2 Electric Power Business

The scope of the Group's electric power business encompasses the procurement of fuels, generation, and sales. In these operations, wholly owned subsidiary Nijio Co., Ltd. procures its own fuel and then subcontracts power generation to Group-owned power plants. The power that is then generated is sold to wholesale and large-lot customers. Looking ahead, and with the complete liberalization of retail electric power, the Tokyo Gas Group will look to build a more competitive power source portfolio while at the same time delivering electricity to residential and commercial customers as a part of efforts to expand its electric power business.

Recent Initiatives

Jun. 2013	Start-up of construction of third unit of Ohgishima Power Station (operations scheduled to commence from February 2016)
Sep. 2014	Concluded an agreement with Kobe Steel, Ltd. for the supply of electricity from the Shinko Moka Power Station(1,200 MW; operations scheduled to commence from fiscal 2019)
May 2015	Joint establishment of Chiba Sodegaura Power Co., Ltd. with Idemitsu Kosan Co., Ltd. and Kyushu Electric Power Company Inc. to further promote the coal-fired thermal generation business (power generation scale up to a maximum of 2,000 MW; operations scheduled to commence in the mid 2020s)
Jun. 2015	Full-fledged consideration of the enlargement plan for the no. 3 and 4 units of the Kawasaki Natural Gas Power Plant (power output of approximately 550 MW x 2 units; operations scheduled to commence progressively from 2021)
Jul. 2015	Agreed with Tohoku Electric Power Co., Inc. to jointly establish an electric power retail

sales company (New company scheduled to be established in October 2015)



The Group's Natural Gas-Fired Thermal Power Plants



o Gas Baynowor Co. Ltd

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Generation capacity	100 MW x 1 unit 100 MW		
Tokyo Gas generation capacity	100 MW		
Generation method	Combined cycle generation		
Start of operations	2003		
Tokyo Gas interest	100%		



Tokyo Gas Yokosuka Power Co., Ltd.		
Generation capacity	240 MW x 1 station 240 MW	
Tokyo Gas generation capacity	180 MW	
Generation method	Combined cycle generation	
Start of operations	2006	
Tokyo Gas interest	75%	



Kawasaki Natural Gas Power Generation Co., Ltd.

Generation capacity	420 MW x 2 units 840 MW
Tokyo Gas generation capacity	400 MW
Generation method	Combined cycle generatio
Start of operations	2008
Tokyo Gas interest	49%



Ohgishima Power Co., Ltd.

Generation capacity	407 MW x 3 stations 1,221 MW*		
Tokyo Gas generation capacity	900 MW		
Generation method	Combined cycle generation		
Start of operations	Progressive rollout from 2010		
Tokyo Gas interest	75%		
Unit 3 is scheduled to start operations from February 2016.			



Tokyo Gas's Strengths 1 Close Proximity to High Demand Areas

Robust electricity demand

The Kanto region, is densely populated by the Tokyo-Yokohama and other industrial zones, and electricity demand is robust as a result. Electricity differs from gas in the fact that it cannot be stored. It is therefore necessary to adjust generation levels in line with fluctuations in demand. Electricity also incurs large losses during transmission. For these reasons, a location close to high demand areas is a great advantage for an electric power business.

Tokyo Gas's Strengths 2 Neighboring LNG Terminal

Efficient power plant operations

Close proximity to the LNG receiving terminal ensures that the power station is easily supplied with the natural gas that is used as fuel. In addition, power station operations can be contracted within the LNG terminal, thereby ensuring efficient operation at low cost.



Increasing Competitive Generation Capacity

- Expand generation capacity from the current level of approximately 1,300 MW (company equity) to around 3,000 MW by 2020.
- Aim at building a more competitive power source portfolio, including base load supply sources, in addition to natural gas thermal power.

$\langle {\rm Confirmed \ Expansions \ in \ Generation \ Capacity \ (Own \ Equity)} \rangle$



Expand Electric Power Sales

- With the complete liberalization of retail electric power in 2016, in addition to the wholesale and large-lot customer to date, deliver electricity to residential and commercial customers and expand sales to around 30 billion kWh (about 10% of Tokyo metropolitan area demand) by 2020.
- Commence pre-order sales of electricity to residential and commercial customers from fiscal 2015.

Approx. 30 billion kWh



"Challenge 2020 Vision" Earnings from the electric power and LNG sales as well as other businesses account for 25% of

Realize

income. (Fiscal 2020)

consolidated net



Tokyo Gas's Strengths

Highly efficient gas turbine combined cycle (GTCC) generation

The Tokyo Gas Group currently generates electricity at its gas-fired thermal power generation plants in Japan. These plants employ GTCC generation, which is highly efficient and offers superior energy savings. In this manner, the Company is engaging in highly efficient power generation. (record high of 58% realized at the Ohgishima Power Station)



Initiatives Aimed at Increasing Competitive Generation Capacity

Electric Power Trading Contract with the Moka Power Station of Kobe Steel, Ltd.

In September 2014, Tokyo Gas concluded an agreement concerning the supply of electric power with Kobe Steel, Ltd. Under the agreement, Tokyo Gas will supply city gas to Shinko Moka Power Station, the gas-fired thermal power station under construction by Kobe Steel in Moka City, Tochigi Prefecture. All of the electricity generated at the station will then be supplied to the Company. This initiative, which complements efforts to cultivate additional demand in the northern Kanto region through the construction of the Hitachi LNG Terminal, is a major step toward Tokyo Gas increasing its competitive generation capacity in the lead up to the complete liberalization of retail electric power. Here, we provide details of the significance of this agreement in the following interview with a Kobe Steel representative.

In ensuring the timely start-up of Japan's first full-scale thermal power station located inland, we will balance the supply of electric power at competitive prices with

technological stability and reliability.



General Manager East Japan Power Project Department Electric Power Project Division **Hisato Murakoshi**

Background Leading Up to the Decision

Drawing on its know-how in operating private power generation facilities nurtured for over five decades, Kobe Steel, one of Japan's leading independent power producers (IPPs), has continued to supply electricity on a wholesale basis through the Shinko Kobe Power Station. Guided by its medium-term business plan, the company has made efforts to secure a stable profit base by expanding its power supply business. Impacted by the Great East Japan Earthquake that devastated the nation in March 2011, we have taken steps to boost our generation capacity in a timely manner and on a major scale by promoting plans to construct a power station adjacent to our Moka Plant at the No. 5 Industrial Park in Moka.

From the outset, the construction of a power station by Kobe Steel was based on the supply of gas as a generation fuel from Tokyo Gas. With our understanding toward Tokyo Gas's electric power business deepened, our confidence in and expectation toward the Company have similarly increased. As a result, we decided to enter into this agreement.



Special Features of the Shinko Moka Power Station

The Shinko Moka Power Station is attracting considerable interest as Japan's first full-scale thermal power station located inland. The facility will yield a generation capacity of 1.2 million kW (0.6 million kW x 2 units), which is equivalent to the output of one nuclear power plant. In adopting a state-of-the-art gas turbine combined cycle power generation format, positive steps are being taken to achieve Japan's highest level of energy efficiency at around 60%.

In the case of inland power plants, where seawater is not an option, the steam generated by steam turbines is cooled by ambient air using fans. At the same time, long distance transportation is also a necessity after reducing the size of large-scale facility components. The construction site in Moka City, Tochigi Prefecture, however, offers a host of benefits. In addition to a fully completed industrial zone site as well as existing plans by the Company to construct a major trunk line, the location of the plant provides excellent access to large volume power distribution grids and the potential to maximize use of existing or planned social infrastructure. Taking into consideration the concentration of existing power plants in and around Tokyo Bay and the Pacific Coast, scattered distribution that includes inland areas also addresses such risks as tsunami damage in the event of an earthquake. This attribute of scattered distribution therefore helps to overcome some of the associated weaknesses.

Turning to efforts aimed at securing power sources on a timely basis, steps have been taken in advance to conduct the necessary environmental impact assessment from March 2013. We anticipate construction with commence around the middle of 2016 with the first station coming online in the second half of 2019 and the second station in the first half in 2020.

Power generation method	Gas-fired, gas turbine combined cycle power generation
Generator output	1.2 million kW class (0.6 million kW class x 2 units)
Fuel	City gas
Operations scheduled to commence	Unit 1: Second half of 2019 Unit 2: First half of 2020



Significance to Both Companies and Future Outlook

On completion, the Moka Power Station will become Japan's first fully-fledged inland thermal power station. In addition to ensuring the stable supply of electricity to the northern Kanto region, expectations are that the Moka Power Station will serve as a precious source of power for the Tokyo metropolitan area, which has a high dependence on power generated along coastal areas. In recognition of the initiative taken through this project, the Moka Power Station was selected by the Kanto Bureau of Economy, Trade and Industry and the National Resilience Promotion Office of Japan's Cabinet Secretariat as a prime example of energy base resilience and private sector ingenuity, respectively. Energies are now being channeled toward completing construction of the station and heading toward the commencement of commercial operations in a bid to meet these expectations and acclaim.

For Kobe Steel, which is overseeing the project and its operations, the Shinko Moka Power Station is a component of its earnings platform. In addition to providing Kobe Steel with a stable stream of earnings, the Shinko Moka Power Station will also complement Tokyo Gas's generation capacity with an additional 1.2 million kW of electricity, bringing within sight the Company's target of 3.0 million kW identified under its Vision. By controlling both the supply of fuel (entry) to the Power Station as well as the purchase of electricity (exit), Tokyo Gas is well positioned to properly manage risks,

By ensuring a competitive electricity price in combination with successful efforts to promote technological stability and reliability, this initiative is expected to exert a significant presence in the stable supply of electricity to the Kanto region as a whole, while taking into consideration trends in the complete liberalization of retail electric power. In addition, Tokyo Gas, which maintains considerable experience in natural gas-fired thermal power generation, and Kobe Steel, which has substantial know-how in coal-fired thermal power, are anticipated to nurture close ties of mutual trust through this business. By deepening mutual exchange and interaction, both Tokyo Gas and Kobe Steel will further lift the levels of their overall technological and power generation capabilities, thereby enhancing corporate value. At the same time, the common goal of expanding power generation as the next business pillar is also serving to deepen ties of mutual trust between the companies. Through collaboration that makes the most of each company's inherent steps, Tokyo Gas and Kobe Steel will continue to promote this business in a bid to contribute to the next-generation and society as a whole.



Front row from left: General managers Yamamoto, Murakoshi, and Manabe from Kobe Steel, Ltd. Back row from left: Mr. Sato and Mr. Miyamoto from Tokyo Gas Co., Ltd.

Initiating Steps to Consider the Construction of a Coal-Fired Thermal Power Plant \sim Establishing the New Company Chiba Sodegaura Power Co., Ltd. \sim

Overview

Idemitsu Kosan Co., Ltd., Kyushu Electric Power Company Inc., and Tokyo Gas all agreed to jointly proceed with preparations for the development of a coal-fired thermal power plant in March 2015. As a part of these preparations, steps were taken to establish Chiba Sodegaura Power Co., Ltd. in May 2015. This is the Company's first venture into the coal-fired thermal power plant field. In the lead-up to the full liberalization of the retail electric power, this initiative will go a long way to helping Tokyo Gas provide stable electric power at a competitive price to the Tokyo metropolitan area and building a competitive power source portfolio.

Special Features

In addition to securing stable and competitively priced base load supply sources, this initiative will help to maximize efforts aimed at reducing environmental impact by incorporating a variety of technologies.

1Alliance between three companies

Working to realize the stable supply of electric power at affordable prices while making the most each company's inherent strengths



2Economic rationality

Coal prices remain stable at a low level; considerable competitive advantage from a generation cost (variable expenses) perspective

Generation Costs by Power Source: Variable Costs (representation)



③Eco-friendliness

- Reducing CO₂ emissions by adopting highly efficient units that comply with BAT.*
- Plans are in place to reduce NOx, SOx, soot and dust through the installation of environmental equipment and facilities.

*BAT is the acronym for best available technology. BAT is a specification that is announced at the national level calling on business operators to utilize the best available technology. In the case of commorial operations, BAT entails the introduction of technologies that ensure the highest levels of efficiency.