

# TOKYO GAS ANNUAL REPORT 2016

Tokyo Gas Co., Ltd.



# Supporting you Always and bettering every day.



The Tokyo Gas Group aims to be
a true power source for people's lives, and for society.

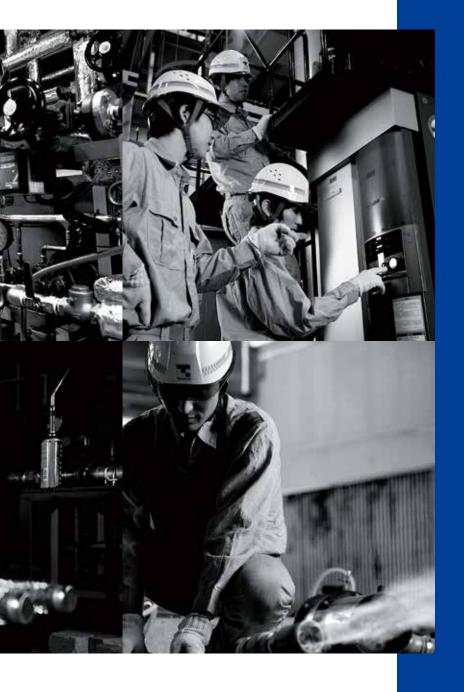
Over 130 years, our work kept
us in a kind of face-to-face relation with our customers.

Based on the accumulated experience and trust
derived from that history,
we want to help create a bright, safe, and pleasant tomorrow.

We will continue to be very close to our customers
and be deliberate in taking action on their behalf.

Our efforts will be group-wide as will
be our bold, confident approach to the challenges ahead.





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# Forward-Looking Statements

This annual report includes various management goals and other forecasts relating to the "Challenge 2020 Vision" announced in November 2011 and other strategies. This information is based on forecasts, assumptions, and available information when preparing the "Challenge 2020 Vision" and other strategies and does not guarantee the achievement of goals and forecasts or future business results. Further, this information may change due to changes in business conditions. Therefore, placing undue reliance on this information is not advised. In addition, the target figures for fiscal 2016 are based on the judgment of management and the information available when the figures were published (April 28, 2016). The company will disclose the latest information to the Tokyo Stock Exchange in a timely manner and at the same time publish it in the investor relations section of its website (http://www.tokyo-gas. co.jp/IR/english/index.html).

# **Tokyo Gas** continues to grow as "New Energy Frontier"

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For generations of Japanese people the Tokyo Gas Group has provided a stable, reliable supply of gas for industries and households, to support economic development of all, and ensure comfortable home environments and desirable lifestyles. At the same time, we have raised the corporate value of Group companies.

We believe we are in the midst of an era we call the second foundation of the company as the full deregulation of the electric power and gas markets draws near. In this context, we are pledged to make our "Challenge 2020 Vision" adopted in 2011 a reality and ensure the unfaltering growth of the Tokyo Gas Group in the years to come.

\* The numbers of gas customers and gas sales volumes are parent-based up to fiscal 2002 and consolidated-based from fiscal 2003.

million million The Tokyo Bay Underwater Line .... Gas sales volume (LH) went into service. Number of customers (RH) The Looped Line (Negishi- Sodegaura) went into service. 5 million LNG imports from Brunei started. • Sodegaura LNG Terminal started operation. LNG imports from Alaska started. ..... Tokyo Gas was established. Negishi LNG Terminal started operation. Following the enactment of the Commercial Code, name changed to Tokyo Gas Co., Ltd. 0 1895 1900 1905 1910 1915 1920 1925 1930 Main gas Oil

Gas usage

Lighting )

Heating

Started to supply gas for lighting

Developed household gas appliances for a more comfortable life

1902 "Gas Kamado" oven went on sale

1957 "Automatic gas rice cooker" went on sale.



Gas lamp



Gas Kamado oven



Automatic gas rice cooker



Kuramae Kokugikan



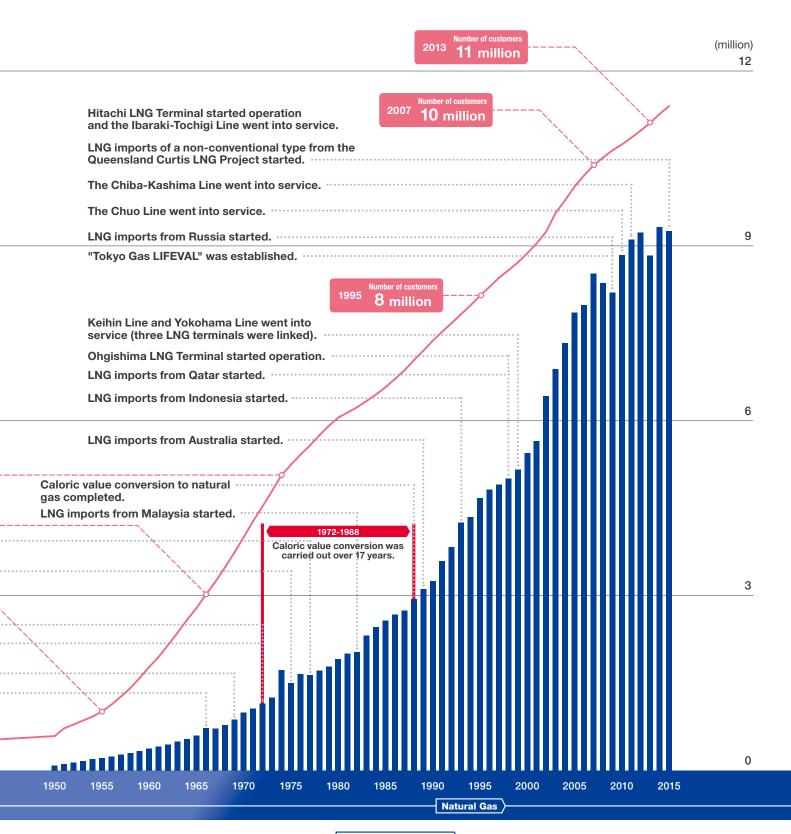
The old Shinjuku District Heating and Cooling Center



First natural gas cogeneration system



Residential fuel cell "ENE-FARM"



# Heating and electricity

### **Expansion in the commercial** and industrial user segment

- 1970 The first gas air-conditioning unit was installed at Kuramae Kokugikan sumo arena.
- 1971 District heating and cooling service launched in the Shinjuku district, Tokyo (first customer, Keio Plaza Hotel).
- 1974 Use of industrial gas took off with adoption of gas boilers by Nisshin Sugar Co., Ltd.

# Promoted cogeneration

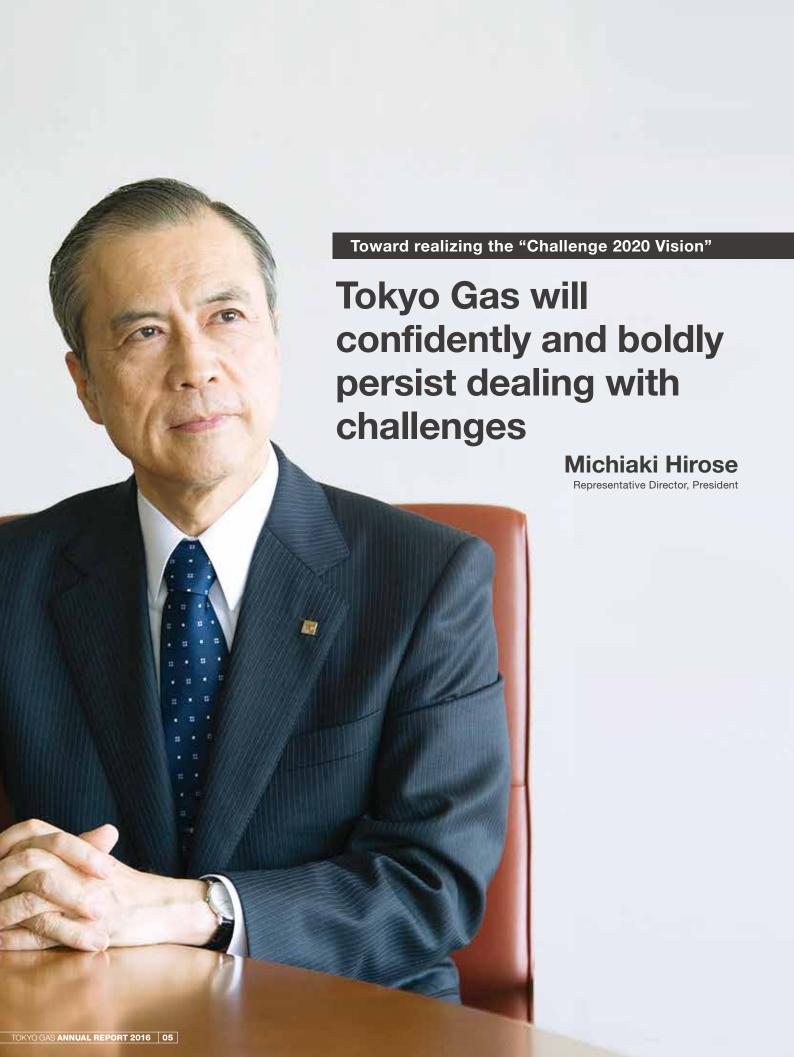
- 1981 The first cogeneration system was installed at the National Stadium.
- 1987 "Gas heat pump" was launched.

### Entered the electric power business

- 2000 Ennet was established.
- 2003 Tokyo Gas Baypower Station went into operation.
- 2006 Yokosuka Power Station went into operation.
- 2008 Kawasaki Natural Gas Power Station went into operation.
- 2010 Ohgishima Power Station went into operation.
- 2016 Entered into the electric power retail business.

### Promoted and expanded "ENE-FARM" residential fuel cells

- 2009 A model for detached homes went on sale.
- 2014 A model for housing complexes went on sale.
- 2015 A model with built-in selfsustaining power generation function went on sale.



My mission is to create new Tokyo Gas corporate value.

Since 1885, Tokyo Gas has provided a stable and reliable supply of gas to industries and households in the Greater Tokyo Area to support its economic development and quality of life of its people. While doing so the company has also raised its corporate value.

We believe we are in the midst of an era we call the second foundation of the company as the full deregulation of the electric power and gas markets draws near. In this context, we are pledged to make our "Challenge 2020 Vision" adopted in 2011 a reality and ensure the unfaltering growth of the Tokyo Gas Group in the years to come.

# Fiscal 2016 will be a year to form a solid base for future growth

In fiscal 2015, ended March 31, 2016, we achieved a record high in operating income, ¥192 billion (up 11.8% year-on-year). This was mainly due to a lagged benefit from lower oil prices, and adjusted for such extraordinary factors, operating income was estimated to be similar to that of the previous year.

For fiscal 2016, ending March 31, 2017, assuming the exchange rate of ¥115 per U.S. dollar and an oil price of \$37.5/bbl (\$35 in the first half and \$40 in the second half), operating income (initial forecast) is expected to be ¥48 billion (down 75% y-o-y). Major factors for this profit decline will be an absence of the lagged benefit of last year, pension actuarial difference, and an increase in depreciation burden following the start-up of domestic large infrastructure projects. Excluding such extraordinary factors, we do not think that our operating performance is significantly deteriorating this year. With the advent of completion of the deregulation of the electric power and gas markets, we have identified this year to be a critical year for Tokyo Gas to become a "total energy" company and a truly global company. We will make investments and implement measures for enhancing our mid- and long-term corporate value to form a solid base for our future growth.

# We are making steady progress in the second "Step" stage measures of our Challenge 2020 Vision

Fiscal 2015 was the first year of the second "Step" stage of our Challenge 2020 Vision. We made steady progress in its three main measures: to evolve into the total energy business; to accelerate global business development; and to reconstruct the corporate group. We will continue our progress in fiscal 2016.

# **Evolving into the total energy business**

To evolve into the total energy business, we have established our base for expanding sales of gas in the future. Specifically, we began operation of our Northern Kanto Area infrastructure, including the Hitachi LNG Terminal, our first receiving terminal located ouside of the Tokyo Bay area as well as the Ibaraki-Tochigi Line. In addition, we have decided to construct the Ibaraki Line to connect Hitachi area and

Kashima area, as a last component to complete our infrastructure in the Greater Tokyo Area. Upon completion of the Ibaraki Line and pipeline loops, we can surely accommodate future additional gas demand in the Greater Tokyo Area.

Concerning the electric power business, the third unit of Ohgishima Power Station (Tokyo Gas generation capacity: 300 MW) started operation in February 2016, ahead of the full deregulation of the retail electric power market in April 2016. In January, we commenced pre-order sales of electricity to residential and commercial customers and have been steadily building up the number of customers. Our plan for the initial year is 400,000 customers but we are making group-wide efforts to achieve and exceed the target as soon as possible, with the aim of becoming the No. 1 new power entrant.

# Accelerating global business development

In the context of accelerating global business development, we have established new business operation sites and increased our workforces in the past two years. Specifically, our office in Houston, Texas increased the workforces to around 20 persons, while we opened new offices in Singapore, Jakarta, Bangkok, and Hanoi to make a fiveoffice network in Southeast Asia, including the existing office in Kuala Lumpur. Having bases like these enables us to collect valuable and timely information. From fiscal 2016, we have launched two initiatives based on our enhanced new network. First, leveraging our strength as an LNG importer, we decided to get involved in upstream projects in North America. Making use of our past lesson in being forced to record impairment loss in a downward phase of oil and gas prices, we will cautiously select prime projects while carefully focusing on commodity price trends. Second, capitalizing our long-accumulated total energy business technology and know-how, with an emphasis on LNG in Japan, and through alliances with local energy companies in Southeast Asian countries, we want to take up the challenge of developing an LNG value chain business from receipt and supply to use of LNG. We recognize that it will take time to establish a deep-rooted local network. Nonetheless, with a focus on North America and Southeast Asia, we would like to develop and promote business from a medium- to longterm perspective.



# **Reconstructing our corporate group**

Concerning the reconstruction of our corporate group, we aim to integrate functions and operations, including those at subsidiaries and affiliates, through the selection and concentration of businesses. Specifically, we withdrew from manufacturing and sales of gas appliances by selling shares of Gastar Co., Ltd., our group company, to Rinnai Corporation, and decided to enhance sales business, which brings us closer to customers and leverages our Group's strength. In April 2016, we established Tokyo Gas Liquid Holding Co., Ltd. to control our liquid gas business, such as LPG gas and industrial gas. By having Tokyo Gas Energy Co., Ltd., Tokyo Gas Chemicals Co., Ltd., and Japan Super Freeze Co., Ltd. under the new company, the liquid gas business structure has been restructured to enhance group management.

Triggered by the fully deregulating the retail electric power and gas market, we are carrying out the reconstruction and consolidation of the Tokyo Gas Group and other structural reform, where none has been done up to now. The city gas business will always be our core business. Going forward, however, we will shift away from management focused on one dominant business in city gas, corresponding to Mt. Fuji, to management of several large businesses, including the electric power business, overseas, engineering, liquid gas, and real estate businesses, corresponding to an entire mountain range.

Going forward, to boldly and speedily promote our measures of the "Step" stage, we expect that investment in resources will temporarily have priority over establishing infrastructure, acquiring customers in the electric power market, and achieving other objectives. This is a requisite, however, for our next "Jump" stage. I firmly believe that Tokyo Gas will continue to grow by steadily implementing the measures, looking toward the future beyond the Challenge 2020 Vision.

# Deregulation of the retail electric power and gas markets is regarded as a major business opportunity.

The electric power market is immense, at ¥3 trillion in the Greater Tokyo Area alone, and we regard the opportunity to access this market as a major business opportunity for Tokyo Gas. In addition to wholesale and large-scale customer markets, we are focusing on the sale of electricity to households and small commercial customers, the sectors that are subject to deregulation. We have a very challenging objective of satisfying 10% of demand for electricity, equivalent to 30 billion kWh, in the Greater Tokyo Area by 2020. Regarding the power supply required for electricity sale, the third unit of the Ohgishima Power Station began operation in February 2016 and power generation capacity has been raised to 1,600 MW. Moreover, due to purchase of the electricity generated at Kobe Steel's Moka Power station and other factors, we plan to expand our supply capacity to 3,000 MW by 2020. Further, in addition to competitive gas-powered thermal power sources, we will also implement renewable energy initiatives, with consideration to addressing to the issues of the climate change. As we have a clear prospect of securing adequate power sources, the next challenge is how to build a customer base, which we believe incorporates two important points. First is

# Tokyo Gas is carrying out structural reforms, looking ahead to the full deregulation of the electric power and gas business

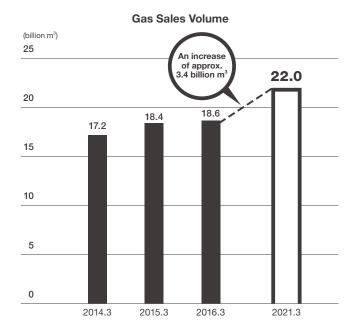
our policy on pricing. Tokyo Gas has long accumulated added value, namely reliability, safety, and trust through its 130-year history in the gas business. It is certainly important to make certain competitive pricing relative to our competitors. However, we believe a considerable strength of Tokyo Gas lies in its direct contact with its customers with whom the solid relationship of trust has been established and through Lifeval companies engaged in maintenance, inspection, sale of gas appliances, and others. We intend to get maximum leverage out of it.

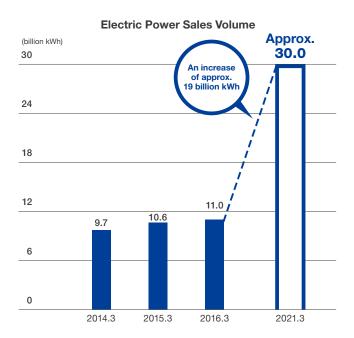
The second important point is how to think about earnings. We hope to be widely recognized that Tokyo Gas will be the No. 1 new power entrant from the beginning of the full deregulation of the retail market and will steadily acquire a significant market share. Then after a few years, we expect that new players will be reorganized and consolidated into a fewer number. Along with such scenario, at the initial stage, costs to enter the small-scale-user electricity sales market will temporarily increase. However, as the infrastructure industry leverages economies of scale, at a stage when a certain scale of demand is acquired, our management focus can be shifted into acquiring profitability.

In April 2017, the retail gas market will be deregulated. In my view, the purpose and objectives of the Gas System Reform is slightly different from the Electricity System Reform. The Electricity System Reform aims at 1) stable supply of electricity; 2) lower electricity prices; and 3) more options of suppliers for customers, while the Gas System Reform aims at 1) stable supply and expansion of diffusion of gas use; 2)

lower gas prices and higher customer satisfaction; and 3) more options of suppliers for customers and enhanced customer safety. Differences are to include "expansion of diffusion of gas," "higher customer satisfaction," and "enhanced customer safety" for the gas reform's purposes. Use of environmentally-friendly natural gas which generates low CO<sub>2</sub> emissions displaced other fuel and conversion to gas use is still advancing. While electricity is relatively easy to handle, gas requires safety to be secured up to the point of use at customers. As safety know-how is indispensable for the safe use of gas, we believe that now is precisely the time that our accumulated relationship of trust with customers will be tested. Moreover, in Japan, a country poor in natural resources, Tokyo Gas can stably procure energy resources by procuring as planned approximately 14 million tons of LNG annually, equivalent to 15% of Japan's LNG procurement, and can utilize its existing LNG terminals and other components of its infrastructure.

As a managerial risk scenario, we need to prepare for the possibility of a certain share to be taken away by our competitors if the full deregulation triggers renewed competition in the already-deregulated large-scale customer segment of the market, in addition to competition in satisfying household gas demand. This makes us even more determined to increase profits in absolute value terms by fully utilizing our relationship of trust with customers and enhancing our unique services, and at the same time by expanding our business in the electricity market, which is bigger in size than that of gas, at an early stage.





# Enhance "invisible assets" and take up challenges of our second round of foundation

In the midst of an era of the full deregulation of the retail electric power and gas markets, we think of ourselves as being in our second foundation era. Eiichi Shibusawa, a Japanese industrialist and financier in the 19th century, who founded Tokyo Gas and established its business base, wrote in his book Rongo to soroban (The Analects and the Abacus) the importance of balancing the pursuit of common good and profit. For 130 years since foundation, we have kept this foremost and consistently have endeavored to contribute to society by safely and stably supplying energy, which is indispensable to people's lives, and have achieved sustainable profit growth of the company. This dedication is shared by all of our employees and is the ultimate source of our corporate value. This underlying principle will remain unchanged when we handle not only gas but also electric power and other energy sources and when we do business not only in the Greater Tokyo Area but also Japan and the World. Since our foundation in 1885, we have accumulated "invisible value" which do not appear on financial statements, while being engaged in the stable supply of gas to industries and households and in supporting economic development and prosperous lives of people in the Greater Tokyo Area. Our sources of competence include accumulated knowledge and know-how, richly experienced human resources, a track record in stable supply, LNG procurement capacity, our

customers' trust, the metropolitan network of Lifeval as service companies and others, and various business partners. We are determined to enhance such "invisible value" and realize a sustainable growth as a corporate group through three avenues of contribution.

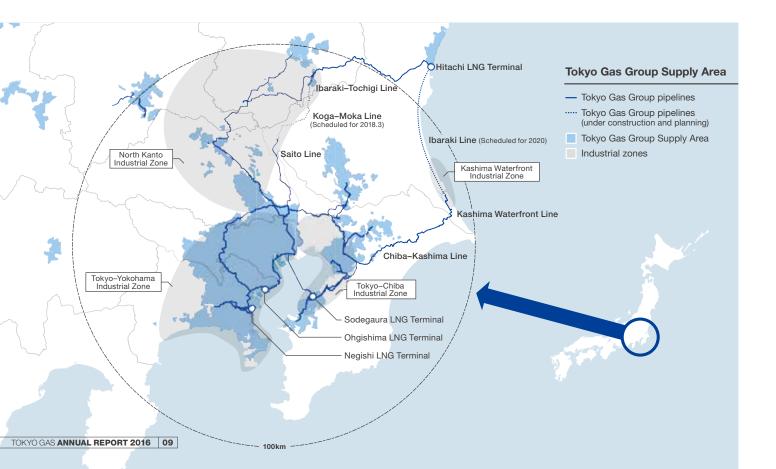
First, as a progressive public-interest energy corporate group in Japan's energy sector, the Tokyo Gas Group stably supplies internationally-competitive energy in Japan and makes a constant contribution to people's safe, reliable lives and Japan's economy.

Second, Tokyo Gas will evolve into a unique total energy business to better respond to everyday needs for customers' lives, by making use of its bonding with over 11 million customers, maintenance system and know-how, ICT and other advanced technology, and over 200 Tokyo Gas Group shops in the Greater Tokyo Area.

Third, we will contribute to economic development and people's level of life elsewhere in Asia, by making use of our accumulated technology portfolio and know-how in Japan to respond to increasing demand for natural gas and other energy resources in Asia, and by establishing an intra-region infrastructure and value chain.

# Give our full attention to the stakeholders and committed to enhance corporate value

Tokyo Gas will be open to all of our stakeholders, including our customers, shareholders, business partners, local communities,



and employees, and contribute to enhance value for each of them. This will ultimately enhance our own corporate value. Concerning shareholder return, we intend to maintain unchanged the amount of dividend per share in fiscal 2016 despite expecting a significant decline in profit. Our policy continues to be a gradual increase in dividends over time in line with earnings growth. In addition, by combining share repurchase (assuming subsequent cancellation), our basic policy to target a total payout ratio of approximately 60% will be maintained up to 2020.

Given the strong public service nature of our business, our management stance to date has emphasized a well-balanced approach to our customers, our most important stakeholders, in our returning the company's achievements in management efficiency. Our customers benefited from the lowering of gas prices, in December 2013 and December 2015, and our shareholders benefited in the form of an increase of ¥1 in dividend per share to ¥11 in fiscal 2015. Our corporate and business philosophy will not change in principle even in this era of deregulation. Nevertheless, we will continue to steadily grow earnings after 2020 and seek to return our achievement to our shareholders.

Lastly, I will manage Tokyo Gas to keep it a growth company. First, the gas business is a growth business. While Japan's economic growth rate is now not as high as in the past, there is a potential demand for natural gas in the Greater Tokyo Area that waits to be satisfied, and continual sales growth can be projected with a high degree of confidence. Second, Tokyo Gas will evolve into a total energy company, including the electric power business, and foster businesses that have the potential to become earnings pillars alongside the gas business.

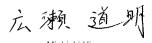
Third, we will explore overseas business opportunities, leveraging the strengths accumulated in Japan in the total energy business.

While the Gas System Reform in 2017, mainly the deregulation of the retail gas market, is likely to intensify competition, I am convinced that Tokyo Gas will make continued growth by evolving into a total energy company and by accelerating global operations over time.

The full deregulation of the retail electric power and gas markets is reshaping Japan's energy industry. At the center of this tumultuous change, the Tokyo Gas Group is transforming itself, and confidently and boldly faces challenges as the industry enters virgin territory.

I ask for the continued understanding and support of our stakeholders, including our customers, shareholders, business partners, and local communities.

Representative Director, President







Tokyo Gas will maintain financial health and appropriate and timely shareholder returns, and steadily implement growthdriven investments to achieve continuous profit growth.

Isao Nakajima

Senior Executive Officer, CFO

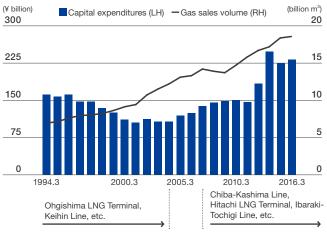
# Triple promotion of growth strategy, financial health, and shareholder return

As CFO, I participate in setting management strategy and am also in charge of financial strategy, capital policy, and business administration. Based on the premise of assuring appropriate shareholder returns each year, I firmly believe that the way to respond to this mandate by the company, it being entrusted with capital from its shareholders, is to realize continuous profit growth into the future. I therefore aim at well-balanced allocation of operating cash flow to growth investments, maintenance of a healthy financial position, and policy for medium- to long-term shareholder return.

For that purpose, return on equity (ROE) is an indicator we focus on. As ROE is return on assets (ROA) multiplied by financial leverage (assets divided by equity), it is critical to raise ROA in order to improve ROE. Therefore, we regularly assess the group's assets and businesses, and try to compress total assets by sale or disposal of assets or businesses which make less sense to own, when appropriate. At the same time, we strictly review the purpose and business potential of our investments.

Financial leverage is another way to improve ROE but we

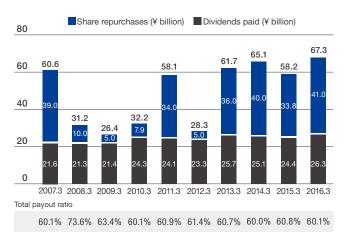
# **Capital Expenditures and Gas Sales Volume**



should not be short-term oriented. Rather we find it important to balance "accumulated retained earnings to be used for growth investments and in ensuring financial health" with "return to shareholders". In order to secure fund sources for medium- to long-term shareholder return, continuous growth investments are critical. Financial health is indispensable for sustaining high credit ratings (Aa3 by Moody's and AA- by S&P), and will eventually lead to restrain funding costs and become more trusted by our customers. By keeping these things in mind, we will continuously and aggressively strive for dividend payment and share repurchases.

From the viewpoint that it is important to clearly communicate our views and policy on shareholder return to shareholders, we have set a target for a total payout ratio (ratio of dividends and stock repurchases to consolidated net income) of approximately 60% and have steadily been implementing it. In regard to dividend payment, we aim to maintain stable levels while carrying out a gradual increase in dividends. Since fiscal 2000 when we raised the annual dividend from ¥5 per share to ¥6, and we have gradually raised it to ¥11 in fiscal 2015, up ¥1 from the previous year. In fiscal 2016, we intend to maintain ¥11 in dividend despite expecting a significant decline in profit mainly due to an increase in gas resource costs.

# **Shareholder Returns**



<sup>\*1</sup> Non-consolidated basis up to fiscal 1998; consolidated-basis from fiscal 1999 \*2 Gas sales volumes from fiscal 2011 are on a 2020 Vision basis. (Including the portion used in tolling and the LNG sales volume.)

# **Basic Financial Policy**

Steadily implement growth investments

Aiming to realize continuous profit growth in the years ahead, growth investments are to be appropriately prioritized and implemented from a medium- to long-term perspective.



We will keep the D/E ratio at approximately 0.8 and credit rating at the AA-level to maintain funding capacity and creditability.



Under the policy of aiming at a total payout ratio of approximately 60% to shareholders, profits are to be distributed to them appropriately and timely.

# Continuous investment to grow as a total energy company

Our focus for realizing sustainable growth is to evolve into the total energy business and to accelerate global business development. We seek to move away from management focused on one dominant business in city gas, corresponding to Mt. Fuji, to management of several large businesses, including the electric power business and the overseas business, corresponding to an entire mountain range. While we are prudent in investment assessment, we will not hesitate to make growth investment once it is determined to be needed. With regard to the evolving into the total energy business, it is indispensable to establish and expand the production and supply infrastructure of city gas. Investment recovery tends to take substantial time in our business and we may have to bear temporary declines in profit if production and supply capacity (increase in depreciation burden) exceeds demand acquisition (increase in revenues) for some time after construction is completed.

Nevertheless, such investment will lead not only to acquire hidden demand but also to stimulate and create new potential demand. For example, Kobe Steel is currently constructing Moka Power station with operation scheduled to commence from 2019 and Tokyo Gas will supply city gas to this state-ofthe-art 1,200 MW gas-fired thermal power station. This mega project has been set up after the Hitachi LNG Terminal construction was completed in fiscal 2015 and the Ibaraki-Tochigi Line was scheduled to be built to connect this terminal with Moka City in Tochigi Prefecture. Tokyo Gas plans to purchase all of the electricity generated at this station and expects it to become our main electricity source and support our electricity business in the future. In April 2016, we began doing retail electric power business. Among about 300 new suppliers, we have so far received the highest number of customers, which has given us some confidence toward the future. The backdrop for this outcome must include our long-nurtured bonding with our customers in the gas business and our brand power in reliability, safety, and trust.

Also, we believe that our careful and cautious advance in retail electric power business will protect our city gas customers. As we have identified fiscal 2016 as an important year to solidify our No. 1 position as a new power entrant, we are investing significant management resources in establishing arrangements for customer services and sales. Although earning profits will be difficult, we will heavily invest our group power in the retail electric power business, with the spirit of "First come, first served." Regarding global business development, we will make careful assessment of feasibility of each potential project and the oil and gas market trend, and intend to steadily expand our business to accumulate favorable businesses. In addition to the LNG and shale gas businesses in Australia and North America, we plan to invest in power generation and energy service businesses in Southeast Asia. In fiscal 2016, we decided to invest in a few projects, all of which are joint projects with an excellent local partner. We thereby intend to reduce risks and grow earnings from them.

# Message to shareholders and dialogue with capital markets

I think it is important to talk about our initiatives to investors as accurately as possible, without pretending ourselves to be bigger than we actually are. In the last 12 months, we had about 300 one-on-one meetings with institutional investors in Japan and overseas besides various analyst meetings and facility visits.

The 130-year history of Tokyo Gas, which originated from gas lamp business, is a history of continuous competition with electricity, fuel oils, LPG, and other energy sources. By providing pleasant living and working environments through city gas and our economical and eco-friendly energy system, we are now supported by over 11 million customers and sell natural gas which is on the order of magnitude of 18.6 billion m<sup>3</sup>. Our customer-first mindset, proven by our long history, and our highly-reliable manufacturing and supply infrastructure, are our greatest strengths. We will make best of those strengths and are determined to create growth opportunities from the electric power and gas deregulation.

# LNG Value Chain for Value Creation

The Tokyo Gas Group, since receiving the first cargo of LNG to Japan, in 1969, has been the nation's leader in use of LNG and a top company in natural gas. We have strived to establish an LNG value chain that encompasses procurement, production and sales. We will continue to accumulate the technology and know-how of LNG and natural gas, improve infrastructure and its competitiveness, and pursue both a safer and more reliable supply of energy and reduction in energy costs. Through these activities, we will enhance our corporate value, on the basis of contributing to society.

# **LNG Value Chain**



# **LNG Value Chain Strengths and Managerial Assets**



# Stable and affordable LNG procurement capacity

LNG procurement volume 13.87 million tons (equivalent to approx. 15% of Japan's total)



# Reliable solid infrastructure

4 LNG terminals, 4 power stations, and gas pipelines



Track record of stable supply, relationships of trust with over 11 million customers; Natural gas technology and maintenance know-how; employees sharing a common management philosophy; and business partners in Japan and overseas

Healthy balance sheet that supports stable financing



Community-based sales network and capability to propose energy solutions



Assets that do not appear on financial statements



# **Value Creation**

# **Social Value**

Contribution to economic development through stable energy supply and reduction in energy costs

Provision of energy solutions (i.e., convenience, safety, economic efficiency, reduction in  ${\rm CO_2}$  emissions etc.)

# **Economic Value**

Fiscal 2020 (target)

**Operating cash flow** 

¥250 billion

ROE

ROA

8%

4%

Shareholder return

Total payout ratio

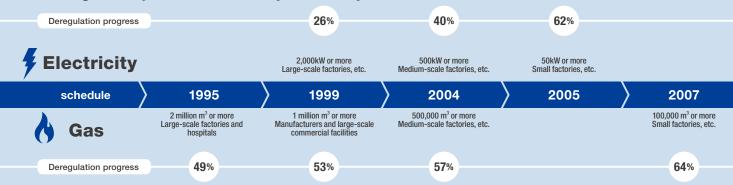
**60**%

# Shareholder return policy

- Return profits to shareholders through dividends and share repurchases, by setting a target for a total payout ratio (ratio of dividends and stock repurchases to consolidated net income) of approximately 60% for each fiscal year up to fiscal 2020.
- Stable dividend payment is maintained, while a gradual increase in dividend has been achieved.

# **Deregulation of the Electric Power and Gas Markets**

# Meaning and Objectives of Electricity and Gas System Reforms and Schedule Milestones



# Major issues in Gas System Reform

As a preparatory measure for full deregulation of the retail gas market, the regulatory authorities defined the gas industry as consisting of three types: pipeline business (general and dedicated); retail business; and production business. As a general gas business in the Greater Tokyo Area, Tokyo Gas has provided a one-stop

service from production to supply and sales. However,

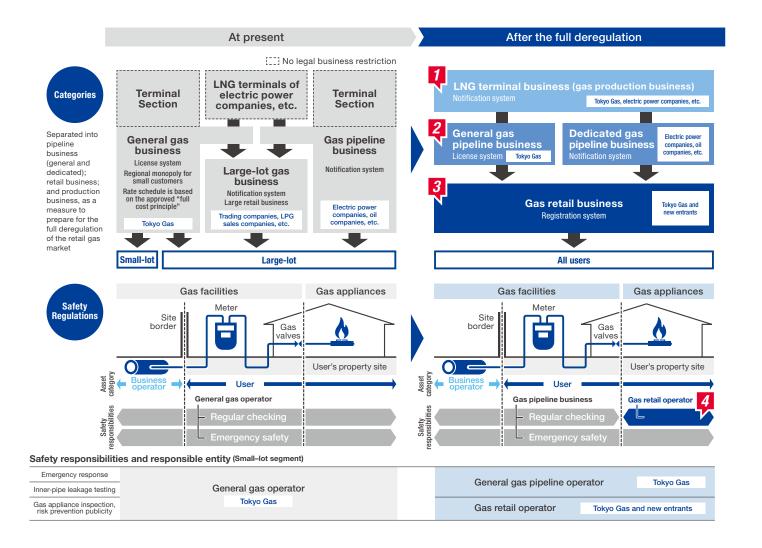
after the full market deregulation,

(new entrants) will be able to use the pipelines of Tokyo

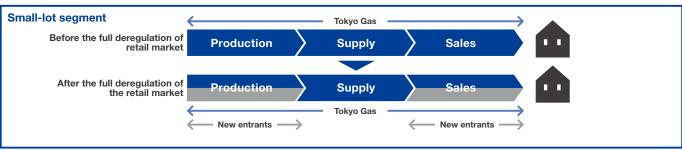
Gas, upon payment of usage rates, and to sell gas to

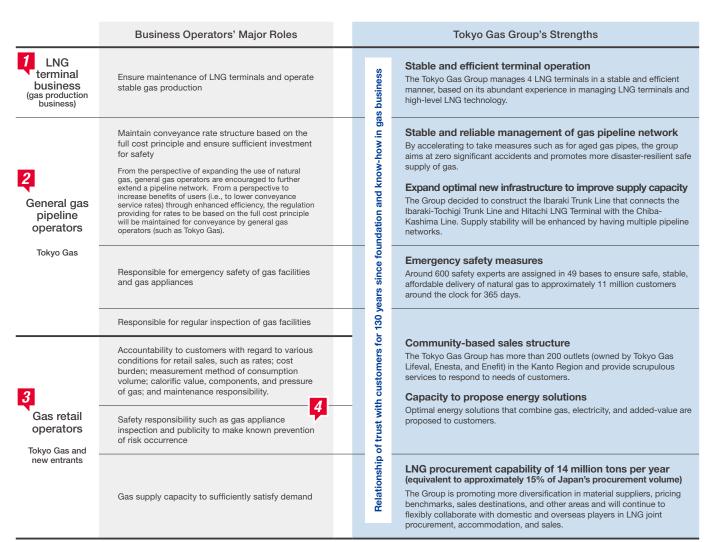
small-scale users.

The Tokyo Gas Group is preparing to address the full deregulation as a priority issue and to ensure that it remains the preferred choice of customers, by harnessing its unique strengths.









# Toward Achieving the hallenge 2020 Vision

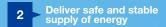
In November 2011, we released "The Tokyo Gas Group's Vision for Energy and the Future: Challenge 2020 Vision" as a guideline to lead us to what we aim to be up to 2020. It was based on extensive internal discussions about the role of an energy company in society that can enable it to realize a prosperous, fulfilling way of life for people, contribute to the competitiveness of domestic industries, and be friendly toward the environment.

# Gist of Challenge 2020 Vision

We will develop and expand our business structure and base, in order to enhance the value of our LNG value chain, return profits to customers and shareholders, and contribute to society.

# Five action plans to advance the LNG value chain

Reduce LNG purchase costs and expand overseas operations



Provide energy solutions adapted to a variety of needs

Procurement and transportation

Production and supply

**Energy solution** 

Areal expansion :

..... LNG value chain: from Japan to the world

LNG value chain from the Greater Tokyo Area to nationwide



Pursue technical development and IT utilization with a focus on the future



Realize a leaner and stronger business structure



# What we did in the "Hop" stage

# Built a base to realize the Vision and evolved the Value Chain

The first three-year period (fiscal 2012-2014) was identified as a "Hop" stage and we carried out activities for the following major themes: (1) diversification and expansion of LNG procurement and overseas business; (2) infrastructure building for safe and stable energy supply; and (3) provision of energy solutions that meet customer needs.

- Diversification and expansion of LNG procurement and overseas business While taking into consideration the balance between supply stability, price, and flexibility, we
- emphasized acquisition of shale and other unconventional gas resources, and of interests in them. We also made progress in making alliance with overseas LNG players.

Safe and stable energy supply
We endeavored to put in place an optimal infrastructure in step with the increased use of natural gas and broadening of our service area by constructing the Hitachi LNG Terminal and establishing trunk line loops in Northern Kanto. At the same time, we implemented countermeasures for earthquakes and other disasters to ensure safe and stable gas supply that is less susceptible to damage and interruption.

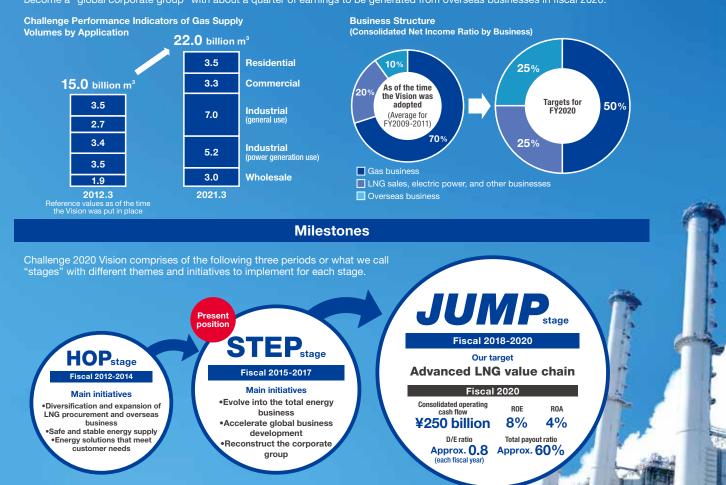
Energy solutions that meet customer needs

We released the world's first residential fuel cell system for housing complexes. ENE-FARM, In addition to securing additional power sources in order to expand the electric power business, we worked to expand nationwide LNG sales.

# 2020

# Toward becoming the "total energy corporate group" and the "global corporate group"

Tokyo Gas will make further progress in its core city gas business and develop the electric power, engineering, wide-area gas supply, and other businesses into new sources of strength whereby to make being the "total energy corporate group" a reality. At the same time, we will maintain our business base in the Greater Tokyo Area and develop business across Japan and overseas, aiming to become a "global corporate group" with about a quarter of earnings to be generated from overseas businesses in fiscal 2020.



# Review of the "Hop" stage

We made a smooth first step during the "Hop" stage. Various initiatives in areas such as LNG procurement, overseas business, infrastructure building and expansion, and energy solutions were carried out.

Looking at the business environment, in Japan, the direction and schedule of the electric power and gas system reforms had become clearer. As electric power companies and gas companies have begun to enter into each other's markets and areas, and new companies have also begun to enter both markets, a new era of a choice of customers for their electric power and gas suppliers has been emerging.

Overseas, increased needs for natural gas-related infrastructure have become evident on the back of a sustainable increase in demand for natural gas. The Tokyo Gas Group is taking such changes in the energy industries in Japan and overseas as an opportunity for growth and is boldly and speedily taking up challenges in the next "Step" stage.



# Three years from fiscal 2015

# Building a path toward achieving the Vision

The full deregulation offers an opportunity for growth for the Tokyo Gas Group. Beyond enabling us to start in the electric power business it is facilitating our evolution into the total energy corporate group. Our emphasis continues to be on serving the Greater Tokyo Area, where we seek for a style of evolution only the Tokyo Gas Group can have, by leveraging its business base, know-how, history of 130 years duration. We also find it critical to explore growth opportunities overseas in order to achieve long-term growth. An

important part of accelerating our overseas development at present is our management of the existing upstream project in Australia. In addition, we will focus on new projects in Southeast Asia and North America.

Moreover, we are reconstructing our group itself, in order to better promote both the evolution into the total energy business and the accelerated global development, not to overlook creating new sources of earnings flows.

### **Changes in Business Environment**

### **Energy policies**

Natural gas will continue to be one of the key energy sources in Japan in the immediate future.

### Regulations

Deregulation of the electric power and gas industries led to more market interpenetration across business and regional borders.

**Trend in the Greater Tokyo Area** Growth of the economy and energy demand of the Greater Tokyo Area is slowing down over the long term.

# **Two Growth Factors**

### **Evolving into the total energy business**



Shift from management focused on one dominant business in city gas, corresponding to Mt. Fuii, to management of several large businesses, by developing additional sources of income and growth, in electric power, engineering and other busine corresponding to an entire mountain range

Expand nationwide and overseas, based on the business in the Greater Tokyo Area.



### Reconstructing our corporate group

Build an organization and a system to support the "total energy corporate group" and the "global corporate group"

## What we did in fiscal 2015

- - Started LNG imports from Australia's Queensland Curtis LNG Project
  - Signed an agreement on strategic mutual cooperation with Taiwan's CPC Corporation
- Signed a basic agreement on LNG sale and purchase from the Cameron LNG Project in the U.S.
- 2. Infrastructure
- Saito Trunk Pipeline went into service.
- Onahama Satellite Terminal started operation.
  Hitachi LNG Terminal started operation and Ibaraki-Tochigi Line went into service. 3. Restructuring and integration
- Completed the approval and notification procedures required for the integration of
- Chiba Gas, Tsukuba Gakuen Gas, and Miho Gas Energy Solutions
  - Started marketing for ENESINFO
  - Hydro Stations in Senju and Urawa went into service.
  - Developed housing complexes fuel cell "ENE-FARM," jointly with Panasonic Corporation

### Electric power business

- 1. Sales of electric power to low-voltage customers
- Started pre-order sales of the total energy service 'Zuttomo Plan"
- Entered into alliance with wholesale customers and LPG companies 2. High-voltage and extra-high-voltage electric
- power sales Established Synergia Power Co. with Tohoku Electric Power
- 3. Expansion of power generation capacity
- Chiba-Sodegaura Energy Co. began preparation
- for construction of a coal-fired power plant Ohgishima Power Station Unit 3 went into
- Preparation began for an expansion plan of the Kawasaki Natural Gas Power Plant Units 3 and 4

# **Engineering solution business**

Consolidated the group's engineering capability into Tokyo Gas Engineering Solutions

# Real estate business

Started construction of the TGMM Shibaura Project (tentative name).

# Accelerating global business development

Evolving into the total energy

business

Expansion of business bases and business development in North America and Southeast Asia

- Opened offices in Jakarta, Hanoi, Singapore, and Bangkok.
- Entered into a basic agreement with Toray Industries to provide energy services to its factory in South Carolina, U.S.
- Withdrew from the energy service business in Brazil, in order to concentrate managerial

### Reconstructing our corporate group

- Decided to establish Tokyo Gas Liquid Holdings Co., Ltd. to control the liquid gas business
- · Signed agreement to transfer stock in GASTAR Co., Ltd. with the aim of transferring management control of GASTAR to Rinnai Corporation.

# **Challenge 2020 Vision**

# What we will do in fiscal 2016

Fiscal 2016 is an important year to ensure future growth of the group, as the current year is in the middle of the nine-year Challenge 2020 Vision period (fiscal 2012-2020). In the electric power business, we are committed to establish ourselves as No. 1 among new electric power entrants.

Concerning the gas business, the retail gas market will be fully deregulated in April 2017. We will be fully prepared for the change by having deepened our relationships with over 11 million customers and by leveraging such strength.



# City gas business

### 1. LNG procurement

- · Promote diversification
  - Enhance flexibility and pricecompetitiveness through alliances with LNG players in Japan and overseas

## 2. Infrastructure expansion

Establish and expand the pipeline network, production infrastructure, etc.

### 3. Restructuring and integration

- · Integrated Chiba Gas, Tsukuba Gakuen Gas, and Miho Gas to Tokyo Gas
- 4. Address the shift to full gas deregulation
- 5. Optimal LNG value chain
- 6. Energy solutions

# 2

# **Electric power business**

### 1. Increase generation capacity

- Expand competitive gas-fired thermal power and base power generation capacity
- Implement initiatives for expansion of renewable energy generation, as an effort to suppress climate change

## 2. High-voltage and extra-highvoltage electricity sales

 Expand sales through Ennet and Synergia Power

# 3. Low-voltage electricity sales

- Expand sales, aiming to become a No. 1 new electric power entrant
- Expand sales via alliances with wholesale customers, LPG companies, and various industries.

# 3

Developping engineering solution business, liquid gas business, and real estate business

# **Engineering solution business**

Provide one-stop solutions that satisfy needs of customers in Japan and overseas

### Liquid gas business

- Expand and rationalize via alliances with LPG operators and M&A
- Provide electricity and value added services to LPG customers

# Real estate business

 Promote large-scale development projects in areas such as Tamachi and Toyosu and do business in small- and mid-scale properties



Participate in new projects in North America and Southeast Asia by utilizing the enhanced overseas basis (organization and personnel) and information network

Schedule the start of providing energy services in the Toray Group's factories in Malaysia and North America



The group management and structure will be enhanced to support growth strategies.

# GAS BUSINESS

# **Outline and Strength**

The Tokyo Gas Group began its gas business with supply of gas for lighting and since then has expanded applications of its gas to residential cooking, heating, and hot water; commercial air conditioning; industrial use; power generation; and other usage, by which we have increased the number of customers to over 11 million. In fiscal 2015, our consolidated gas sales volume was 15.4 billion m<sup>3</sup>, representing about 45% of Japan's gas sales volume. The Kanto Region, our Group's service area, accounts for about 40% of Japan's gross domestic products (GDP) and is expected to have vigorous production and consumption activities. We therefore anticipate sales volume growth particularly in the industrial sector. These two aspects will continue to support our growth. Our Group strengths include achievement in delivering "reliability" through stable supply of gas, and ensuring its safety. While the completion of the deregulation program for retail gas in April 2017 is likely to further intensify competition in the Tokyo area, the Tokyo Gas Group is carefully confident in facing increased competition by making best use of its base of over 11 million customers, which have been accumulated over 130 years since its foundation, and relationship of trust with those customers, the majority of which have been our customers for years. This will be supplemented by benefits from the group's safety-related know-how and energy solution technology.

Anticipatory diversification to achieve stable and affordable LNG procurement

Japan heavily relies on imports for natural gas procurements. Prices for LNG imported are generally set under a framework that is linked to the price of crude oil. Aiming for stable and affordable LNG procurement with these given conditions in the background, the Tokyo Gas Group has been using an LNG procurement strategy that calls for diversified procurement sources, varying contract terms and conditions, and developing its LNG network.

1 Of resource suppliers
for stable procurement

2 Of contract terms and conditions

for stable prices

Three Ways of Diversification

3

3 Of the LNG network

for more flexibility

# **Diversify resource suppliers**

Tokyo Gas began to receive LNG from the Gorgon LNG Project in Australia, which resulted in increasing the number of LNG suppliers to 12 projects in 5 countries, and making Tokyo Gas one of the foremost purchasers with diversified contracts in Japan. In our striving to enhance procurement stability we will be considering widening LNG procurement from Southeast Asia and Australia to include North America and Africa. We will also study adopting non-conventional gas such as shale gas.

LNG 12 projects **7** projects suppliers



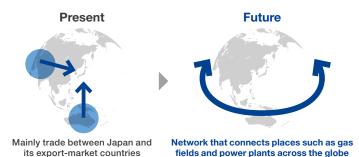
# **Diversify contract terms and conditions**

By adding contracts linked to the United States natural gas prices and other benchmarks, in addition to conventional crude oil price-linked contracts, we aim to have a better balanced portfolio of contracts and thereby to stabilize procurement costs. We also intend to increase the number of contracts which allow us freedom to determine shipment destinations and other matters to enhance our flexibility.

# **Diversify our LNG network**

By establishing an LNG network that connects the markets in Europe, Asia, and North America, we aim to reduce cost differentials among regions and to position ourselves to flexibly adjust demand and supply.





# Enhance and expand alliances with other LNG players for enhanced flexibility and economic efficiency

Tokyo Gas will enhance and expand alliances with LNG players in Japan and overseas to achieve price-competitive LNG procurement and ensured flexibility.

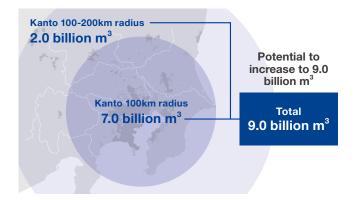
September 2014	Signed a memorandum of understanding on a strategic alliance with Korea Gas Corporation, South Korea
August 2015	Signed a memorandum of understanding on a strategic alliance with CPC Corporation, Taiwan
April 2016	Agreed on a strategic alliance with Kansai Electric Power concerning LNG procurement and know-how in power plant operation



# **Expansion of Natural Gas Usage through Infrastructure Development**

# Investment of ¥730 billion in nine years in domestic infrastructure

Under the Challenge 2020 Vision, Tokyo Gas plans to invest around ¥730 billion, equivalent to 35% of its total investment budget, in domestic infrastructure upgrades over the nine-year period from fiscal 2012 to fiscal 2020.



# Northern Kanto, a region of significant potential demand

Tokyo Gas puts particular strategic emphasis on Northern Kanto which has strong potential demand growth for natural gas owing to large-scale industrial zones.

We aim to expand gas sales volume from 15.0 billion m³ in fiscal 2011 to 22.0 billion m³ in fiscal 2020 by advancing on two fronts:

1) further enhancing the stability of supply through expanded supply capacity for the development of potential demand and the completion of its pipeline loop; and 2) promoting fuel conversion from heavy oil and kerosene as fuel to natural gas and advanced utilization of natural gas. In particular, we aim to double the sales volume of gas used by general industry, from 3.4 billion m³ in fiscal 2011 to 7.0 billion m³.

General Industrial Gas Sales Volume



7.0 billion m<sup>3</sup>

Fiscal 201

Fiscal 2020

# Advantages of natural gas, superior in eco-friendliness and earthquake resistance

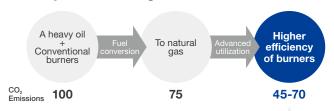
- Benefits of fuel conversion Eco-friendly; no need for storage; improved operability (no clean-up); labor saving; stable supply
- CO<sub>2</sub> emission reduction by fuel conversion Comparison of CO<sub>2</sub> Emissions (Coal=100)

Natural gas	Oil	Coal
60	80	100

CO<sub>2</sub> emission reduction by use of advanced (high efficiency) facilities

Gas processing facilities designed for high efficiency require less energy for industrial heat sources and emit less CO<sub>2</sub>

CO<sub>2</sub> emission reduction by conversion from A heavy oil to natural gas



Examples of advanced utilization measures

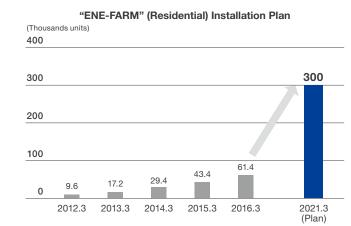
Adoption of high efficiency burners; collection of exhaust heat; improved heat insulation and reduced heat loss at openings; improved combustible air ratio

# Promoting the widespread use and expansion of distributed energy systems

Tokyo Gas will promote diversification in use of natural gas by providing energy solutions centered on natural gas and continue to improve its LNG value chain.

# Residential fuel cell system "ENE-FARM"

The "ENE-FARM" residential fuel cell system is a type of distributed energy system that is installed onsite at customers' homes. This highly efficient system uses city gas to generate electricity while also utilizing the heat created through the generation process to heat water. "ENE-FARM" is an important strategic product in residential gas sales as customers using this system also consume greater volumes of city gas. Since the first unit was launched in 2009, "ENE-FARM" has continued to evolve to introduce smaller, lower-priced models. In March 2016, our "ENE-FARM" installed base had risen to approximately 61,000 units.

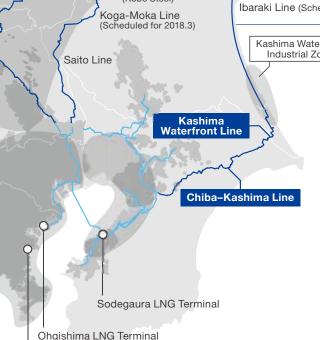


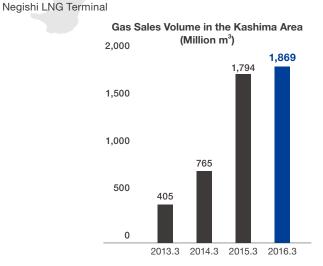
# Gas sales volume in the Kashima area surged to represent 10% of total

As a first step toward capturing potent demand through the development of infrastructure, we completed the Chiba-Kashima Line in March 2012. Gas sales volume increased dramatically in the Kashima Waterfront Industrial Zone to approximately 1.8 billion m³, representing about 10% of our consolidated gas sales volume in fiscal 2015.

# Tap Northern Kanto's greater potential market for gas by another fuel conversion initiative

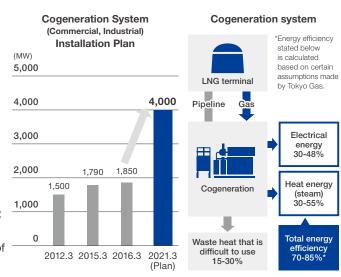
The Saito Line (Soka City, Saitama Prefecture-Koga City, Ibaraki Prefecture) started service in October 2015, followed by the start of service of the Hitachi LNG Terminal and the Ibaraki-Tochigi Line (Hitachi City, Ibaraki Prefecture-Moka City, Tochigi Prefecture) in March 2016. By linking with our existing three terminals in Tokyo Bay and our high-pressure trunk line network, our supply infrastructure has become more stable. Given our infrastructure building in Northern Kanto, Kobe Steel has decided to construct a gas-fueled thermal power plant in Moka City, Tochigi Prefecture. In addition to the projection of an increased gas sales volume by supplying gas to this power plant, we anticipate that it will enable us to tap into more potential demand. In order to complete our infrastructure base in Northern Kanto, we have decided to construct an Ibaraki Line between Hitachi City and Kamisu City. This will enable us to develop further demand in the Kashima area and increase use of natural gas in the Kanto Region.





# Commercial and industrial cogeneration systems

Cogeneration systems supply electricity and heat through power generators and other means. In addition to the installation of facilities at the point of demand, cogeneration systems help to enhance energy efficiency, reduce the amount of  $CO_2$  emissions, and improve economic efficiency through the conservation of energy by effectively utilizing both electricity and waste heat. Against the backdrop of increased demand for energy security and business continuity plans, we have been promoting sales of commercial and industrial cogeneration systems, and the scale of our cumulative installed base of these systems has reached 1,850 MW. Aiming at widespread adoption, we are increasing the product line-up by having commercialized 1MW gas engines with reduced low maintenance costs as well as an easy-to-install package type of co-generation.



# ELECTRIC POWER BUSINESS

# **Outline and Strength**

Since 2000 when the Tokyo Gas Group started to generate and supply the electric power, it has engaged in a comprehensive range of business activities that extend from fuel procurement to power generation and sales. Among the new entrants to the sector following the start of its deregulation program, we own the largest power station in the Greater Tokyo Area and sell generated power to wholesale and large-lot customers. With the completion of deregulation of the retail electric sector in April 2016, we started electricity sales to residential and commercial customers. The complete lifting of the restrictions on region of operations or original business sector provided an enormous growth opportunity for our Group, which has a competitive power source portfolio and well established sales power.

By our responding to customers' needs for more affordable, reliable, and safe energy, we aim to significantly expand our electric power business and to raise corporate value (see details on the deregulation of the electric power and gas industries on page 15).



# Toward realizing our Challenge 2020 Vision

Deregulation of the retail market, completing the program for electric power and gas deregulation, can provide the impetus for the Tokyo Gas Group to greatly advance toward expanding as a "total energy" concern. While completion of the deregulation program for retail gas in 2017 is likely to intensify competition in the gas business, we are expecting to gain more earnings opportunities by entering the much bigger retail electric power market. In the Challenge 2020 Vision, we aim to evolve our total energy business including the electricity retail business, and expand the ratio of "electric power, LNG sales, and other business" from 20% of consolidated net earnings when the plan was adopted to 25% by fiscal 2020.

# **Tokyo Gas Group's strengths**

# The largest-scale and highly-efficient power sources among the new power suppliers in the **Greater Tokyo Area**

The Tokyo Gas Group now has the largest scale of power sources (1,600MW from 4 bases) among the new power suppliers servicing the Greater Tokyo Area. By adopting highly efficient gas turbine combined cycle (GTCC) generation, which offers superior energy savings, highly efficient power generation has been realized (a record high of 58% realized at the Ohgishima Power Station). In addition, close proximity to the LNG receiving terminals enables efficient gas transportation.

## Community-based sales network and over 11 million customer base

The Tokyo Gas Group has established a community-based sales network with over 200 outlets in the Kanto region (operated by Tokyo Gas Lifeval, Enesta, and Enefit) enabling us to tailor services to individual customers' needs. The 10,000 employees of Lifeval, through whom there is direct interaction with those customers on behalf of the Tokyo Gas Group, are engaged every day in meticulous services that encompass from sales calls and maintenance of gas appliances to the opening and closing of gas fixtures in time of moving, gas appliance safety checking, and gas meter reading. Our push-type marketing, involving contacts with over 11 million customers at their homes and places of work. has benefitted us by enabling us to steadily gain contracts toward becoming a No. 1 new electric power entrant in a competitive and newly deregulated market.

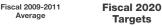
# Infrastructure and management know-how system

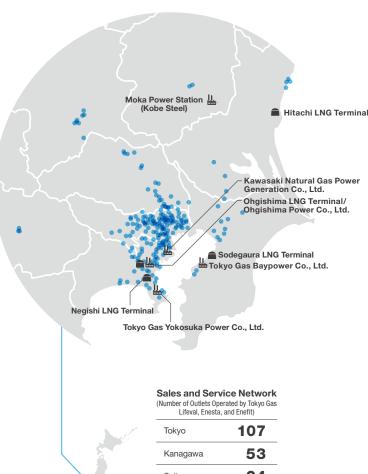
In addition to the owned city gas business assets such as LNG terminals, pipelines, and LNG purchasing capacity, the Tokyo Gas Group is capable of using distributed power generations, including cogeneration and fuel cells, know-how for management of electricity generation by use of LNG, and experience in systematic business techniques from utility rate calculation to billing and collection.

### Full Deregulated Market of the Electric Power and Gas

	Number of companies	Approximate potential customers (Million)	Approximate market size (¥trillion)
Electricity	10	85	8.0
Electricity	Within TEPCO's domain	29	2.8
City gas	206	26	2.4







Lilevai, Ellesta, allu Ellellt)		
Tokyo	107	
Kanagawa	53	
Saitama	24	
Chiba	11	
Gunma	8	
Ibaraki	8	
Yamanashi	3	
Tochigi	2	

# **Future Initiatives Given Complete Deregulation of Retail Electric Power**

In light of the objectives of the electric power system reforms and of the needs of customers, Tokyo Gas intends to establish a demand and supply structure that contributes to greater stability of supply, realize to supply affordable energy, and help diversify services offered to customers by undertaking a variety of measures to expand its electric power business.

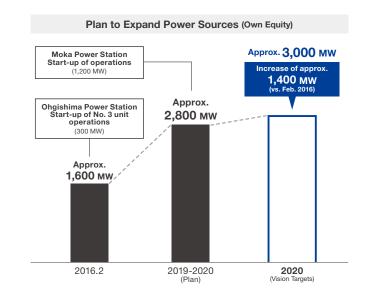


## **Initiative**

01

# **Expand power sources**

Aiming at delivering electricity to low-voltage residential and commercial customers, in addition to the wholesale market, we plan to expand generation capacity from the current level of approximately 1,600 MW (company equity base) to around 3,000 MW by 2020. In addition to the Tokyo Gas Group's power stations, it has been agreed that electric power generated at Moka Power Station, which is under construction by Kobe Steel, one of the largest Independent Power Producers (IPP), will be supplied to Tokyo Gas. Adding to our competitive gas-fired thermal power sources and base load supply sources, we will also promote initiatives aimed at expanding renewable power sources in order to address to the issue of preventing climate change.



### Recent Initiatives

Sep. 2014 Concluded an agreement with Kobe Steel, Ltd. for the supply of electricity from the Moka Power Station (1,200 MW; operations scheduled to commence from fiscal 2019)

Jan. 2016 Submitted the "Environmental Impact Statement" for the construction plan of the coal-fired thermal power plant (power generation scale up to a maximum of 2,000 MW by mid-2020s) of Chiba-Sodegaura Energy Co., Ltd. (investment by Idemitsu Kosan, 33%; Kyushu Electric Power, 33%; Tokyo Gas, 33%)

Feb. 2016 Ohgishima Power (investment by Showa Shell Sekiyu, 25%; Tokyo Gas, 75%) started operation of the No. 3 of Ohgishima Power Station, expanding the Tokyo Gas Group's Power source to approximately 1,600 MW

Mar. 2016 Received the subsidy of Fukushima Prefecture's wind power generation optimal location selection business and began a study of wind conditions.

Mar. 2016 Kawasaki Natural Gas Power Generation (investment by JX Nippon Oil & Energy, 51%; Tokyo Gas, 49%) submitted the Environmental Impact Statement for the Kawasaki Natural Gas Power Plant Units No. 3 and No.4 Enlargement Plan (power output of approximately 550 MW X 2 units, scheduled to start operations from 2021)

### The Group's Natural Gas-Fired Thermal Power Plants



 Generation capacity
 Tokyo Gas generation capacity

 100MW
 100MW x 1 unit
 100MW

 Start of operations
 2003
 Tokyo Gas interest
 100 MW



 240MW
 240MW x 1 unit
 180MW

 Start of operations 2006
 Tokyo Gas interest 75%



Generation capacity

840MW 420MW x 2 unit

Start of operations 2008 Tokyo Gas generation capacity

Tokyo Gas generation capacity

400MW



Generation capacity

Tokyo Gas generation capacit

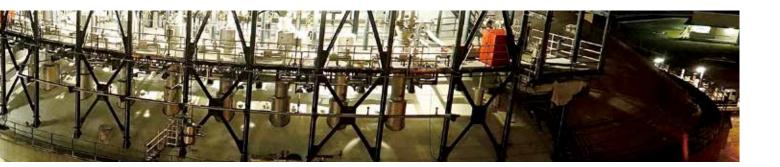
1,221MW 407MW x 3 unit

900MW

Tokyo Gas interest 75%

Start of operations 2010





# Initiative $\bigcirc 2$

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

In October 2015, we established Synergia Power Co., Ltd., jointly with Tohoku Electric Power Co., Ltd. Synergia began electricity sales to high-voltage and extra-high-voltage customers in the Kanto Region, mainly in its northern area.

## **Tokyo Gas Group's Electricity Sales Companies**



	Corporate name	Synergia Power Co., Ltd.
	Address	1-9-12 Kita Ueno, Taito-ku, Tokyo
	Established	October 1, 2015
	Main business	Electricity retail supply to high-voltage and extra-high-voltage customers in the Kanto region, mainly in its northern area
	Capital	¥495 million
	Shareholders	Tohoku Electric Power 50%; Tokyo Gas 50%



Corporate name	ENNET Corporation
Address	The Front Tower Shiba Koen, 2-6-3 Shiba Koen, Minato-ku, Tokyo
Established	July 7, 2000
Main business	Electricity trading and electricity generation
Capital	¥6.3 billion
Shareholders	NTT Facilities 40%; Tokyo Gas 30%, Osaka Gas 30%

# **Initiative**



# Expand electricity sales to low-voltage customers

Following the full deregulation of the electricity retail sector in April 2016, we began low-voltage electricity sales to residential and commercial customers mainly in our supply area, the Kanto Region. We sell electricity through the Tokyo Gas Group companies, such as Tokyo Gas Lifeval, Enesta, and Enefit, as well as through partnerships with companies in various industries, including nearby city gas and LPG suppliers and businesses in a range of other industries, including housing, construction, equipment, and telecommunications services.

# Offer one-stop electricity, gas and other value-added services

The Tokyo Gas Group has established relationships of trust with over 11 million customers through its community-based sales network, which tailor services to individual customers' needs at their homes and workplaces. The services include gas appliance safety checking and gas meter reading, gas appliance repair and installation, and the opening and closing of gas fixtures in time of moving. In the electricity retail business, we will leverage our existing sales structure and relationships of trust with customers, provide more value to them, and take up challenges that may arise, whereby to raise the Tokyo Gas Group's corporate value.



# OVERSEAS BUSINESS

# **Outline and Strength**

The Tokyo Gas Group is participating in seven upstream projects and four midstream and downstream projects with, investing approximately ¥265 billion (as of March 2016). The upstream business is to secure new sources of revenue through business investment, and at the same time enable a higher level of stability of Group revenues against fluctuations in raw material prices, and improving our ability to collect valuable information concerning raw material procurement. The midstream to downstream business is where our know-how in the domestic business can be utilized and stable income flows can be expected. In implementing the Challenge 2020 Vision, we intend to expand the overseas business and make it become another major earnings source of the group. Looking ahead, from a perspective of efficient allocation of managerial resources, we intend to more deliberately concentrate on certain areas and businesses. Specifically, we will focus on participating in direct operation of LNG and natural gas businesses in North America and Southeast Asia. Through these operations, we plan to use our Group's accumulated experience and know-how, acquire new insights, and expand business.



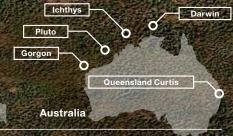
# Accelerating global development

The Tokyo Gas Group has been accelerating its global business development to add overseas business to our earnings pillars. Our specific strategy is to develop natural gas-related business, in which our experience and know-how in the gas and electric power business in Japan can be

utilized. For more efficient use of resources, we will also concentrate managerial resources in North America and Southeast Asia where demand for natural gas is increasing and ample entry opportunities tend to be available.



**Southeast Asia** 



**Upstream** 

Operation and management of existing projects; exploration of new projects

Operation and management of existing

Midstream and

Gas-fired thermal power generation; gas and electricity supply

LNG terminal; gas-fired thermal power generation; gas supply; energy service

The Gorgon Project is a joint venture between the Australian subsidiaries of Chevron (47.3%), ExxonMobil (25%), Shell (25%), Osaka Gas (1.25%), Tokyo Gas (1%) and Chubu Electric Power (0.417%).

# Forming an LNG Value Chain

### North America

We are focusing on the upstream, gas-fired thermal power generation, and gas and electricity supply in North America. We envision forming a North America LNG value chain, in which synergies can be generated among businesses, such as by stably supplying gas from one of our upstream projects to our operations in gas-fired thermal power generation and gas supply.

**Upstream Business** By monitoring the commodity price trends and carefully ascertaining the productivity and reserves of gas fields, we will form appropriate alliances with experienced operators and invest in prime assets. In addition to investments in the shale gas development projects in Cordova, Canada and Barnett, Texas, U.S.A. and we acquired rights in the Eagle Ford shale gas development project in Texas in June 2016.

Project Name (Shale gas development)	Start of Participation	Tokyo Gas Interest (Equity Stake)
Canada Cordova	May. 2011	3.75%
U.S. Barnett	Mar. 2013	25%
U.S. Eagle Ford	Jun. 2016	25%

Midstream- and Downstream Business When planning gas-fired power generation we will continue to use well-defined criteria to select projects in which to participate, giving due consideration to demand and supply of electricity, competition with other power sources, regulations and business environment by each regional government. In gas supply business, we seek to participate in business, in which we can leverage our Group's strength, such as demand development, in the deregulated market.

### **Southeast Asia**

Midstream- and Downstream Business By building a relationship with local governments and through alliances with local companies, we intend to increase our participation in midstream- and downstream businesses. Particularly in Indonesia, Thailand, and Vietnam, we seek to participate in LNG terminal, gas-fired thermal power generation, gas supply, and energy service businesses, leveraging our Group's know-how. Our ultimate target is to form a Southeast Asia LNG value chain.



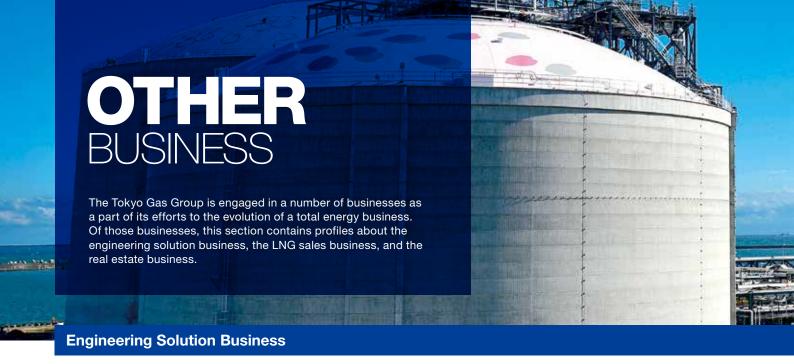
# Focus on operation and management of existing projects

## **Australia**

**Upstream Business** Due to the start-up of the Gorgon Project in fiscal 2015, four LNG projects that we have invested in, in Australia, are in operation today, while the Ichthys

Project is still in preparation. We will continue to focus on operation and management of those projects.

Project	LNG Production Capacity (Million tons/year)	Start of Participation	Tokyo Gas Interest (Equity Stake)	Start of Production (Operation)
Darwin	3.0	2003	3.07%	Jan. 2006
Pluto	4.7	2008	5.00%	Apr. 2012
Gorgon	15.6	2009	1.00%	Mar. 2016
Queensland Curtis	8.5	2011	1.25% (Gas field) / 2.50% (No. 2 Liquefaction Plant)	Dec. 2014
Ichthys	8.9	2012	1.575%	2017 (Plan)



# Integrated previously-separate Group capabilities for engineering and energy solutions

In April 2015, Tokyo Gas Engineering Co., Ltd., engaged in construction, maintenance, and management of LNG terminals and other energy infrastructure, merged with Energy Advance Co., Ltd., which specialized in energy service, district heating and cooling service, and electric power-related engineering business, to establish Tokyo Gas Engineering Solutions Corporation (TGES).

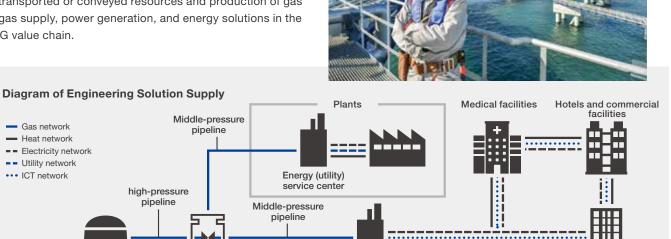
By integrating capabilities in engineering and energy solutions, which used to be separately available within the group, TGES is able to provide one-stop solutions that better satisfy the needs of our customers in Japan and abroad in a wide range of domains, stemming from receipt of transported or conveyed resources and production of gas to gas supply, power generation, and energy solutions in the LNG value chain.

pipeline

Valve station

LNG receiving





Offices and housing complexes

Smart energy center

Gas network

Heat network = = Electricity network - Utility network · · · ICT network



# Unique engineering solutions, leveraging accumulated know-how

Japan

# Established an energy supply system that responds to Business Continuity Plan (BCP)

Kamatahigashi District Heating and Cooling Center, operated by TGES since 1998, supplies thermal energy (steam, cool water) and electricity in the Ota-ku, central Tokyo. In July 2015, in addition to the Center's adoption of a gas cogeneration system (CGS) with a blackout start function, TGES integrated supply desinations with the center's electricity system to enable the whole district to use electricity generated by CGS in times of blackout. Such optimal management of electricity and heat by use of CGS contributes to enhance the entire community's disaster prevention capability.



Overseas

# **Energy service business**

TGES' overseas subsidiary will provide energy services to the Toray Group's plants in Malaysia and the U.S. The energy services comprise construction of an energy plant that has gas cogeneration systems, boilers, and equipment such as for air-conditioning and water treatment, and efficient supply of a wide range of services involving generated electricity, steam, water, and other resources. Based on its proven achievement, TGES' plant design and maintenance will enable to realize energy savings from its optimal systems and long-running cost reductions. In return, TGES will receive energy service fees, based on its longterm customer contract.



# **Engineering business**

TGES was awarded an order for assignment as a project management contractor (PMC) of the capacity expansion construction project of PPT LNG Map Ta Phut Receiving Terminals, Thailand. This is the first PMC order of its kind received by a Japanese company outside Japan. These first LNG terminals in Thailand were planned in anticipation of substantial growth in energy demand in keeping with the nation's economic development. The Tokyo Gas Group intends to further promote overseas business development, leveraging by its frontrunner experience and strengths in construction, operation, maintenance, and management of LNG terminals.

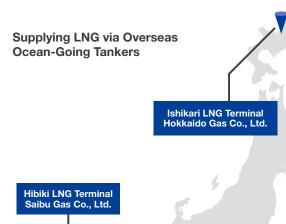


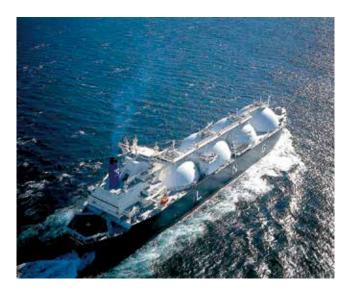


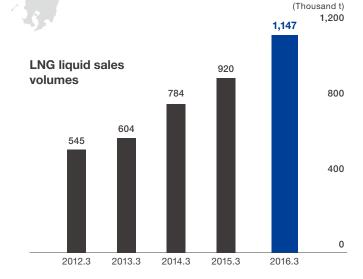
**Expand LNG supply to nationwide range and advance the LNG value chain through sales channel expansion** 

We have been working on expanding our own LNG sales channel so that it can be used by other gas operators nationwide, beyond the Kanto region, by use of lorries and access to supply from ocean-going LNG tankers. In October 2012, we started to supply LNG to the Ishikari LNG Terminal of Hokkaido Gas. This was our Group's first use of an ocean-going tanker to supply LNG we had purchased to a domestic gas operator outside the group. For 11 years starting from that, we plan to supply approximately 300,000-400,000 tons of LNG a year to Hokkaido Gas.

From October 2014, we also started to supply approximately 300,000 tons of LNG a year to Saibu Gas under a 16-year contract.



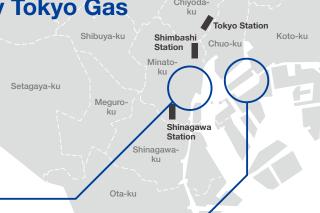






# Generating stable earnings by effective use of high-potential sites owned by Tokyo Gas

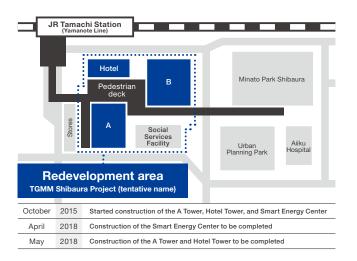
The Tokyo Gas Group holds high-potential, large-scale sites in locations as Tamachi and Toyosu in the Tokyo metropolitan area. We are developing those real estate holdings, while limiting the attendant risks, in order to improve asset value by their effective use. We are also interested in installing a smart energy network in those development projects as an initiative to improve asset value.



# Tamachi

### Large-scale development with direct connections to **JR Tamachi Station**

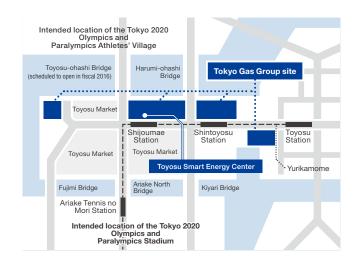
Tamachi Station and its surrounding area are expected to play the role of a gateway to Tokyo, as it is close to the Linear Chuo Shinkansen Line route and has easy access to Haneda Airport which has a plan for further development. Office and hotel buildings and commercial facilities are under construction on this 2.8ha site, and will be directly connected to Tamachi Station.



# Toyosu

### Complex town planning project in the intended locations of the Tokyo 2020 Oympics

The redevelopment area in Toyosu is a prime location, about 4km away from Tokyo Station. The Tokyo Bay area, including Toyosu, is getting increased attention as it will be a major location of the Tokyo 2020 Olympics and Paralympics events. The Tokyo Gas Group is involved in construction of a combination of residential, office, and commercial functions in this widespread development area of approximately 20ha.



# **Corporate Governance**

Tokyo Gas works to ensure continued development while consistently earning the trust of customers, shareholders, and society. Based on this philosophy, we aim to achieve a continuous increase in our corporate value through enhancing corporate governance systems. We are endeavoring to develop systems with a commitment to management legality, soundness, and transparency. Tokyo Gas continues to emphasize the importance of accurate and prompt decision making, efficient business operations, strengthening of auditing and monitoring functions, and clarification of management and executive responsibilities.

# **Board of Directors**

In principle, the Board of Directors meets once a month to discuss and decide important matters regarding business operations. Directors must submit reports to the Board of Directors regarding the status of execution of their duties periodically and when deemed necessary, allowing the board to monitor the performance of directors.

The Board of Directors comprises 11 directors, 3 of whom are outside directors. In addition, the term of directors is set at one year with the goal of further clarifying managerial responsibility.

### **Outside Directors**

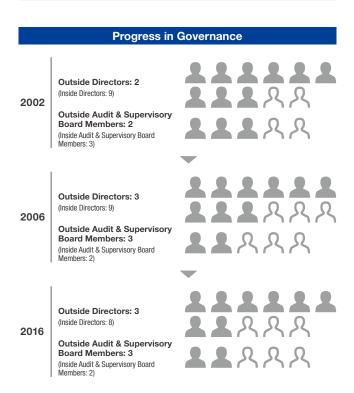
In accordance with their individual experience and knowledge, the outside directors strive to secure the soundness and appropriateness of deliberations and decisions regarding business execution. From an independent viewpoint, the outside directors monitor the performance of duties by the directors and exercise their authority at meetings of the Board of Directors. In this way, the outside directors contribute to the improvement of the rationality and objectivity of the company's business execution and of the deliberations and decisions of the Board of Directors.

In making judgments about matters related to the independence of outside officers, such as capital, transactions, and relationships, we comprehensively verify that they are unlikely to have conflicts of interest with general shareholders and they are in a position that enables them to be objective and neutral, and on that basis we make a judgment on their independence. (The company discloses the Independence Standards for Outside Directors on its website: http://www.tokyo-gas.co.jp/IR/english/gvnnc/pdf/ independence.pdf) The Advisory Committee has confirmed that none of the outside officers has a material conflict of interest with the company—in regard to capital, transactions, or relationships—and has confirmed their independence in accordance with the above standards. The committee's decision has been reported to the Board of Directors, which has designated them as independent officers and reported that designation to the stock exchanges on which the company is listed.

# Realizing Accurate, Rapid Decision Making and Efficient Business Execution

The Corporate Executive Committee, which meets weekly as a general rule, deliberates on provisions stemming from Board of Directors' resolutions and important management-

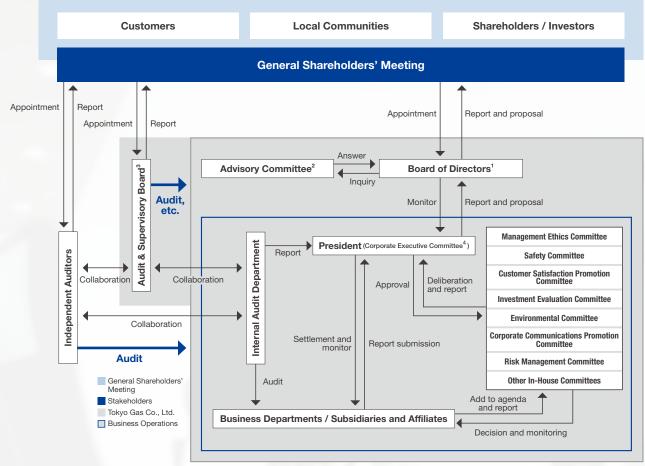
Reasons for selecting Outside Directors		
Name	Reason for selecting	
Akihiko Ide	The company's management will benefit from Akihiko Ide's cosmopolitan outlook he has acquired in overseas businesses in the general materials industry, particularly in Asia, as well as the strong management capabilities and deep insight he has acquired through a wide range of business development in resource business and others.	
Yoshinori Katori	The company's management will benefit from Yoshinori Katori's cosmopolitan and broad outlook as well as the deep insight he has acquired over his many years as a diplomat.	
Chika Igarashi	The company's management will benefit from Chika Igarashi's advanced legal expertise, broad perspective, and deep insight she has acquired over her many years in corporate legal affairs.	



related issues. The company has introduced an executive officer system for business execution in accordance with decisions of the Board of Directors.

Substantial authority has been delegated to executive officers in their designated areas of responsibility, while directors, as appropriate, receive reports on the status of execution from executive officers and monitor the executive officers. In addition, executive officers report to the Board of Directors as needed. (To clarify management responsibility and executive responsibility, the terms of office of directors and executive officers have been fixed at one year.)

## **Corporate Governance System**



- 1 Board of Directors: 11 directors (3 outside directors and 8 internal directors), 5 Audit & Supervisory Board members (3 outside auditors and 2 internal auditors)
- 2 Advisory Committee: 3 representatives from outside directors and outside Audit & Supervisory Board members, Chairman (1), and President (1) 3 Audit & Supervisory Board: 5 Audit & Supervisory Board members (3 outside auditors and 2 internal auditors)
- 4 Corporate Executive Committee: President, 2 Executive Vice Presidents, and 10 Senior Executive Officers (3 of the representative directors also serve as President and Executive Vice Presidents)

Overview of Corporate G	ioverna	ance System (As of June 29, 2016)	
Number of directors	11	Participation of outside directors in determination of director candidates	Yes
Average age of directors	61.7	Number of meetings of Board of Directors*	12
Number of outside directors	3	Attendance rate of outside directors at meetings of Board of Directors*	91.7%
Number of Audit & Supervisory Board members	5	Term of office of directors	One year
Number of outside Audit & Supervisory Board members	3	Results-linked remuneration	Yes
Number of independent officers	6	Share purchase system to reflect the perspective of shareholders in management	Yes
Participation of outside directors / outside Audit & Supervisory Board members in determination of remuneration	Yes	* Total for the period from April 20	115 to March 2016

#### Working to Promote Transparent Management and Create a Flexible and Open Corporate Culture

In fiscal 2002, the company established the Management Ethics Committee, chaired by the President. We also formed in-house committees to address issues that are important from a management perspective, such as compliance,

safety, customer satisfaction, and risk management. This structure facilitates the sharing of information within the group as well as deliberations and adjustments regarding the group's overall direction.

# **Audit & Supervisory Board Members**

The Audit & Supervisory Board members meet once a month as a general rule and otherwise as needed. The 5 members of the board, which include 3 outside Audit & Supervisory Board members, conduct deliberations and make reports. In line with the Corporate Auditor's Audit Standards, each Audit & Supervisory Board member conducts effective audits through the following principal initiatives.

The Audit & Supervisory Board members attend meetings of the Board of Directors, the Corporate Executive Committee, and other important meetings. They state their opinions relating to legality and other perspectives when necessary.

The Audit & Supervisory Board members conduct research into the state of operations at the head office, business offices, and subsidiaries and hold discussions with directors to exchange opinions, both on a regular basis and otherwise as needed.

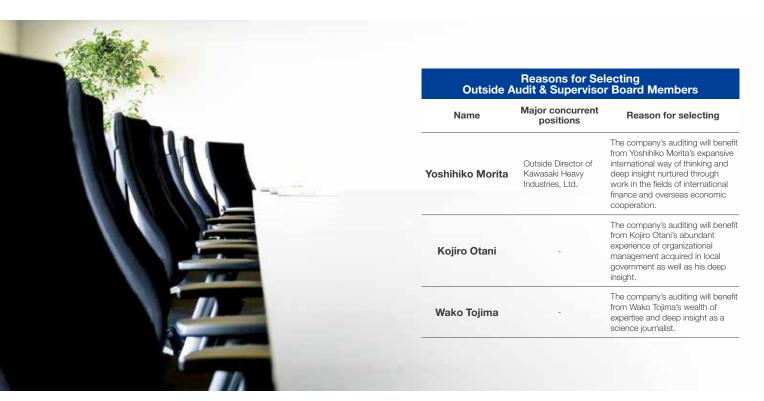
In regard to the internal control system for financial reporting, the Audit & Supervisory Board members receive evaluations of internal control and reports on the status of audits from the Board of Directors, etc., and KPMG AZSA LLC.

#### **Outside Audit & Supervisory Board Members**

The outside Audit & Supervisory Board members conduct audits monitoring from an independent viewpoint and contribute to improving the rationality and objectivity of the company's business execution and of the deliberations of the Board of Directors through their statements at meetings of

the Board of Directors. In addition, through their statements and the exercise of their majority voting rights at meetings of the Audit & Supervisory Board, the outside Audit & Supervisory Board members contribute to assuring and improving the legality, appropriateness, rationality, and objectivity of the audits by the Audit & Supervisory Board members. In addition, with the objective of assuring the effectiveness of audits by the Audit & Supervisory Board members, the company invites outside Audit & Supervisory Board members who have a substantial degree of knowledge about finance and accounting.

In making judgments about matters related to the independence of outside officers, such as capital, transactions, and relationships, we comprehensively verify that they are unlikely to have conflicts of interest with general shareholders and they are in a position that enables them to be objective and neutral, and on that basis we make a judgment on their independence. The Advisory Committee has confirmed that none of the outside officers has a material interest with the company—in regard to capital, transactions, or relationships—and has confirmed their independence in accordance with the above standards. The committee's decision has been reported to the Board of Directors, which has designated them as independent officers and reported that designation to the stock exchanges on which the company is listed.



#### Officer Remuneration

In 2005, the company formulated the basic policy on officer remuneration, which outlines the method of remuneration for directors, etc. At a meeting of the Board of Directors in February 2012, the policy was revised as follows.

#### 1 Role of Officers and Remuneration

The role demanded of officers is to seek to enhance short, medium-, and long-term corporate value, and officer remuneration shall serve as an effective incentive for them to perform that role.

#### 2 Level of Remuneration

The level of officer remuneration shall be suitable for the role, responsibility, and performance of the officer.

# 3 Composition and Other Details of Remuneration Paid to Directors

- (1) Remuneration of directors shall be paid within the scope of the remuneration limit approved at the General Shareholders' Meeting.
- (2) Remuneration of inside directors shall comprise monthly remuneration and bonus. Monthly remuneration shall comprise fixed remuneration paid in accordance with the post of each individual and performance-linked remuneration. A portion of fixed remuneration shall be allocated to the purchase of shares based on a sharepurchase guideline and from the standpoints of reflecting the perspectives of shareholders on management and improving shareholder value over the long term. The amount of performance-linked remuneration shall be determined after evaluating company-wide performance and performance of operating units from the standpoints of motivating Inside Directors to execute management strategies and reflecting their performance clearly in their remuneration. The amount of bonus to be paid shall be determined in accordance with the post of each inside director after performance evaluation.

(3) Remuneration of outside directors shall comprise monthly remuneration and bonus. Monthly remuneration shall comprise only fixed remuneration, while bonus shall be the same as that of inside directors.

# 4 Composition and Other Details of Remuneration Paid to Audit & Supervisory Board Members

- (1) Remuneration of Audit & Supervisory Board members shall be paid within the scope of the remuneration limit approved at the General Shareholders' Meeting and determined through discussions among Audit & Supervisory Board members.
- (2) Remuneration of Audit & Supervisory Board members shall comprise only fixed monthly remuneration.

# 5 Assurance of Objectivity and Transparency of the Remuneration System

The company shall assure the objectivity and transparency of the system of officer remuneration by establishing and operating the Advisory Committee comprising a number of outside directors, outside Audit & Supervisory Board members, and inside directors to govern the system of personnel affairs and remuneration of officers.



\* Monthly remuneration of outside directors are fixed remuneration only.

#### Total Remuneration for Directors and Audit & Supervisory Board Members (Fiscal 2015)

		Тур	e (Millions of '	Yen)	Type (Tho	usands of U.S. o	dollars*2)
	Number of officers*1	Total value of remuneration	Base	Bonuses	Total value of remuneration	Base	Bonuses
Remuneration for directors (excluding outside directors)	10	¥ 460	¥ 397	¥ 63	\$ 4,107	\$ 3,545	\$ 563
Remuneration for Audit & Supervisory Board members (excluding outside Audit & Supervisory Board members)	3	¥ 74	¥ 74	-	\$ 661	\$ 661	-
Remuneration for outside officers (outside directors and outside Audit & Supervisory Board members)	8	¥ 64	¥ 58	¥ 6	\$ 571	\$ 518	\$ 54

<sup>\*1</sup> The number of officers included in the total value of remuneration for directors, Audit & Supervisory Board members, and outside officers includes four directors and one Audit & Supervisory Board members, and outside officers includes four directors and one Audit & Supervisory Board

member (of which two were outside officers) who retired upon the conclusion of the 215th Annual Shareholders' Meeting.

2 Equivalent U.S. dollar amounts are included for the convenience of readers outside Japan and are converted at a rate of V112 per U.S. dollar, the prevailing exchange rate at the end of March 2016.

These conversions should not be construed as representations that the Japanese yen amounts have been, or could have been, or could in the future be, converted into U.S. dollars at this or any other rate of exchange

# **Advisory Committee**

In February 2005, we established the Advisory Committee to assure objectiveness and transparency in management. It has been defined that this committee will have no more than 6 members consisting of no more than 3 representatives from outside of the company and no more than 3 internal representatives, and that one of the outside representatives will serve as the committee's chairman.

Today, the Advisory Committee has 5 members: 3 representatives from the outside directors and outside Audit & Supervisory Board members as well as the Chairman and the President. In accordance with inquiries from the Board of Directors, the Advisory Committee deliberates on officer candidates and officer remuneration in a fair and appropriate manner and makes reports to the Board of Directors. The committee also deliberates on the independence of outside officer candidates.

# **Internal Control System**

To secure management legality, soundness, and transparency and to realize its management philosophy, the company has formulated the "Basic Policy on Development of Corporate Structures and Systems for Ensuring Appropriateness of Operations (Internal Control System) for the Tokyo Gas Group," and the company is applying this policy in an appropriate manner.

Specifically, the company has established systems to ensure that directors and their assistants perform their duties in a manner that is compliant to relevant laws and regulations, the articles of incorporation, and other rules. In addition, crisis management provisions have been formulated to limit losses from risks related to investments and natural disasters. The company also defines guidelines for ensuring the independence of Audit & Supervisory Board members and guaranteeing the effectiveness of the Audit & Supervisory Board.

# **Independent Auditors**

The company has concluded an auditing contract with KPMG AZSA LLC for auditing services based on the Companies Act and auditing services based on the Financial Instruments and Exchange Act, as well as internal control audits based on the Financial Instruments and Exchange Act, and the company is being audited on that basis. The company's audits are handled by 3 certified public accountants: Teruhiko Tanaka, Shuichi Ikeya, and Yoshihiro Uehara. For each of these auditors, the number of consecutive years of auditing service is seven years or less (as of June 29, 2016).

Compensation for Independent Auditors (Fiscal 2015)				
	Millions of yen	Thousands of U.S. dollars*		
Compensation for auditing services	¥ 268 \$ 2,39			
Compensation for non-auditing services	¥ 31	\$ 277		
Total	¥ 299	\$ 2,672		

<sup>\*</sup> Equivalent U.S. dollar amounts are included for the convenience of readers outside Japan, and are converted at a rate of Y112 per U.S. dollar, the prevailing exchange rate at the end of March 2016. These conversions should not be construed as representations that the Japanese yen amounts have been, could have been, or could in the future be, converted into U.S. dollars at this or any other rate of exchange.

# **Compliance**

#### **Compliance Structure**

The company has identified the following three points as its basic policy and is promoting compliance on that basis.

Fostering of a compliance oriented mentality

Compliance efforts through coordination among divisions based on the fundamental policy

Establishment of the compliance PDCA cycle

We have established the Management Ethics Committee, chaired by the President. This committee discusses at the management level basic compliance policies and all aspects of compliance initiatives by the company, monitors the implementation of compliance-related measures, and confirms activity programs from the following year and thereafter. We have also established the Compliance Department to support compliance-related activities for each unit. These include development of compliance promotion systems, encouragement awareness and educational campaigns about the code of conduct, compliance risk reduction measures, maintenance of advisory systems, and broad-based distribution of information within and beyond the Tokyo Gas Group companies. To cultivate an understanding of compliance, we promote a thorough awareness of ongoing activities related to our code of conduct. We are also moving forward with a compliance casebook designed for applying the code of conduct to various problems in the workplace, so as to achieve the permeation of compliance.

#### **Compliance Risk Management**

Through the effective operation of internal and external advisory systems, we are endeavoring to ensure that compliance-related problems are discovered and resolved quickly so that our corporate self-regulatory processes will continue to function effectively. We monitor the effectiveness of Group compliance promotion activities by conducting regular compliance awareness surveys of all employees. The results of these surveys are reflected in initiatives for the following years. The Compliance Audit Sect. of the Internal Audit Department conducts audits of the company, its subsidiaries, and its affiliates focusing on the probability that risks will materialize and their degree of importance from the viewpoint of strict compliance with laws, corporate ethics, and social norms. When concerns are identified, the group conducts follow-up audits in the following year to verify progress in tackling those concerns.

# **Risk Management System**

#### **Enterprise Risk Management System**

In fiscal 2003, the company established an enterprise risk management (ERM) system and drew up risk management regulations, which include documented rules concerning major risks faced by the group.

The Risk Management Committee was established in fiscal 2008 with the aim of tracking progress regarding the establishment and the operational status of the ERM system as well as improving the level of ERM. The committee periodically undertakes risk assessments and checks on the status of the ERM system. It also reports to the Corporate Executive Committee and obtains the necessary approvals. Moreover, in fiscal 2011, the risk management function was made the responsibility of the Corporate Planning Department, and there has been a framework in place for implementing unified ERM in conjunction with operational management. Under the framework, around 120 Risk Management Promotion Officers are deployed in the business departments of Tokyo Gas and its subsidiaries and affiliates in order to promote ERM. Each year, we assess risks and the implementation and improvement status of countermeasures. This system facilitates the steady implementation of the ERM-PDCA (Plan-Do-Check-Act) cycle.

#### **Crisis Management System**

Because the company provides public services that comprise a lifeline, for many years it has also had a crisis management system that serves as a response system in case an accident or other risk-related event actually occurs. Specifically, we have formulated Emergency Response Organization

# Enterprise Risk Management (ERM) System

#### **Securities Markets and Other Stakeholders**

Disclosure of risk information through Securities Report, Financial results, CSR report



# Corporate Executive Committee

Confirmation of major Group risks

Report / proposal for plan for assessment of major Group risks / other essential matters

**Risk Management Committee** (Executive Office: Corporate Planning Dept.) Identifying and confirming Group risk management

> Report regarding results of risk assessment, status of implementation of countermeasures, status of improvement, etc.

#### Feedback of evaluation results / improvement proposals Clear statement of risk management policies

Clear statement of risk management policies

#### **Business Departments / Subsidiaries and Affiliates**

- (1) Identifying and evaluating risks, formulating and implementing risk countermeasures
- (2) Improvement of risk assessment, countermeasures

#### **Emergency Response Organization** President **Executive Office\*** (Organization Leader) Suggestion of Instructions / establishment Collaboration of Emergency Response orders Organization, etc. Corporate Planning Dept. **Business Departments**

\* The organizational unit in charge of the executive office is determined in advance in accordance with the type of the emergency

(Group-wide coordination)

Regulations. In case of crises, including major natural disasters, such as earthquakes, or production or supply disruptions arising from major accidents at pipelines or terminals, as well as influenza, terrorism, failures in missioncritical IT systems, and compliance problems, the Emergency Response Organization responds to the situation immediately in accordance with the Emergency Response Organization Regulations. Periodic training is conducted in relation to major risk response measures. Moreover, the company has also formulated a business continuity plan (BCP), outlining its responses in the event of a major earthquake of the magnitude assumed by Japan's Cabinet Office, a major accident disrupting gas supply, a widespread blackout, an outbreak of influenza, etc. This plan is in place to reinforce the company's risk management system.

### Board of Directors As of June 29, 2016



June 1997 Deputy Chief Executive of Northern Regional Business Div. 1998 General Manager of Documents Dept. June 1999 Assistant to Director in charge of General Administration Dept. Executive Officer and General Manager of Corporate Planning Dept. of Strategic Planning Div. April 2004 Senior Executive Officer and Chief Executive of Strategic Planning Div. 2004 Director, Senior Executive Officer and Chief Executive of Strategic Planning Div. 2006 Director, Senior Executive Officer, Chief Executive April of Corporate Communication Div. and in charge of Compliance Dept. and Internal Audit Dept. 2007 Representative Director, Executive Vice President April and in charge of Personnel Dept., Secretary

Dept. and Internal Audit Dept. 2009 Representative Director, Executive Vice President and in charge of Personnel Dept., Secretary Dept. General Administration Dept. and Compliance Dept.

Dept., General Administration Dept., Compliance

2010 Representative Director, President April 2014 Director and Chairman of the Board (Current April

position) 2016 Outside director of JAPAN POST BANK Co., Ltd



April 2004 Executive Officer and Assistant to Chief Executive of Corporate Communication Div.

April 2006 Executive Officer and General Manager of Corporate Planning Dept. of Strategic Planning Div.

Senior Executive Officer and in charge of Corporate April Planning Dept., Infrastructure Project Dept., Finance Dept. Accounting Dept. and Affiliated Companies Dept.

2008 Senior Executive Officer and in charge of Corporate Planning April Dept., Investor Relations Dept., Finance Dept., Accounting Dept., Affiliated Companies Dept. and Gas Industry Privatization Research Project Dept.

2009 Senior Executive Officer and in charge of Corporate Planning Dept. and Affiliated Companies Dept. April

Director, Senior Executive Officer and in charge of Corporate Planning Dept., Corporate Communications Dept. and Affiliated Companies Dept.

January 2010 Director, Senior Executive Officer and in charge of Corporate Planning Dept., Project Management Dept., Corporate Communications Dept. and Affiliated Companies Dept.

2012 Representative Director, Executive Vice President and Chief Executive of Living Energy Div.

2013 Representative Director, Executive Vice President and Chief April Executive of Residential Sales and Service Div

2014 Representative Director, President (Current position)



April 1977 Joined the company 2004 General Manager of Gas Resources Dept. of April Energy Resources Business Div.

April 2007 Executive Officer and General Manager of Gas Resources Dept. of Energy Resources Business Div.

2008 Executive Officer and General Manager of April Industrial Gas Sales Dept. of Energy Solution Div. April 2010 Senior Executive Officer and Chief Executive of

Energy Resources Business Div. 2013 Senior Executive Officer and Chief Executive of Apri

Energy Production Div. 2013 Director, Senior Executive Officer and Chief June Executive of Energy Production Div.

2014 Representative Director, Executive Vice President, Chief Executive of Energy Solution Div. and General Manager of Volume Sales Dept. of Energy Solution Div.

2015 Representative Director, Executive Vice President April and in charge of Power Business Planning Dept., Business Restructuring Project Dept., Gas Business Deregulation Project Dept., and Sales Innovation Planning Dept.

2016 Representative Director, Executive Vice President, Head of Power Business, Chief Executive of Regasification & Power Generation Div. and in charge of Power Business Planning Dept. (Current position)



Anril 1979 Joined the company June

2006 General Manager of Pipeline Planning Dept. of Pipeline Network Div. 2009 General Manager of Corporate Planning Dept.

2010 Executive Officer and General Manager of April Corporate Planning Dept.

April 2012 Senior Executive Officer and in charge of Personnel Dept., Secretary Dept., Compliance Dept. and Internal Audit Dept.

2013 Senior Executive Officer and Chief Executive of April Energy Resources Business Div.

2015 Director, Senior Executive Officer and Chief Executive of Energy Resources Business Div. April

2016 Representative Director, Executive Vice President and Chief Executive of Residential Sales and Service Div. (Current position)



1980 Joined the company

April 2005 General Manager of Technology Development Dept. April 2006 General Manager of Product Development Dept.

April 2007 Assistant to Chief Executive of Living Energy Div. October 2007 General Manager of Area Development

Planning Dept. April 2008 General Manager of Customer Safety Dept. 2009 Executive Officer and General Manager of April

Customer Safety Dept. April Executive Officer and General Manager of Residential Fuel Cell Business Development Dept.

2012 Senior Executive Officer and Chief Executive of April Technology Development Div.

2013 Senior Executive Officer, Chief Executive of Technology Development Div. and in charge of Smart Energy Business Development Dept.

2014 Director, Senior Executive Officer, Chief Executive of Technology Development Div. and in charge of Smart Energy Business Development Dept.

April 2015 Director, Senior Executive Officer, Chief Executive of Pipeline Network Div. (Current position)



1979 Joined the company Anril

2006 General Manager of Industrial Gas Sales Dept. of Energy Sales and Service Div. April

2008 General Manager of Gas Resources Dept. of Energy Resources Business Div.

2010 Executive Officer and General Manager of Gas April Resources Dept. of Energy Resources Business Div. 2011 Executive Officer and General Manager of Sales

Marketing 1 Dept. of Living Corporate Sales and

2012 Senior Executive Officer and Chief Executive of Regional Development Marketing Div.

2015 Senior Executive Officer and Chief Executive of IT April Div. and in charge of Environmental Affairs Dept. and Fundamental Technology Dept.

2015 Director, Senior Executive Officer, Chief Executive of IT Div. and in charge of Environmental Affairs Dept. and Fundamental Technology Dept.

2016 Director, Senior Executive Officer, Chief Executive April of Energy Solution Div. and General Manager of Volume Sales Dept. of Energy Solution Div. (Current position)



April 1979 Joined the company

2009 General Manager of Residential Sales Planning April Dept. of Living Energy Div.

2010 Executive Officer and General Manager of Residential

Sales Planning Dept. of Living Energy Div. 2013 Senior Executive Officer and Head of Sales

April Marketing of Energy Solution Div.

October 2014 Senior Executive Officer, Head of Sales Marketing of Energy Solution Div. and General Manager of Energy Sales & Service Planning Dept.

2015 Senior Executive Officer, Chief Executive of Energy Solution Div. and General Manager of April Volume Sales Dept.

2016 Senior Executive Officer of the company April President, Representative Director of Tokyo Gas Liquid Holdings Co., Ltd.



1980 Joined the company April

April 2005 General Manager of Home Service Planning Dept of Home Service Div.

2006 General Manager of Business Partnership Support Dept. of Home Service Div. April

2010 General Manager of Lifeval Project Management April Dept. of Living Energy Div.

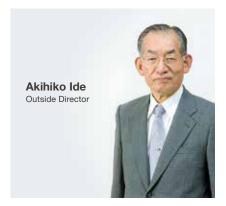
April 2011 Executive Officer and General Manager of Lifeval Project Management Dept. of Living Energy Div.

April 2012 Executive Officer and General Manager of Corporate Planning Dept.

2014 Senior Executive Officer and in charge of April Corporate Planning Dept. and Affiliated Companies Dept.

April 2015 Senior Executive Officer and in Charge of Corporate Planning Dept., Personnel Dept., Chiba-Ibaraki Project Dept., Group Management Project Dept., and Group Personnel System Project Dept.

2016 Senior Executive Officer and in Charge of April Personnel Dept., Secretary Dept., General Administration Dept., Compliance Dept., and Internal Audit Dept.



1965 Joined Mitsubishi Metal Mining company Ltd. (Current Mitsubishi Materials Corporation) April

1994 General Manager of General Affairs & June Administration Dept. at Mitsubishi Materials Corporation

1997 Director of Mitsubishi Materials Corporation 2000 Managing Director of Mitsubishi Materials June

Corporation 2002 Executive Vice President of Mitsubishi Materials June

2004 President of Mitsubishi Materials Corporation June 2010 Chairman of Mitsubishi Materials Corporation Director of Sakai Chemical Industry Co., Ltd.

2015 Senior Advisor of Mitsubishi Materials April

Corporation

2015 Advisor of Mitsubishi Materials Corporation June Director of the company (Current position)



April 1973 Joined Ministry of Foreign Affairs

August 2004 Director-General of Consular Affairs Bureau August 2005 Press Secretary/Director-General for Press and Public Diplomacy of Minister's Secretariat

August 2006 Ambassador Extraordinary and Plenipotentiary to the State of Israel

October 2008 Ambassador for ASEAN, and Science and Technology Cooperation, Ministry of Foreign Affairs

2010 Director-General of Foreign Service Training Institute, Ministry of Foreign Affairs

March 2011 Ambassador Extraordinary and Plenipotentiary to the State of Indonesia

October 2014 Retired from Ministry of Foreign Affairs

2015 Director of the company (Current position)



1997 Registered as an attorney at law April

1997 Joined a law firm in Tokyo Metropolitan area April 2006 Joined Asahi Law Office (Currently Nishimura &

July Asahi)

June 2007 Registered as an attorney at law in New York State, USA

2016 Director of the company (Current position)

# Audit & Supervisory Board Members As of June 29, 2016



1975 Joined the company April

June 2002 General Manager of the International Affairs Dept. of the Strategic Planning Div.

2004 Executive Officer, General Manager of Urban Energy

Business Dept. of Energy Sales and Service Div., and Acting General Manager of Volume Sales Dept. of Energy Sales and Service Div.

2006 Senior Executive Officer and Division Manager of April Energy Resources Div.

June 2009 Director, Senior Executive Officer, and Division Manager of Energy Resources Div.

April 2010 Director, Senior Executive Officer, and Division Manager of Energy Production Div. and in charge of the Environmental Affairs Dept.

2012 Director, Senior Executive Officer, and Division Manager of Energy Production Div.

April 2013 Director

June 2013 Audit & Supervisory Board Member



1978 Joined the company April

July 2003 General Manager of Marketing Dept., Living

April 2004 General Manager of Home Service Planning Dept., Home Service Div.

April 2005 General Manager of Kanagawa Branch, Corporate Communication Div.

April 2007 General Manager of Corporate Communications Dept.

April 2009 Executive Officer and General Manager of Corporate Communications Dept.

2012 Senior Executive Officer and in charge of April Purchasing Dept., Real Estate Management Dept., Major Site Development Dept.

2013 Senior Executive Officer and in charge of April Purchasing Dept., Real Estate Management Dept., Personnel Dept., Internal Audit Dept.

March 2015 Retired as Senior Executive Officer 2015 Audit & Supervisory Board Member



Anril 1969 Joined Export-Import Bank of Japan

October 1999 Full-time Auditor of Japan Bank for International Cooperation

2000 Director of Japan Bank for International Cooperation October 2004 Vice Governor of Japan Bank for International Cooperation

October 2008 Representative Director and Senior Managing Executive Officer of Japan Finance Corporation Deputy CEO of Japan Bank for International Cooperation

2011 Retired as Deputy CEO of Japan Bank for International June

December 2011 Advisor of Sumitomo Mitsui Banking Corporation

2012 President (Chief Executive Officer) of Japan Institute for Overseas Investment

Outside Audit & Supervisory Board Member of the company

2013 Outside Director of Kawasaki Heavy Industries, Ltd. Retired as Advisor of Sumitomo Mitsui Banking Corporation

December 2014 Retired as President (Chief Executive Officer) of Japan Institute for Overseas Investment



March 1971 Joined Yokohama City Hall

April 2003 Director General of General Affairs Bureau of Yokohama City Hall

2006 Director General of Waterworks Bureau of Yokohama City Hall

2008 Vice President of Kanagawa Water Supply July

2013 Outside Audit & Supervisory Board Member of the company Retired from Kanagawa Water Supply Authority

Wako Tojima Outside Audit & Supervisory Board Member

April 1985 Joined The Yomiuri Shimbun,

1991 Retired from The Yomiuri Shimbun Freelance journalist March

Part-time lecturer at School of Social and International Studies of University of Tsukuba

2014 Outside Audit & Supervisory Board Member of the

## **Executive Officers**

President	Michiaki Hirose	
Executive Vice Presidents	Yutaka Kunigo	Head of Power Business, Chief Executive of Energy Production Div., In Charge of Power Business Planning Dept.
	Takashi Uchida	Chief Executive of Residential Sales and Service Div.
Senior Executive Officers  Hiroaki Kobayashi Satoru Yasuoka		Chief Executive of Pipeline Network Div.
		Chief Executive of Energy Solution Div., General Manager of Volume Sales Dept. of Energy Solution Div.
	Fumio Murazeki	President, Representative Director of Tokyo Gas Liquid Holdings Co., Ltd.
Masaru Takamatsu Hideaki Arai		In Charge of Personnel Dept., Secretary Dept., General Administration Dept., Compliance Dept., and Internal Audit Dept.
		Chief Executive of Region Div.
	Shin Yamagami	Chief Executive of IT Div., in charge of Environmental Affairs Dept., and Fundamental Technology Dept.
	Isao Nakajima	CFO, in Charge of Finance Dept., Accounting Dept., Purchasing Dept., and Real Estate Management Dept.
	Kunio Nohata	President, Representative Director of Tokyo Gas Engineering Solutions Corporation
	Satoru Sawada	In Charge of Corporate Planning Dept., Corporate Communications Dept., Gas Business Deregulation Project Dept., Tokyo 2020 Olympic and Paralympic
	Takashi Anamizu	Chief Executive of Energy Resources and Overseas Div.

Executive	Fumihiko Hara
Officers	Kiyotada Den
	Takahiro Saito
	Shinichi Takagi
	Toshiyasu Ishii
	Nobuhisa Kobayashi
	Tadashi Komiyama
	Koki Hayakawa
	Kentaro Kimoto
	Yohei Nitta
	Tomoyuki Yoshioka
	Hiroshi Kishino
	Shinichi Sasayama
	Ayumi Shigitani
Executive	Masami Takayanagi
Specialists	Minoru Sanari

## Message from an Outside Director

Full liberalization of the gas retail market in Japan is scheduled to take place in April 2017, as determined one year earlier, following the full liberalization of the electric power retail market in April 2016. Overseas, oil prices and other factors remain uncertain, while the requirements to invest in natural gas-related infrastructure are rising. As such, Tokyo Gas is facing such significant changes in its business environment.

Concerning corporate governance, the Tokyo Stock Exchange formulated Japan's Corporate Governance Code in June 2015, whereby listed companies are expected to make further efforts to ensure healthy corporate entrepreneurship and transparency, and to enhance initiatives with the aim to create mid- to long-term corporate value.

As a lawyer, I have provided various legal services to many corporations. In the current critical juncture, I felt deeply honored to be appointed as an independent outside director of Tokyo Gas and was humbled by the significant responsibility and high expectations. According to the principles of the Corporate Governance Code, independent outside directors are expected to oversee management and reflect opinions of stakeholders to fulfill their roles as independent watchdogs and guides. I thus believe my first task is to encourage more active constructive discussions at the Board of Directors meetings. Specifically, given my knowledge and experience as a legal professional, I will always be mindful of the interests of shareholders and other stakeholders, and ask questions or express opinions at each stage when management issues are formulated, and measures are developed and implemented. In other words, I believe my first task is to play a monitoring function. Second, I intend to review whether structures for compliance, risk management, or internal control are properly established and are effectively utilized. Moreover, human resource development and consideration for maintaining a good working environment are indispensable from the perspective of raising mid- to long-term corporate value. I am also hoping to contribute to enhancement of corporate value from a viewpoint of promoting diversity in terms of gender, age, nationality, physical condition, family environment, and other factors.

Chika Igarashi **Outside Director** 



Tokyo Gas was early to start appointing outside directors. I think the company is addressing corporate governance issues at a relatively high level. I put great confidence in Tokyo Gas employees, who freely explain the company's business outline and issues to outside directors such as me and always sincerely respond to questions.

In my view, corporate value of Tokyo Gas is based on its "reliability, safety, and trust" branding power, which was accumulated during its 130-year history, and is driven by its vitality to capture growth opportunities in changing times and keep facing challenges boldly. Value should be permanently created by wellbalanced functioning of those elements.

Corporate value also places a primary focus on shareholder-oriented management. However, in case of Tokyo Gas, which plays a social mission of the supply of energy. I think it would be more appropriate to think of its corporate value as an aggregate of value provided to all stakeholders, including customers, employees, suppliers, local communities, and international society in general.

Vitality of Tokyo Gas is well presented in the context and progress of its Challenge 2020 Vision, a 9-year plan established six months after the Great East Japan Earthquake of March 2011. At present, the company is in the midst of the second "Step" stage making steady progress in its three main policies: to evolve into the Total energy business; to accelerate global business development; and to reconstruct the corporate group. As the changes accompanying liberalization appear, one by one, it appears that more barriers in terms of business and regions are to be discarded and business restructuring could be accelerated, with repercussions overseas. I will make my best efforts to accomplish my tasks by always keeping interests of stakeholders in mind and helping Tokyo Gas shift into the third "Jump" stage.



# Tokyo Gas Group's Invisible Assets

Since its foundation in 1885, the Tokyo Gas Group has steadily supplied gas to industrial and household customers in the Greater Tokyo Area, and cultivated "invisible assets" that are not shown on financial statements while supporting economic development and a good life.

Amid the advancing full deregulation of the electricity and gas retail markets as well, the group will realize sustainable growth and the enhancement of

its corporate value while improving these invisible assets.



system with close connections to local communities, they have built a strong relationship of trust with customers. Tokyo Gas has also made a partial capital contribution to the companies and is supporting their management. Many staff that are involved in a full range of services have been assigned to each outlet, and through operations spanning legal inspections of gas facilities to sales and maintenance of gas appliances, we have responded to customer needs. In the case of sales of electricity to households and small commercial customers

as well, we have a marketing system that enables every single customer to be visited individually, which has become a strength in

terms of the Tokyo Gas Group's electricity sales.

Lifeval, Enesta, and Enefit are service companies with strong local community relationships that are engaged in meter reading, safety inspection of gas shutoff taps and gas facilities, and sales, installation and repair of gas appliances. Based on a marketing

Lifeval and Enesta are fostering staff that not only specialize in gas but also have specialist knowledge and qualifications related to electricity such as electrical construction work qualifications. We are thus making progress in the establishment of an organization aimed at providing comprehensive energy services related to gas and electricity.

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. At a training facility dedicated to developing safety staff in Tsurumi-ku, Yokohama City, a total of about 6,900 Tokyo Gas employees and employees at Tokyo Gas Group partner companies a year are undergoing practical training.

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. After full deregulation as well, we will strive to maintain and enhance the level of safety through continuous human resource development.





The Group is continually endeavoring to share skills across the entire Group and further increase awareness regarding quality enhancement in a wide range of areas related to customer safety

As part of initiatives aimed at improving skills, in the area of "gas tap and gas appliance maintenance and regular safety inspection operations," which represent an opportunity to come into contact with our valued customers, we have held a practical skill competition over a period of five years from 2011. Partner companies of Lifeval, Enesta and Enefit take part in this, and by competing in knowledge and skills that are required in daily operations, it is refining its workplace skills.

#### **Recent Skill Competitions' Details**

Operational area		Number of participants
FY2013	Regular safety inspections	Approx. 750
FY2014	Gas taps	Approx. 800
FY2015	Gas appliance maintenance	Approx. 600



#### Strong commitment regarding diversity

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

Amid increasingly fierce competition among companies in the energy market, the Tokyo Gas Group aims to realize its Challenge 2020 Vision in order to continue to be selected by customers and achieve sustainable growth and development in the future. One of the important challenges that we will tackle to this end on a groupwide basis is the promotion of diversity. To continue to respond to diversifying customer needs, it is essential for every person working in the group to make maximum use of their knowledge, ability, and experience and excel. We aim to be a corporate group that will develop and expand systems that will support this aim and foster awareness of it while also continuing to proactively create an organizational culture where every working person can excel regardless of their gender, age, or nationality, whether they are disabled or not, or whether they are hired just after graduating or in mid-career.

#### **Basic Policy Regarding Promotion of Diversity**

The Tokyo Gas Group will promote diversity in order to become a corporate group where every single working person makes maximum use of their knowledge, abilities, and experience and excels.

- 1 We aim to realize an organization (diverse working styles and productivity enhancement) in which every person accepts each other's working style while enhancing productivity.
- We regard promoting the success of women as the beginning of the promotion of diversity, and will continue to undertake this proactively.
- 3 We will establish a "Group Diversity Promotion Team" and promote diversity in the entire Group in an integrated manner with management.

#### 1 Active Promotion and Development of Women

Tokyo Gas recognizes the critical need to promote the success of a diverse pool of human resources and to create a workplace environment that allows each and every employee to maximize his or her various capabilities and strengths in order for it to secure growth as a company. Guided by this understanding, we actively recruit and promote women. As a result, our female employees are excelling across a wide range of occupational fields, and the ratio of women in management positions is also steadily increasing. In April 2016, we appointed our first female executive

Ratio of Women in Management

(%)
10.0
10.0
8.0
4.6
5.1
5.8
6.3
6.5
4.0

2011.4 2012.4 2013.4 2014.4 2015.4 2016.4 **2020.4** (Targets)

officer, and opportunities for female employees to excel are steadily expanding. In addition to upgrading and expanding our child-rearing and nursing care systems, Tokyo Gas places considerable weight on fostering employee awareness and creating an organizational culture that is conducive to developing the careers of the company's female employees by promoting a variety of initiatives including seminars. Looking ahead, we will continue to actively promote measures that will broaden opportunities for women to excel, with the aim of having women account for 10% of management positions in 2020.

#### 2 Employment of People with Disabilities

At Tokyo Gas, people with disabilities work alongside our other employees and are performing a variety of duties. As of March 2016, 137 people with disabilities were in our employment, achieving the statutory rate. To further expand employment of people with disabilities and create opportunities for their success, we will newly establish 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. At the same time, we will promote the creation of an environment that is safe and comfortable.



#### Assigning personnel to strategic areas

We are prioritizing the deployment of personnel to the electricity power business and overseas businesses, which are strategic areas, in an effort to promote their growth and expansion.

#### **Electric power business**

In tandem with the expansion of the electricity power business, we are emphasizing the deployment of personnel and developing personnel in relation to this business. In addition, we are flexibly engaged in mid-career recruitment of human resources with experience and expertise.

#### **Overseas business**

To expand overseas businesses, we increased the number of overseas employees by 2.5 times to about 100 during a period of five years from 2011. We plan to increase the number of personnel to 200 in tandem with the scale and speed of business expansion.

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





 $\label{petroVietnam} \ \ \text{Gas (Signed a memorandum of understanding to conduct a feasibility study on }$ 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-)

#### Gas resource procurement



By enhancing and expanding alliance with LNG players in Japan and overseas, we have flexibility and pricing competition in procurement of LNG.

Korea Gas Corporation; CPC Corporation, Taiwan; Kansai Electric Power

#### **Power Generation**



#### Expansion of competitive power generation capacity

JX 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)

#### **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 alliance with 18 companies including gas operators which are our city gas wholesale customers (approx. 569,000 city gas customers)

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

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



# 11-Year Consolidated Financial Highlights As of March 31, 2016

	2006.3	2007.3	2008.3	2009.3	
Net Sales (¥ million)	1,266,501	1,376,958	1,487,496	1,660,162	
Operating Income (¥ million)	112,345	162,315	70,048	65,204	
Operating Income Margin (%)	8.87	11.79	4.71	3.93	
Ordinary Income (¥ million)	98,689	156,039	66,832	58,337	
Net Income (¥ million)	62,114	100,699	42,487	41,708	
Equity (¥ million)	728,231	795,101	769,072	772,365	
Total Assets (¥ million)	1,693,898	1,692,635	1,703,651	1,764,185	
Interest-bearing Debt (¥ million)	559,911	525,467	558,716	593,230	
Operating Cash Flow (¥ million)	198,490	233,841	184,908	182,791	
Free Cash Flow (¥ million)	79,057	109,285	46,902	36,862	
EBITDA (¥ million)	248,721	295,457	212,469	206,287	
Capital Expenditure (¥ million)	119,435	124,556	138,006	145,929	
Depreciation (¥ million)	136,376	133,142	142,421	141,083	
EPS (Earnings per Share, fully diluted EPS) (¥)	21.70	35.69	15.50	15.37	'
BPS (Book Value per Share) (¥)	270.46	293.11	289.49	284.72	
Issued Number of Shares (Common Stock) (thousands of shares)	2,810,171	2,810,171	2,741,571	2,717,571	
Dividend per Share (¥)	7	8	8	8	
DOE (Dividends on Equity) (%)	2.71	2.83	2.72	2.78	
Payout Ratio (%)	29.81	21.33	50.19	51.18	
Total Payout Ratio (%)	84.29	60.14	73.56	63.35	
Current Ratio (%)	102.91	112.60	106.76	118.99	'
D/E (Debt-Equity) Ratio (times)	0.77	0.66	0.73	0.77	
Equity Ratio (%)	42.99	46.97	45.14	43.78	
ROE (Return on Equity) (%)	9.02	13.22	5.43	5.41	
ROA (Return on Assets) (%)	3.69	5.95	2.50	2.41	
Total Asset Turnover (times)	0.75	0.81	0.88	0.96	
TEP (¥100 million)	229	538	17	(48)	
WACC (%)	3.7	3.8	3.6	3.4	
Number of Customers (thousands)	10,016	10,207	10,380	10,513	
Gas Sales Volume (million m³)	13,098	13,315	14,215	13,942	
2020 vision basis*	_	_	_	_	

<sup>\* 2020/</sup>ision basis...These numbers are the numerical results calculated by the same method when we planned our vision. Namely, it is the amount that added self-consuming volume and LNG sales volume (excluded volume for Nijio) to a Consolidated gas sales volume.

\* Depreciation includes amortization of long-term prepaid expenses.

\* Although unaudited, financial information in this investors'guide is based on certified financial statements.

2016.3	2015.3	2014.3	2013.3	2012.3	2011.3	2010.3
1,884,656	2,292,548	2,112,117	1,915,639	1,754,257	1,535,242	1,415,718
192,008	171,753	166,044	145,633	77,075	122,451	85,229
10.19	7.49	7.86	7.60	4.39	7.98	6.02
188,809	168,169	159,613	147,453	75,620	121,548	83,519
111,936	95,828	108,451	101,678	46,060	95,467	53,781
1,100,271	1,069,515	1,011,787	927,634	839,166	858,920	813,886
2,251,518	2,257,662	2,176,816	1,992,403	1,863,885	1,829,661	1,840,972
715,769	730,739	713,823	642,550	625,830	584,169	555,919
257,122	237,680	248,831	240,448	194,565	244,803	199,898
25,089	13,084	827	56,651	48,152	94,600	51,712
337,194	313,605	306,424	284,403	225,580	271,788	231,346
232,033	224,596	248,004	183,797	146,413	150,202	148,186
145,187	141,852	140,380	138,770	148,505	149,336	146,117
46.68	39.15	43.10	39.52	17.70	35.63	19.86
460.35	438.28	402.91	360.70	324.67	320.70	301.58
2,396,778	2,446,778	2,517,551	2,577,919	2,590,715	2,684,193	2,703,761
11	10	10	10	9	9	9
2.58	2.34	2.59	2.91	2.74	2.88	3.07
23.57	25.55	23.20	25.30	50.85	25.26	45.32
60.10	60.80	60.00	60.70	61.36	60.87	60.11
155.48	150.63	156.67	162.16	156.89	142.26	120.93
0.65	0.68	0.71	0.69	0.75	0.68	0.68
48.87	47.37	46.48	46.56	45.02	46.94	44.21
10.32	9.21	11.18	11.51	5.42	11.41	6.78
4.96	4.32	5.20	5.27	2.49	5.20	2.98
0.84	1.03	1.01	0.99	0.95	0.84	0.79
676	434	507	598	91	640	186
3.4	3.6	3.2	3.2	3.1	3.3	3.2
44.000	11.000		10.070	10.0==	10 = 22	10.00
11,398	11,263	11,111	10,978	10,855	10,739	10,637
15,436	15,541	14,735	15,390	15,190	14,745	13,666
18,587	18,360	17,225	16,741	15,833		

#### Computations

Operating Cash Flow = Net Income + Amortization of Long-term Prepaid Expenses + Depreciation
Free Cash Flow = Net Income + Amortization of Long-term Prepaid Expenses + Depreciation - Capital Expenditure
Current Ratio = Current Assets (year-end) / Current Liabilities (year-end) x 100
Debt-Equity Ratio = Interest-bearing Debt (year-end) / Equity (year-end)
Equity Ratio = Equity (year-end) / Total Assets (year-end) x 100
Total Asset Turnover = Net Sales / Total Assets (average)
TEP (Tokyo Gas Economic Profit) = After-tax & pre-interest-payment profit - capital cost (cost of interest-bearing debt

+shareholder capital cost)

WACC calculation data (fiscal 2015 actual)
Interest-bearing debt cost: Real interest rate of 1.11% (after tax)
Cost of shareholders' equity
Risk-free rate: 10-year JGB yield of 0.44%
Risk premium: 5.5%, Beta coefficient of 0.75

# **Consolidated Balance Sheet**

			(Millions of yen
Assets	Non-current assets	2015.3.31	2016.3.31
7100010	Property, plant and equipment		
	Production facilities	174,760	241,842
	Distribution facilities	479,060	550,713
	Service and maintenance facilities	60,525	59,560
	Other facilities	326,424	351,950
	Inactive facilities	387	316
	Construction in progress	223,821	107,685
	Total property, plant and equipment	1,264,979	1,312,068
	Intangible assets		
	Goodwill	503	841
	Other	134,937	136,348
	Total intangible assets	135,441	137,189
	Investments and other assets		
	Investment securities	199,166	179,410
	Long-term loans receivable	16,149	24,013
	Net defined benefit asset	5,541	229
	Deferred tax assets	24,731	40,447
	Other  Allowance for doubtful accounts	30,335	34,741
	Total investments and other assets	(444)	(394)
	Total non-current assets	275,480	278,447
	Current assets	1,675,901	1,727,705
	Cash and deposits	86,493	170,262
	Notes and accounts receivable - trade	250,326	201,344
	Lease receivables and investment assets	26,379	24,054
	Securities	43,010	_
	Merchandise and finished goods	3,189	3,501
	Work in process	14,046	10,784
	Raw materials and supplies	71,630	46,525
	Deferred tax assets	12,637	8,004
	Other	74,632	59,808
	Allowance for doubtful accounts	(584)	(472)
	Total current assets	581,761	523,812
	Total assets	2,257,662	2,251,518
Liabilities	Non-current liabilities		
	Bonds payable	312,697	284,997
	Long-term loans payable	339,214	363,393
	Deferred tax liabilities	11,436	11,321
	Net defined benefit liability	75,071	89,405
	Provision for gas holder repairs	3,421	3,455
	Provision for safety measures  Provision for appliance warranties	868 3,675	466 9,538
	Provision for loss on guarantees	1,562	1,678
	Asset retirement obligations	11,448	10,695
	Other	24,798	24,490
	Total non-current liabilities	784,193	799,443
	Current liabilities	701,100	7 00, 110
	Current portion of non-current liabilities	58,020	47,044
	Notes and accounts payable - trade	108,948	82,352
	Short-term loans payable	18,547	16,512
	Income taxes payable	43,640	28,914
	Deferred tax liabilities	2	1
	Provision for safety measures	3,839	_
	Asset retirement obligations	_	53
	Other	153,208	162,023
	Total current liabilities	386,206	336,903
	Total liabilities	1,170,400	1,136,346
Net assets	Shareholders' equity		
	Capital stock	141,844	141,844
	Capital surplus	2,065	1,878
	Retained earnings	855,776	910,353
	Treasury shares	(3,715)	(4,441)
	Total shareholders' equity	995,971	1,049,634
	Accumulated other comprehensive income		
	Valuation difference on available-for-sale securities	34,455	26,298
	Deferred gains or losses on hedges	(1,820)	(2,573)
	Foreign currency translation adjustment	43,071	44,945
	Remeasurements of defined benefit plans	(2,163)	(18,033)
	Total accumulated other comprehensive income	73,543	50,636
	Non-controlling interests	17,747	14,900
	Total net assets	1,087,262	1,115,172
	Total liabilities and net assets	2,257,662	2,251,518

# **Consolidated Statement of Income**

		(Millions of ye
	2014.4.1 - 2015.3.31	2015.4.1 - 2016.3.31
Net sales	2,292,548	1,884,656
Cost of sales	1,668,041	1,239,020
Gross profit	624,506	645,636
Selling, general and administrative expenses		
Supply and sales expenses	383,749	385,572
General and administrative expenses	69,003	68,054
Total selling, general and administrative expenses	452,752	453,627
Operating income	171,753	192,008
Non-operating income		
Interest income	770	615
Dividend income	3,891	1,878
Rent income	1,622	2,177
Foreign exchange gains	148	1,733
Share of profit of entities accounted for using equity method	3,313	2,122
Miscellaneous income	7,796	7,043
Total non-operating income	17,542	15,570
Non-operating expenses		
Interest expenses	12,659	12,158
Adjustments of charges for construction of distribution facilities	2,054	2,189
Miscellaneous expenses	6,413	4,421
Total non-operating expenses	21,126	18,769
Ordinary income	168,169	188,809
Extraordinary income		
Gain on sales of non-current assets	6,134	_
Gain on sales of investment securities	5,062	_
Total extraordinary income	11,197	_
Extraordinary losses		
Impairment loss	30,987	28,293
Loss on reduction of non-current assets	505	_
Loss on valuation of investment securities	622	4,747
Total extraordinary losses	32,115	33,040
Profit before income taxes	147,251	155,768
Income taxes - current	51,451	43,782
Income taxes - deferred	(847)	(991)
Total income taxes	50,603	42,791
Profit	96,647	112,977
Profit attributable to non-controlling interests	819	1,040
Profit attributable to owners of parent	95,828	111,936

# **Consolidated Statements of Comprehensive Income**

		(Millions of yen)
	2014.4.1 - 2015.3.31	2015.4.1 - 2016.3.31
Profit	96,647	112,977
Other comprehensive income		
Valuation difference on available-for-sale securities	8,603	(8,363)
Deferred gains or losses on hedges	(447)	(1,062)
Foreign currency translation adjustment	20,537	3,614
Remeasurements of defined benefit plans, net of tax	(3,402)	(15,904)
Share of other comprehensive income of entities accounted for using equity method	3,887	(1,387)
Total other comprehensive income	29,179	(23,102)
Comprehensive income	125,826	89,874
Comprehensive income attributable to		
Comprehensive income attributable to owners of parent	124,981	89,029
Comprehensive income attributable to non-controlling interests	845	844

## **Consolidated Statements of Cash Flows**

		(Millions of yen)
	2014.4.1 - 2015.3.31	2015.4.1 - 2016.3.31
Cash flows from operating activities		
Profit before income taxes	147,251	155,768
Depreciation and amortibation	138,635	141,930
Impairment loss	30,987	28,293
Amortization of long-term prepaid expenses	3,217	3,256
Loss on retirement of property, plant and equipment	2,001	3,050
Loss (gain) on sales of investment securities	(5,062)	(1,156)
Loss (gain) on valuation of investment securities	622	4,747
Increase (decrease) in provision for gas appliance warranties	3,675	5,863
Increase (decrease) in net defined benefit liability	(4,810)	(1,110)
Increase (decrease) in net defined benefit asset	(4,474)	(1,384)
Increase (decrease) in Provision for safety measures	2,995	(4,242)
Interest and dividend income	(4,661)	(2,494)
Interest expenses	12,659	12,158
Share of (profit) loss of entities accounted for using equity method	(3,313)	(2,122)
Decrease (increase) in notes and accounts receivable - trade	2,355	47,350
Decrease (increase) in inventories	(12,008)	28,117
Increase (decrease) in notes and accounts payable - trade	(7,305)	(22,993)
Decrease (increase) in consumption taxes refund receivable	(4,371)	2,940
Increase (decrease) in accrued consumption taxes	1,137	(2,436)
Decrease (increase) in accounts receivable - other	(5,603)	12,864
Net decrease (increase) in lease receivables and investment assets	(42)	2,273
Other, net	(21,005)	(1,253)
Subtotal	272,878	409,422
Interest and dividend income received	13,512	11,954
Interest expenses paid	(12,649)	(12,547)
Income taxes paid	(50,515)	(54,170)
Net cash provided by (used in) operating activities	223,225	354,658
Cash flows from investing activities		
Proceeds from withdrawal of time deposits	1,846	1,945
Purchase of investment securities	(147)	(1,850)
Proceeds from sales and redemption of investment securities	8,705	3,616
Purchase of property, plant and equipment	(180,097)	(195,060)
Purchase of intangible assets	(25,313)	(26,131)
Purchase of long-term prepaid expenses	(3,276)	(10,683)
Payments for transfer of business	_	(1,250)
Payments of long-term loans receivable	(2,954)	(9,776)
Collection of long-term loans receivable	6,485	1,726
Other, net	9,913	1,057
Net cash provided by (used in) investing activities	(184,838)	(236,406)
Cash flows from financing activities		
Net increase (decrease) in short-term loans payable	241	(2,011)
Repayments of lease obligations	(975)	(1,243)
Proceeds from long-term loans payable	29,359	51,701
Repayments of long-term loans payable	(30,891)	(18,012)
Redemption of bonds	(20,000)	(43,800)
Repayments to non-controlling shareholders	_	(3,581)
Purchase of treasury shares	(40,132)	(33,939)
Cash dividends paid	(24,774)	(24,173)
Other, net	19,432	(356)
Net cash provided by (used in) financing activities	(67,741)	(75,418)
Effect of exchange rate change on cash and cash equivalents	6,769	(1,065)
Net increase (decrease) in cash and cash equivalents	(22,585)	41,769
Cash and cash equivalents at beginning of period	150,918	128,333
Cash and cash equivalents at end of period	128,333	170,102

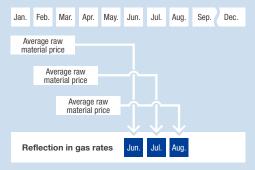
# Factors Affecting Revenues and Expenses

#### Gas Rate Adjustment System's Medium- to Long-Term Neutralizing Effect on Crude Oil Price and Exchange Rate Fluctuations

Gas prices are determined using the gas rate adjustment system. Through this system, average raw material prices over a three-month period according to trade statistics are compared with the raw material cost that is used as the standard (standard average raw material cost), and the gas rates are adjusted using a defined calculation method based on the differences. A time lag of four months on average (called a sliding time lag) exists between the payment of raw material costs and the reflection of such changes in gas rates. Consequently, fluctuations in crude oil prices and exchange rates may result in the under-recovery or over-recovery of raw material costs if this lag cuts across a fiscal year, thereby affecting income. Looking at the medium- to long-term, however, the gas rate adjustment system has a neutralizing effect on the income impacts of fluctuations in raw material costs.

# Timing of the Standard Average Raw Material Cost Calculation and Reflection in Gas Rates

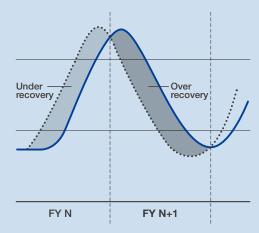
Timing of standard average raw material cost calculation

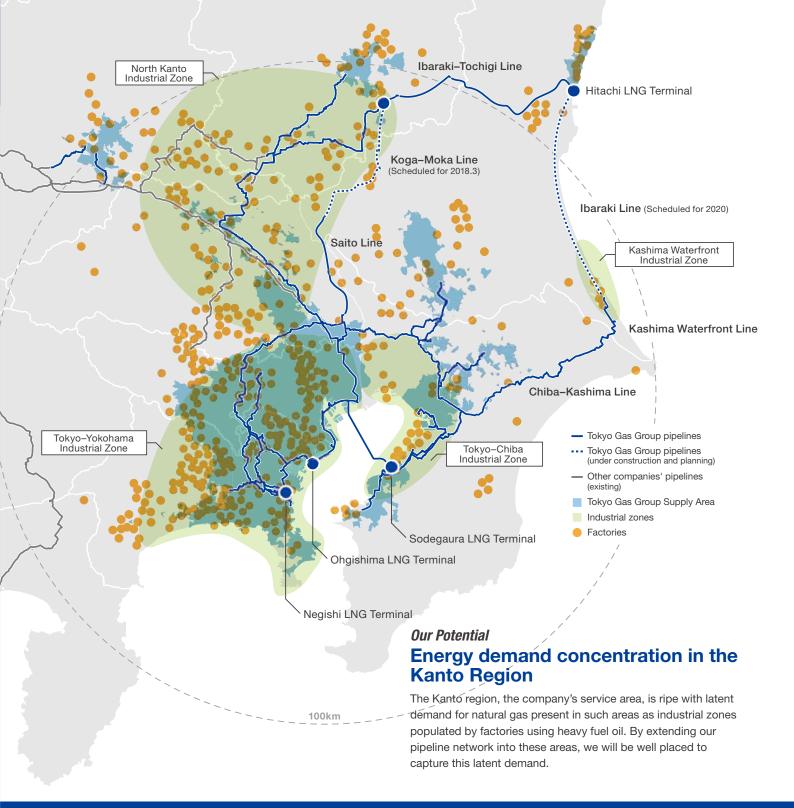


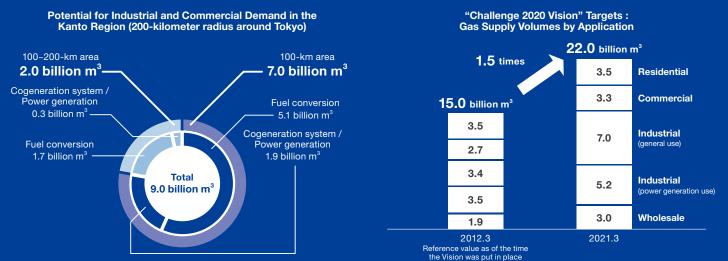
The average raw material price over the past three months is calculated every month and then reflected in the gas rate three months later.

#### How the Sliding Time Lag in Rates Works

- ···· All Japan LNG price
- Average raw material price reflected in gas rate







## Financial and Industry Data (EXCEL Spreadsheet Data Available)

#### **Investors' Guide**

http://www.tokyo-gas.co.jp/IR/english/library/invguid\_e.html

**Quarterly Financial Results** 

#### **Earnings Announcements**

http://www.tokyo-gas.co.jp/IR/english/event/earn\_e.html

#### **Consolidated Financial Results Bulletin**

http://www.tokyo-gas.co.jp/IR/english/library/earn\_e.html

Details of Challenge 2020 Vision The Tokyo Gas Group's Vision for Energy and the Future

#### ~Challenge 2020 Vision~ (Released in November 2011)

http://www.tokyo-gas.co.jp/IR/english/manage/vision\_e.html

**Details of Corporate Governance** 

## **Corporate Governance Report**

http://www.tokyo-gas.co.jp/IR/english/gvnnc/index\_e.html

**CSR Activities** 

## **Tokyo Gas Group CSR Report**

http://www.tokyo-gas.co.jp/csr/index\_e.htm

Stock Code 9531

IR Contact

E-mail:tgir@tokyo-gas.co.jp

Tel: +81-3-5400-3888 Fax: +81-3-5472-3849

1-5-20 Kaigan, Minato-ku, Tokyo 105-8527, Japan

http://www.tokyo-gas.co.jp/index\_e.html

For inquiries regarding planning and editing of this report: Investor Relations Sect., Finance Dept., Tokyo Gas Co., Ltd.

This annual report is printed on Tokyo Gas Recycled Paper (made from recycled paper from Tokyo Gas offices, trimmings from afforestation activities, and reused and unused wood materials) using vegetable oil ink that contains low levels of organic solvents.





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