermal power plants. New large-capacity power plants are equipped with a system to remove sulfur oxides. But no such equipment is attached to a large number of existing coal thermal stations. As a result, China's environment situation continues to deteriorate. How to take environmental preservation measures for existing facilities is a major challenge for China and it would be a major business chance for J-POWER. Our company has technologies to remove the three major environmental disruption sources of sulfur oxides, nitric oxides and coal dust. We are planning to launch businesses to build new power plants using these environmental technologies. What is important in building a new power plant is to introduce one of generating efficiency at the highest level. The key will be the boiler. Our technologies use steam of super-high heat and ultra-high pressure at the boiler to improve generating efficiency, reduce sulfur and nitric oxides, and to tackle carbon dioxide (CO₂) pollution at the same time.

Sustained Passion for Coal

Expectations for coal thermal power are being renewed amid a rise in crude oil prices. What prospect do you have for future coal business?

Nakagaki: I have my own passion for coal different from that for other people. I was assigned to a coal-fired thermal power station just three years after I started my career at J-POWER. I was dusted with coal every day. Physically, I learned what coal is as a fuel resource. Japan's coal mines were shut down one after another, and I continued to see domestic coal losing (to imports) for four years. I spent the four years feeling something ambivalent – retreating from the coal business while knowing its merits. But I have since maintained inseparable feelings for coal for some 40 years. After the 1973 oil crisis, J-POWER sought to use imported coal for thermal power generation as one means of its survival. The Japanese government came to support the use of imported coal as part of its efforts to reduce the country's dependence on imported oil.

Oil and natural gas resources lie unevenly, abundant in the Middle East and Russia, for instance. Their supply is sensitive to political conditions in these regions. But coal is widely buried across the globe, rich notably in Australia and Southeast Asia in the politically stable Pacific rim region. Coal can be used for the coming 250-300 years under the current estimate of coal deposits. I think the period will be longer upon fresh technological development.

Dreaming of No CO₂ Emissions

But coal-fired thermal power generation produces much more CO₂ emissions than oil- and natural

gas-based power. This is seen as a problem for coal thermal power.

Nakagaki: Coal is a stable, low-cost and safe natural resource rich in deposits but contains a large amount of carbon elements. Suppose the amount of carbon emitted by burning coal is 100 and you get 80 from oil and 60 from natural gas. This is the biggest disadvantage for coal. How to clear global environmental problems stemming from carbon emissions would be the biggest issue in utilizing coal over a long term for the sake of humankind. We are tackling the problem to achieve a solution through a variety of measures. One typical measure is renovation of technology for the use of gasified coal. A new power generation method that combines gasified coal and fuel cells would pave the way for improving power generating efficiency to more than 60% in the near future from the present 40% at coal-fired thermal power plants. This means a 50% improvement in generating efficiency. A highly efficient use of coal has become a keyword worldwide in the field of global environment preservation. Coal gasification is widely regarded as a promising solution to the problem. We are on that royal road.

Still, CO₂ emissions will remain despite such technological development if coal is burned. One measure is to develop technology to separate and recover CO₂ for stockpiling under the seabed or ground. Another is to promote the development of renewable energy sources and dilute CO₂ emissions. This means a relative reduction of carbon emissions from coal with the wider use of wind power, biomass energy and nuclear power, including the nuclear fuel cycle, although nuclear energy is not a renewable energy source. A third measure is the use of the clean development mechanism (CDM) introduced under the 1997 Kyoto Protocol to fight global warming. Using such mechanisms, we can obtain



credits for CO₂ reduction in exchange for helping reduce emissions of greenhouse gases in developing nations. We believe this is a reasonable economic means to reduce CO₂ emissions. We are planning to make efforts to maximize CO₂ credit acquisitions. The combination of these three measures is our solution. We are dreaming of emitting no CO₂ eventually by separating, recovering and stocking the gas, among other means.

High Hopes on Wind Power, Biomass Energy

How do you see the future prospects and challenges of such new energy sources as wind, solar, biomass and geothermal power generation?

Photo: J-POWER



This brand-new wind power plant, consisting of 33 windmills, is capable of producing 65,980 KW, the largest combined wind power output in Japan. The J-POWER plant was completed in Koriyama, Fukushima Pref., on Jan. 31, 2007.

Nakagaki: Wind power generation is a clean energy source in relation to the global environment and also beneficial in that it is a domestic energy source. There is no way we could miss it. We were faster than regional power utility firms to tackle it. J-POWER can be the front-runner in this field. We have just completed Japan's largest wind power plant. It has boosted J-POWER's wind power output capacity to 210,000 kilowatts. The Japanese government is encouraging wind power projects from the standpoint of environmental preservation. We are continuing feasibility studies at several domestic locations for more wind power plants.

What do you think is the most promising among the new energy sources?

Nakagaki: I think it is wind power in Japan. The government has set the target of boosting the country's wind power output to 3 million kilowatts in 2010. Current wind power plants are located on land. Future ones should be located offshore, too. But wind power alone is not enough. I think the next promising one is biomass. Japan is rich in forestry resources and also can use waste. We are developing technology to process biomass for use in a mixture with coal at thermal power plants. We are burning coal in the form of fine particles each measuring a 70-1,000th of a millimeter in diameter. We are also developing technology to burn a mixture of carbonized biomass and coal. As the development has taken off, I think we can launch mixed firing tests in a year or two. We also have a target to collect waste from municipalities around power plants for mixed firing of biomass.

New energy is effective in overseas business, isn't it?

Nakagaki: There are many better locations abroad for wind power generation. The potential for development is high. We have launched feasibility studies in Central and Eastern Europe, China, and other regions. The same can be said of biomass energy. If the mixed burning technology is established domestically, China is a highly potential location for such technology. Garbage disposal ranks second only to air pollution in terms of the seriousness of problems in China. Garbage is swelling there, keeping pace with its rapid economic growth. China will hit the limits if it continues to dispose of garbage in its present manner. Burning would scale down the whole mass of garbage and would be extremely effective in disposal. If the mixed burning technology is established, it would be effective for our business abroad, including China.

Boosting Earnings Performance Is Best Defense Against Takeover

The percentage of foreign shareholdings in J-POWER is steadily rising. The so-called "triangular merger" scheme is set to be introduced in May, making foreign acquisitions of Japanese corporations easier. Japan's industrial world is wary about hostile takeover bids. What is J-POWER's policy against foreign capital?

Nakagaki: Foreign shareholdings in J-POWER have reached 40% amid an inflow of foreign funds into the Japanese market. I think this means that the company has won appreciation for its policy of overseas expansion for overall growth and has thus drawn attention from abroad. Shareholders and investors, not just foreign ones, may have various thoughts, but it is important to have dialogue with them and win their full understanding of J-POWER's strategy of steady growth. It is not good to be suspicious of each other. I would like to take the helm of corporate management in a balanced manner, paying attention to expectations from the three stakeholders of shareholders, customers and employees. I believe that is the philosophy of corporate management more valuable to shareholders. The best defensive measure against hostile takeover bids is to do business management valuable to shareholders and achieve results. No hostile takeover bid can be successful if management is appreciated by shareholders. I understand the posture and substance of management are being tested. **J.S**

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