# **Moving Forward** toward **Achievement** of **Frontier 2007**

- Overcoming Competition Triggered by Deregulation
- Entering Related Fields to Extend Customer Services
- Enhancing Procurement of Gas Resources
- Driving Future Growth through R&D



## **OVERCOMING COMPETITION TRIGGERED BY DEREGULATION**

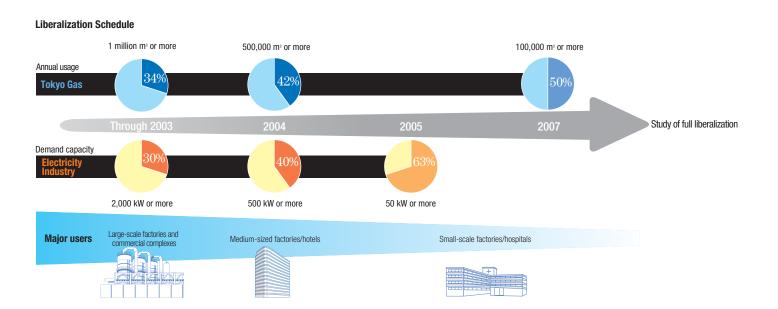
Tokyo Gas is accurately identifying the risks and opportunities resulting from liberalization and strengthening both its offensive and defensive positions.

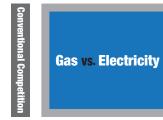
# **Strategies**

- Gas rate strategies based on effective utilization of the ¥180 billion allocated for rate reductions under Frontier 2007
- Development of energy service businesses based on environmental advantages of natural gas and energy efficiency and cost savings made possible by cogeneration
- Expansion into electric power business with competitive electric power prices made possible by the strengths of the Tokyo Gas Group









#### Utilizing a trusted network with more than 9.4 million customers

Tokyo Gas has always faced competition from other energy industries, including electricity. Competition in the area of air conditioning and cogeneration systems for office buildings and other facilities has been particularly intense since Tokyo Electric Power reduced its rates in 2002. Fierce competition is expected to continue, as Tokyo Electric Power has already announced further cuts to take effect from October 2004. This competition has also intensified in the residential market, with electric power companies promoting an all-electric lifestyle.

**Competition with other** energy forms



New market participants

# Gas vs. Gas

In April 2004, the scope of liberalization was expanded to include retail sales of gas to customers using 500,000 m<sup>3</sup> or more annually. This means that approximately 40% of the total volume of gas sold is liberalized. Thus, competitors, including electric power companies and oil companies, are intensifying their gas marketing activities. Tokyo Gas is responding to this gas-gas competition by refining and enhancing the unique strengths that will continue to make the Company attractive enough to be selected by customers. The greatest strength of Tokyo Gas is its ability to apply advanced technology and engineering expertise to the development of solutions that precisely match customers' needs. Tokyo Gas aims to maximize this advantage and

lion m<sup>3</sup>, as of 2007.

#### Seizing business opportunities created by liberalization

# **Electric power** VS. **Electric power**

Market participation by Tokyo Gas

In April 2004, regulatory reform of the retail electricity market expanded the scope of liberalization to include customers with demand capacity of 500 kW, reaching about 40% of electricity sales in volume terms. Tokyo Gas is determined to exploit this opportunity to the full by becoming active in the electric power business. The most critical requirement for success in this market is the ability to supply electricity at highly competitive rates. Tokyo Gas aims to expand its electric power business by forming alliances and using its competitive advantages. These include the use of existing infrastructure and expertise of its own or partner companies, locating plants close to demand areas, and utilizing the most advanced generation facilities to combine high efficiency and low cost.

A key challenge for newcomers is to find buyers for the electricity that they generate. However, Tokyo Gas is developing a range of options, including sales to the power retailer Ennet, which was jointly established by Tokyo Gas, the NTT Group and Osaka Gas, wholesaling to Tokyo Electric Power through an independent power producer (IPP), and direct sales to customers. It will also consider trading through the Japan Electric Power Exchange.

The strategy adopted by Tokyo Gas for this challenging environment is based on effective utilization of the ¥180 million allocated under Frontier 2007 to offer attractive billing options that match the needs of customers.

The competitive advantage of Tokyo Gas is close ties with more than 9.4 million customers based on its brand reputation. Tokyo Gas is determined to protect and enhance this advantage by continuing to provide customers with ideas for business efficiency and more comfortable lifestyles based on the use of natural gas with high added-value products and services.

#### Offering energy solutions based on advanced technology

remain attractive to customers through its energy services, which provide high added-value energy utilization solutions through the use of natural gas cogeneration technology.

Tokyo Gas recognizes the risk of eroding sales as a result of competition and already reacted in Frontier 2007 by assuming that competition will reduce revenues by approximately ¥30 billion, or by a sales volume of 500 mil-

#### **ENTERING RELATED FIELDS TO EXTEND CUSTOMER SERVICES**

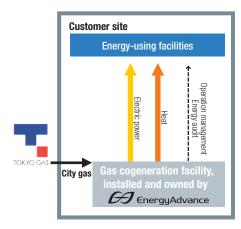
Deregulation has triggered the expansion of energy-related business opportunities. Tokyo Gas is steadily creating new business in this environment.

### **ENHANCING PROCUREMENT OF GAS RESOURCES**

Tokyo Gas strives to improve its cost competitiveness through the establishment of a natural gas supply chain linking upstream development to downstream markets.

# **Energy Services**

#### **Dynamically Expanding its Presence in the Growing Energy Service Market**



Energy service providers construct and retain ownership of the gas cogeneration systems and other energy facilities they employ on customer sites for the provision of one-stop energy solutions. Potential customers are increasingly attracted to the benefits of energy services, which include energy cost savings, increased environmental responsibility and virtually no initial outlay. The profitability of this business is also improving, as the systems themselves are made more efficient—a trend that promises a bright future for this emerging new business.

In 2002, Tokyo Gas established a new subsidiary, ENERGY ADVANCE Co., Ltd. This company is deploying a highly efficient marketing strategy by focusing on customers with substantial heating needs and a strong awareness of environmental issues. It is using the advanced engineering capabilities of the Tokyo Gas Group and its ability to procure LNG reliably and economically to maximize the added-value potential of gas cogeneration. Its main target market is the Kanto region, where there is significant untapped demand.

ENERGY ADVANCE is the leading company in the cogeneration field. By the end of fiscal 2003, the company had signed 35 contracts, totaling approximately 60 MW. It has also been selected for 18 subsidized schemes implemented by the New Energy and Industrial Technology Development Organization and other organizations. These schemes involve a total capacity of approximately 50 MW.

# **Electric Power Business**

#### Marking Full-scale Entry into Electric Power Generation



The Tokyo Gas Group's full-scale involvement in the power business began in October 2003 with the commencement of generation at a 100 MW plant operated by Tokyo Gas Bay Power Co., Ltd. In August 2003, Tokyo Gas acquired an IPP from Tomen Corporation and renamed it Tokyo Gas Yokosuka Power Co., Ltd. This power plant will start operation from 2006 with a generation capacity of 240 MW. Tokyo Gas is also exploring the establishment of an 800 MW plant in collaboration with Nippon Oil Corporation, and a 1.2 GW plant in collaboration with the Shell Group. Eventually, Tokyo Gas plans to increase its total generation capacity to 3 GW in line with the electric supply and demand and the evolution of deregulation in the electric power industry.

#### **Home Security Business Launched**

For decades Tokyo Gas has provided energy solutions to meet a wide range of energy needs. The resulting trust that has grown between Tokyo Gas and its customers is now the basis for the development and commercial introduction of new services. One of these new products is a home-security service provided in partnership with Sohgo Security Services Co., Ltd., combining Tokyo Gas safety technology with Sohgo's security technology. The service provides around-the-clock protection 365 days a year with features that include intruder detection, emergency notification, checking and remedial action when gas taps are left on or doors left unlocked, and emergency action in response to fires and gas leaks. The new service was introduced on a trial basis in April 2004 and will become fully available in autumn or later.



# Strategy

- competitive contract terms regarding pricing and flexibility.
- from fiscal 2002 levels under Frontier 2007. (based on 2002 currency exchange rates and crude oil prices)

#### What's New

#### Adding Upstream Development Capability with Darwin LNG Project



#### Reducing Freight Costs through Use of Wholly Owned LNG Carrier Fleet



In September 2003, the Energy Frontier commenced operations as the Tokyo Gas Group's first wholly owned LNG carrier. During fiscal 2003, ten voyages were carried out to supply Tokyo Gas with LNG, including spot trade, and to provide transportation for other parties. A second vessel is under construction and due to be launched in March 2005. Tokyo Gas aims to reduce its freight costs by using its own vessels to expand its FOB transactions. The vessels will also be used for spot purchasing and the provision of transportation services for other parties. In addition to reductions in gas resource procurement costs, the use of company vessels will also allow Tokyo Gas to secure greater flexibility in contract terms.

#### Securing Geographical Advantage with LNG Procurement from Sakhalin II

In May 2003, Tokyo Gas reached basic agreement concerning the sales and purchase of up to 1.1 million tons of LNG annually from the Sakhalin II project over a 24-year period starting in 2007. In addition to benefits relating to pricing and contract-term flexibility, this project offers a geographical advantage, since the close proximity of Sakhalin to Japan will reduce transportation costs. In addition, Tokyo Gas reduces procurement risk by diversifying its gas resources.

Tokyo Gas is using bargaining power arising from prospects of further growth in gas sales volumes to negotiate more

 The Company also aims to maximize the benefits of its LNG value chain by moving into upstream areas, such as gas field development and transportation. Among its goals is a 5% or more reduction in gas resource costs per cubic meter

The Darwin LNG Project is in progress in the Joint Petroleum Development Area, shared by Australia and East Timor. In June 2003, the two governments gave their approval for the project, in which Tokyo Gas and Tokyo Electric Power Co. (TEPCO) have decided to participate. As a result of this approval, Tokyo Gas is now involved in upstream development activities. In addition to their role in LNG production through this project, Tokyo Gas and TEPCO will purchase a total production of 3 million tons of LNG annually over a 17-year period starting in 2006. This participation gives Tokyo Gas entry to the entire LNG value chain, allowing it to reduce gas resource costs and ensuring reliable procurement of gas resources.



#### **DRIVING FUTURE GROWTH THROUGH RESEARCH AND DEVELOPMENT**

To help drive its growth, the Tokyo Gas Group is pursuing original research and development leading to the creation of innovative products and services as well as to the maintenance and enhancement of basic technologies. These efforts will serve as building blocks for new business models.

# What's New

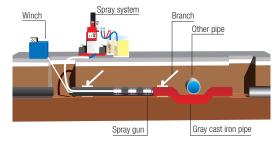
#### Launch of Environment-friendly Residential Fuel Cells Planned for Fiscal 2004

Tokyo Gas is collaborating with system manufacturers on the development of a residential fuel cell cogeneration system. The introduction of this next-generation product is expected to lead directly to increased use of gas. The system that Tokyo Gas is developing is based on solid polymer electrolyte fuel cell (PEFC) technology and will be fueled by hydrogen extracted from city gas. It will have an output capacity of 1 kW. The specifications were basically finalized in 2003 after trials in typical households. The product is now in the final stages of development, and the priorities are to improve durability and reduce costs ahead of the target launch date in the fourth quarter of fiscal 2004.



#### A New and More Efficient Method of Pipeline Maintenance

The period over which existing gas pipelines can be used safely has important implications for capital investment planning and tariffs. Tokyo Gas has developed and started using "Double-lining Technology" that allows maintenance to be carried out without excavation. Existing pipes are strengthened through the application of two resin coatings applied with a spray gun inserted into the pipes. There are major cost savings, since this method saves time, compared with the conventional method.



#### "TES Remote PLUS"—Information Technology the Key to Enhanced Convenience and Safety

The new "TES Remote PLUS" service developed by Tokyo Gas allows customers to control their TES gas water heater/heating systems remotely using mobile telephony. The new system, which has been available since April 2004 for newly built condominiums, also supports remote operation of other residential equipment with home automation capabilities, including door locks and electric air conditioners. TES system is becoming increasingly popular, and TES floor heating is now installed many newly built condominiums in the Tokyo metropolitan area. Tokyo Gas developed the new service to provide enhanced comfort, convenience, safety and peace of mind. The operation is also linked to Tokyo Gas' monitoring station, which can provide warnings or shut off the gas supply remotely if necessary, such as when a customer leaves home and forgets to turn off a gas appliance. The service also includes enhanced maintenance support by detecting and reporting faults in appliances.

