Deregulation is **reshaping** our market.

How are we responding?

KANTO PLAIN токуо Head Office токуо вау Ohgishima 🗆 **LNG Terminal** YOKOHA Sodegaura Negishi **LNG Terminal LNG Terminal** Length of pipeline: 46,285 km (As of March 31, 1999) High-pressure transmission pipelines Planned or under construction Medium-pressure transmission pipelines 10 15 20 (km) ■ Tokyo Gas service area

Negishi LNG Terminal

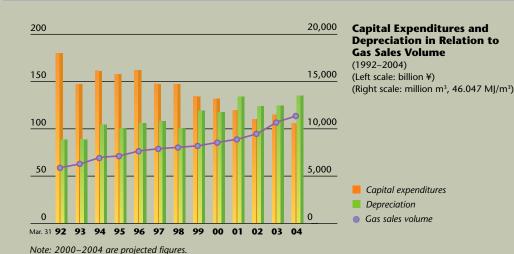
Commenced operations: 1969
Daily production capacity:
1.0 trillion Btu (21 million m³)
Storage capacity: 1.2 million m³
Special feature: Received Japan's first shipment of LNG in 1969

Sodegaura LNG Terminal

Commenced operations: 1973
Daily production capacity:
1.3 trillion Btu (29 million m³)
Storage capacity: 1.6 million m³
Special feature: The world's largest
LNG receiving terminal

Ohgishima LNG Terminal

Commenced operations: 1998
Daily production capacity:
0.4 trillion Btu (10 million m³)
Storage capacity: 0.2 million m³
(another 0.4 million m³ is presently under construction)
Special feature: The world's first completely underground 200,000 m³
LNG storage tank and Japan's first offshore LNG receiving berth



The above graph represents non-consolidated data.

I. Investing in a Powerful Supply Infrastructure

Demand for natural gas has risen as energy providers look for alternative energy sources other than petroleum and the government looks for solutions to environmental problems. According to MITI's Long-term Energy Demand and Supply Outlook for Japan (1998), growth is set to continue—the demand for natural gas is expected to rise 18% compared to 1996 by 2010. Overall energy demand, by comparison, is predicted to increase 3%. We are well placed to benefit further from this trend. Here's why.

Foresight Set to Pay Handsome Dividends

Recognizing the potential of natural gas, Tokyo Gas invested in a powerful supply infrastructure. With deregulation set to fuel even more demand for gas, our investments are giving us a competitive advantage. Significantly, these large-scale investments will approach completion in 1999—investments have already passed their peak. We are thus poised to start recovering on our investments.

Unrivaled Natural Gas Supply Capacity

Just how powerful is Tokyo Gas' supply infrastructure? Tokyo Gas has Japan's largest natural gas supply capability and is progressively upping capacity. Three LNG terminals—each of which plays a prominent role in Japan's gas industry—are at the heart of this strength. Our Negishi LNG Terminal received Japan's first shipment of LNG in 1969. Our Sodegaura facility is the world's largest LNG receiving terminal. And then there is the new Ohgishima LNG Terminal, the first phase of which came on stream in October 1998. Boasting the most sophisticated technologies, Ohgishima is of particular strategic importance. The terminal's location in the high-demand Keihin district near Yokohama means lower costs because a new long-distance pipeline is not required. Ohgishima will eventually have a production capacity of approximately 4 billion m³ per annum to respond to increasing demand.

Extensive Transmission and Distribution Network

Investments to bolster our transmission capacity are allowing us to take maximum advantage of our competitive edge in production. Two new pipelines, the Keihin Transmission Pipeline and the Yokohama Transmission Pipeline, slated for completion by the end of 1999, will augment our supply capability and complete a transmission loop and mutual backup system for our three LNG receiving terminals. What this means is that should an LNG receiving terminal go out of action, supply will continue as the other terminals can step in to take up the slack. The result: an even more powerful network for providing customers with a reliable supply of gas.

With these enhanced infrastructures we will be able to meet growing demand during the next few decades with minimum additional investment.





LEFTOhgishima LNG Terminal offshore receiving berth

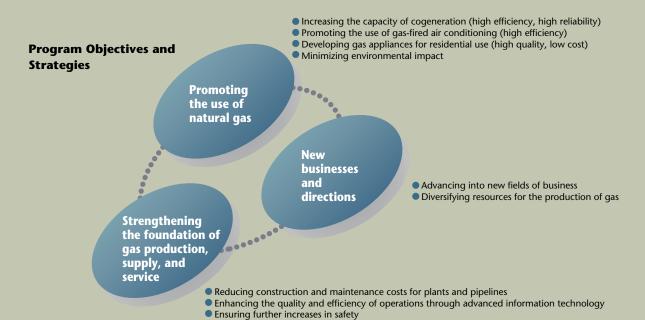
CENTERSodegaura LNG Terminal

Part of Tokyo Gas' transmission pipeline





Cogeneration system testing laboratory



II. Innovative Technology, More Competitive

An extensive and sophisticated supply network for gas is just one way in which we are honing a sharper competitive edge. Fully aware that a deregulated climate forces us to compete against other forms of energy, particularly electricity, we are strategically targeting R&D. Our aim is to give customers even more compelling reasons to choose gas over other energy sources. R&D will be a driver of future growth at Tokyo Gas.

Technologies to Create Demand

- **1. Gas Cogeneration Systems** One of our main research themes is cogeneration systems, which optimize energy use by providing electricity and recovering thermal energy. The ability of these systems to save energy and reduce greenhouse gas emissions makes them an attractive alternative for customers. Presently, we are working on micro turbines and fuel cells for residential cogeneration systems.
- **2. District Heating and Cooling (DHC) Systems** Tokyo is one of the most densely populated cities in the world. With land at a premium, building space must be used as effectively as possible. DHCs achieve this goal, in addition to energy savings, by circulating chilled water, hot water and steam from centralized energy plants via a network of pipes.
- **3. Gas-fired Air Conditioning** National energy policy is now promoting gas-fired air conditioning because of the increasing need to (1) raise the load factor of both gas production and gas distribution systems throughout the year, and (2) alleviate the electricity demand peak during the summer period. In this way, Tokyo Gas is helping to balance energy supply and demand, as well as reduce the overall energy costs of its customers.

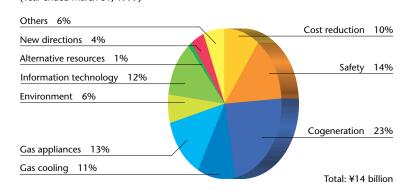
Technologies for Enhanced Infrastructure

Our gas infrastructure is underpinned by the development of innovative technologies that improve safety and reliability and yield cost savings. Foresighted investments in technologies such as high-pressure transmission and underground storage systems will ensure a stable, reliable and economic supply of gas to our customers in the future.

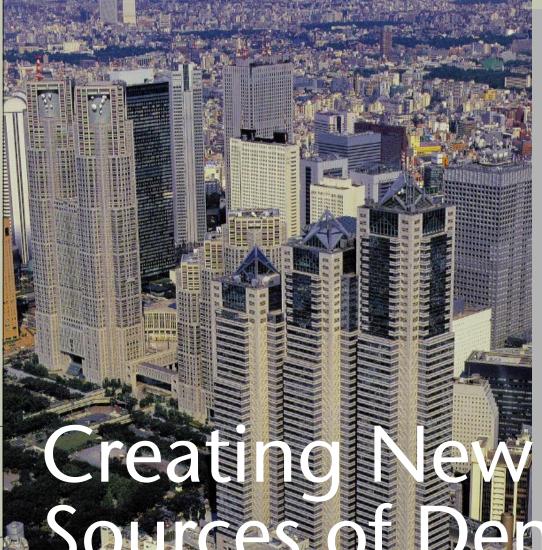
Technologies for Future Operations and Profits

Information technology (IT) is playing a vital role in expanding the gas market by helping to forge stronger relationships with customers. Our advanced services that draw on IT to establish effective two-way communication with gas users are raising customer satisfaction while adding an extra element of flexibility to our operations.



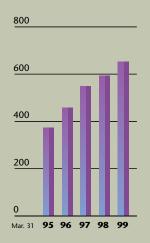




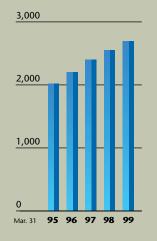


High-rise buildings in Shinjuku, one of Tokyo's liveliest commercial areas, use gas DHCs. This is the largest DHC system in the world.

nand



Growth in Capacity of Gas Cogeneration Systems (Unit: MW)



Growth in Capacity of Gas Heating and Cooling Systems

(Unit: Thousand Refrigeration Tons)

I. Using Deregulation to Boost Natural Gas Demand

Industrial and commercial users accounted for approximately 54% of our gas sales volume as of the end of March 1999, a 26% increase over the last 5 years. In the next 5 years, we expect an over 50% rise. Moreover, deregulation and the Japanese government's energy policy, supported by our gas-related technologies, promise to fuel this growth even more.

Opportunities Spawned by Deregulation

Deregulation has opened the door to the electric power industry. The first noticeable area of change is that independent power producers (IPPs) are now free to operate. We see this as an incredible opportunity to supply gas for power generation to these new large-volume customers. Presently, we have plans to supply three large-volume IPPs. One of these IPPs uses over 150 million m³ of gas a year. Deregulation now allows us to also supply electricity. We will monitor the electricity market closely and consider entering this market when conditions justify the necessary investments.

The December 1995 amendments to the Electricity Utility Industry Law allowed Tokyo Gas to supply electricity in specific areas such as redevelopment zones. With this field expected to expand, we are examining the feasibility of entry into this business.

Supplying gas to large-volume users purchasing 2 million m³ or more of gas per year outside our service area is a new area of potential growth for Tokyo Gas, and will be even more so when the user threshold is lowered to 1 million m³ in the autumn of 1999. In Saitama Prefecture, we have started supplying gas to a large-volume user that would be supplied by a gas company operating in that service area.

Government Energy Policy Driving Demand for Natural Gas

Also working to our advantage is the government's push for the use of certain energy sources as a means of reducing the environmental impact of energy consumption. Natural gas is widely recognized as an environmentally friendly fuel. This drive has been hastened by the adoption of resolutions from COP3.

Technologies to Encourage a Switch to Gas

High hopes are held for gas cogeneration systems; demand is expected to increase approximately 40% by 2002 compared to 1997. Gas-fired air conditioning, which was installed at approximately 56% of all new buildings with over 10,000 m² of floor space during fiscal 1998, is another illustration of how we give industrial and commercial users more reasons to choose gas over electricity. Reduced running costs and other benefits make this technology extremely attractive.





LEFT

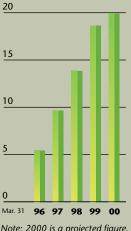
The Nihonbashi main store of Mitsukoshi, a famous Japanese department store chain, introduced a gas cogeneration system that also functions as an emergency power supply.

RIGHT

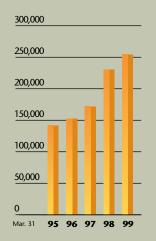
Gas turbine cogeneration equipment located at the site of an industrial customer.



Residential customers represent one of Tokyo Gas' most important areas of growth.



Percentage of New Housing With Gas Floor **Heating Systems in the** Tokyo Gas Service Area



Tokyo Gas Fan Heater Sales (No. of units)

Note: 2000 is a projected figure.

II. Forging Stronger Relationships With Residential Customers

Residential customers are a stable and strategically important source of revenue; in fiscal 1998 they accounted for 36% of total gas sales volume. To increase the gas sales volume per customer, we are pursuing a two-fold strategy. First is to strengthen marketing activities. For this we established the Residential Sales and Service Division in our headquarters in June 1999. The second part of our strategy is to raise customer satisfaction, thereby cementing a loyal customer base. Activities in this respect are overseen by the Customer Service Division, which was also established in June 1999.

Marketing Initiatives to Spur Residential Gas Consumption

We are already the preferred energy supplier for water heating and cooking in our service area with market shares of 92% and 75%, respectively. Now we want to make it that way for space heating by promoting floor heating, demand for which is growing rapidly. Targeted mainly at new buildings and some renovations, floor heating is ideally suited to the Japanese lifestyle—people often prefer to sit on the floor than on a chair or sofa. Floor heating is more than just a clean and comfortable heating alternative. It also helps control house dust and mold that are blamed for allergies. By promoting these advantages, we believe we can make floor heating the *de facto* standard in new homes. For customers living in houses or apartments where installing floor heating is not an option, we have been promoting the use of gas fan heaters. Highly efficient, environmentally friendly and inexpensive, gas fan heaters are increasingly popular; sales rose 10.7% in fiscal 1998 on sales of 254,526 units.

Other marketing initiatives include showrooms to promote our products and services, and direct sales activities to building sub-contractors to get them to install various gas systems in new construction and renovations.

A Customer-Centric Approach

Customer satisfaction is an important key to achieving growth in residential demand. That's why we are stepping up our efforts to offer better services from various angles. Improved safety, more attractive rates, low-maintenance appliances and lifestyle ideas are just some of the ways we are working to spur residential gas consumption—and build stronger bonds of trust with our customers.

Playing a significant role here is our customer service network. Our 18 branches conduct inspections of appliances in homes once every three years in addition to reading meters. To further deepen relationships with residential customers, we established call centers to handle inquiries from customers.

Augmenting our customer service network are roughly 400 Tokyo Gas franchise-based service outlets. Operating under the names Enesta and Enefit, these outlets provide a broad range of services ranging from gas pipeline works to installation and repair of gas appliances and household renovations.





LEFT
An Enesta branch outlet in Tokyo.

RIGHT

Gas floor heating is a clean and comfortable heating alternative.