Tokyo Gas Group's Invisible Assets

Enhance "invisible assets" and achieve sustainable growth in our Second Foundation phase



Three contributions for realizing sustainable growth

The Tokyo Gas Group supplies stable affordable energy in the context of rising interest in using the potential of natural gas and of significant changes in Japan's energy industry triggered by the electricity and gas system reform

In the residential market, the Tokyo Gas Group is offering new values and services to enrich customers' lifestyles, as additions to our supply of gas and electricity. In the commercial and industrial markets, the Group continues working to provide energy solutions that suit customer needs, in order to increase the convenience and pleasantness of business conducted by our customers.

3
Accelerating global expansion

Using its know-how and experience, the Tokyo Gas Group is contributing to other Japanese companies in Japan and overseas with energy solutions, and to local energy infrastructure-building.



Procurement

Natural gas reserves are abundant in various parts of the world. The Tokyo Gas Group was among the first to notice the potential of natural gas and became the first in Japan to import LNG from Alaska. That was in 1969. Today, by procuring LNG mainly from Southeast Asia and Australia, our low dependence on the Middle East is one of our features. We also participate in the upstream gas field projects, which enable us to procure stable, price-competitive LNG.

Supply

We import LNG by tankers and store it in tanks at the LNG terminals. LNG is then reconverted into gas and adjusted in calorific value to be distributed as city gas to customers through our pipeline network of over 60,000 km. Main facilities such as plants and pipelines have adopted latest knowledge and technologies to withstand even a major earthquake (7.0 on the Japanese scale of an earthquake) as intense as the Great Hanshin-Awaji Earthquake of 1995. Unlike other energy sources, as city gas is made by conversion from LNG to gas at an LNG terminal and is distributed via pipeline, there is no energy conversion loss or transport loss to a point of consumption.

Maintenance knowhow to support stable supply and measures to prevent earthquake disaster In order to deliver natural gas safely and steadily to over 11 million customers 24 hours a day and 365 days a year, we are continually developing human resources involved in safety. To support the stable supply of city gas, it is indispensable to have human resources that are equipped with advanced specialized skills in facility design, construction, and maintenance as well as decision-making capabilities that enable the reliable execution of gas supply and safety responsibilities at times of emergencies. The trust of customers that has been earned as a result of expertise and efforts related to safety operations that we have accumulated during the group's history of 130 years has also become a strength of the Tokyo Gas Group.





Relationships of trust with over 11 million customers

Our relationships of trust with over 11 million customers. accumulated over the past 130 years, are our biggest strength. Tokyo Gas Lifeval (over one-third owned by Tokyo Gas), Enesta, and Enefit have 194 outlets and over 10,000 employees, providing services with the background of strong local community relationships and providing one-stop support for the daily life of customers in local communities. Their service menu includes gas tap opening and shutoff; safety inspection of gas taps and gas facilities; sales, installation and

repair of gas appliances and other home appliances; renovation mainly of bathrooms and kitchens; and handling inquiries and applications for electricity services. We believe strong relationships of trust with customers, based on these community-based sales organization is a driver behind our becoming the No. 1 new electric power entrant. In operations of the retail gas business, which was fully deregulated this year, we are determined to augment and strengthen our relationships of trust with customers.

Sales and Service Network



Outlets

194









Employees 14,000



Interface with the community

Help in gas and electricity planning

Gas tap opening and shutoff at the time of moving

Meter reading

Safety inspection and repair of gas appliances and equipment

Sales and installation of gas appliances and housing appliances

Gas plumbing

Design and installation of plumbing equipment and air conditioners

Home improvement

etc.





Research and Development

We are developing energy application technology that supports customers in their daily life and business, and technology to support safety and reliability of the city gas infrastructure. Moreover, in order to enhance competitiveness and expand our business domains, we are taking up the challenges of developing new technology in light of changes in the social environment, such as for low-carbon and digitalization.

R&D Expenditures (consolidated) (Millions of yen) 12,000 9,000 6,000 3,000 0 2011 2012 2013 2014 2015 2016 (FY)

Technology Development Themes of Tokyo Gas

Low-carbon society

Development of technology for realizing a low-carbon society. Raising efficiency of gas appliances and systems, such as fuel cells and gas cogeneration system, and use of renewable energy are included.

Hydrogen-oriented society

Development of technology for establishing a supply base of hydrogen, a form of clean energy with high potential, and for advanced use of hydrogen

Smart Society

Development of technology that responds to various needs of customers for energy saving, cost reduction, and reduction in environment burden. Smart energy network and smart meter system of gas are included.

Earthquake disaster prevention and stable supply

R&D for supporting the city gas infrastructure, including LNG terminals and pipelines; development of system to withstand a major earthquake

Comfortable, convenient and secure living

R&D for creating more values for customers. Research on lifestyle and development of services, using IoT, AI, and other digital technology are included.

Business partners

In this period of transformation of the energy industry, namely, the full deregulation of the electricity and gas retail markets, we are exchanging information broadly with not only electricity and gas companies but also players in various industries. Moreover, we are promoting cooperation in areas where we foresee mutual synergies such as gas resource procurement and the electricity business (power plant construction and electricity sales).

LNG Value Chain

Using technology and know-how concerning the total energy business, we provide energy solutions to customers who are expanding business in Southeast Asia and North America, and contribute to infrastructure-building.

PetroVietnam Gas

(Signing of a Memorandum of Understanding to conduct a feasibility study on energy solution businesses)

PT Pertamina

(Signing of a Memorandum of Understanding with Pertamina towards Forming a Strategic Alliance -Cooperation for Development of LNG Value Chain in Indonesia-)

PT Miura Indonesia

(Signing of a Memorandum of Understanding on Mutual Cooperation in Indonesia)

Petronas LNG Ltd.

(Signing of a Memorandum of Collaboration)

Gas resource procurement

Ensure flexibility and realize cost-competitive LNG procurement by enhancing and expanding alliance with LNG players in Japan and overseas

Kansai Electric Power; Kyushu Electric Power; Korea Gas Corporation; CPC Corporation, Taiwan; Centrica, U.K.

Power Generation

Expand competitive power sources

JXTG Energy (Kawasaki Natural Gas Power Generation)

Showa Shell Sekiyu (Ohgishima Power)

Kobe Steel

(Electricity procurement from Moka Power Station)

Idemitsu Kosan and Kyushu Electric Power (Chiba-Sodegaura Energy)

Shizen Energy

(Development of photovoltaic power generation)

Electricity Sales

Expand sales to high-voltage and extra-high-voltage customers

Tohoku Electric Power (Synergia Power) NTT Facilities and Osaka Gas (Ennet)

Expand sales to low-voltage customers

Business alliances with 21 companies including gas operators which are our city gas wholesale customers

(approx. 620,000 city gas customers)

Business alliances with 27 LP gas sales companies (approx. 310,000 LP gas customers)

Making progress with talks about sales through partnerships with companies in housing, construction, equipment, telecommunication, information service, and other industries.

Human resources

Because we see human resources as the underlying source of creation of corporate value, the Tokyo Gas Group is striving to develop employees who have high-level expertise and integrity, and flexibly respond to changes in society and business environment. Moreover, we are promoting creation of workplaces, where diverse employees can excel, as well as workstyle innovation.

Reorientation of the Tokyo Gas Group

Shift into a Yatsugatake Mountains type management structure

Evolution of the total energy business

Acceleration of global development

Work innovation and workstyle

Achieving sustainable growth

innovation by use of ICT

Promotion of Empowerment for Human Resources

1 Promotion of diversity

Top Management Commitment

The Tokyo Gas Group will promote diversity to ensure sustainable growth and development into the future

With competition between companies in the energy market continuing to intensify, the Tokyo Gas Group aims to maintain its position as the customer's choice and achieve sustainable growth and development in the future by realizing its Challenge 2020 Vision. One important priority for the Group as a whole is the promotion of diversity. For us to continue to meet diversifying

customer needs, it is vital that every single person employed by the Group should have the chance to excel and make maximum use of his or her knowledge, ability, and experience. We are committed as a corporate group to developing and expanding systems to achieve this goal and foster employee awareness of it while continuing to proactively create an organizational culture in which everyone can excel, regardless of gender, age, disability, nationality, or whether they were hired straight out of university or mid-career.



Specific Examples of Promoting Diversity

Promotion and empowerment of women

- Increase in women in management positions (the first female corporate officer was appointed in April 2016)
- Active promotion of initiatives, targeting 10% in the ratio of women in management positions by 2020
- Almost no difference in gender in terms of the average years of service

Employment of people with disabilities

- Employment rate of 2.19%, exceeding the mandatory rate (as of June 2017)
- Established a Liaison Committee to Promote Employment of Disabled People. Expand the locations and scope of work opportunities in the company for people with disabilities, and support initiatives by Group companies.
- Promote safe and comfortable working environment.

Support careers of employees over 50s and over

•A "Grand Career System" was established in April 2016 to support career development of people in their 50s, through training sessions and interviews with career consultants in the Personnel Department.

Development and optimal placement

Recognizing that people grow through their work, we are developing capabilities and skills of employees mainly through on-the-job training and by effectively combining it with off-the-job training and learning, self-development, and job transfer and rotations.

Development of executives

With the objective of developing next-generation executives, we conduct a program for those candidates, for them to discuss management with executive officers and others of various divisions.

Development and assignment of human resources, with consideration given to the Yatsugatake Mountains type management structure

We promote growth of the strategically-important electric power and overseas businesses by assigning more employees. In addition, we hire mid-career personnel with relevant experience and expertise.

Management philosophy to be known by all Group employees Tokyo Gas Group mindset training sessions are conducted for new employees of the Group to nurture a sense of cohesion and unity. We promote our management philosophy for those employees to achieve our own sustainable growth while contributing to our business and overall social endeavors.

2 Occupational safety and health

Safety and health, or protection of the life and health of employees, are basic to the very existence of a company. With the aim of helping employees maintain and enhance health, we have a mental health initiative and an initiative to prevent adult lifestyle-related diseases. We also encourage a 100% participation in regular medical examinations to detect

disease at an early stage and make effective use of outside medical institutions.

In order to prevent a health problem caused by long working hours, overtime work after 10 pm is banned in principle. By maintaining a sharp distinction between work and off-time, we aim at streamlining performance and raising productivity.

External Evaluation

Selected as a Nadeshiko Brand (being outstanding in terms of encouraging the empowerment of women)



Granted Kurumin certification by the Minister of Health, Labour and Welfare as a company that provides superior childcare support



Selected as a Health & Productivity Stock 2017 by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange



Work Innovation Project "Work with Enthusiasm"

Aiming at taking up challenges to changes in the external environment, deregulations, we have promoted a work innovation project Work with Enthusiasm, using ICT. Employees working with enthusiasm are expected to result in the creation of value and the improvement in productivity.

Workstyle Innovation

"Work anywhere"

"Work in a free-form animated manner"

Overcoming restrictions on where to work

Enhancing knowledge sharing and communication

Ex. Work at home, reforms of offices, etc.

Work Process Innovation

"Work to be entrusted"

Automation, use of machines, advancement of work

Ex. Study use of AI technology in work, etc.

We will continue to verify the effects, use the PDCA cycle, and implement and settle tools and rules for promoting changes in mindsets.



Multi-purpose space in the new office of Tokyo Gas Engineering Solutions