

## TOKYO GAS INTEGRATED REPORT 2019

Tokyo Gas Co., Ltd. INTEGRATED REPORT 2019



# For the next 50 years



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19 Tokyo Gas Group FY2018-2020 Medium-Term Management Plan GPS2020 On November 4, 1969, Tokyo Gas became Japan's first company to introduce liquefied natural gas (LNG). It was a big project that was launched with the strong aspiration to stably supply energy that would support Japan's industry and people's lives for a long time as a clean, eco-friendly energy source.

This year marks the 50th anniversary of the introduction of LNG.

The Tokyo Gas Group has been supplying and will continue to supply reassuring energy to everyone.



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03



### Social background behind LNG introduction

The ceremony for signing a long-term contract with the Alaska LNG Project

1960s

Tokyo Gas was Japan's first company to discover the outstanding value of natural gas and to overcome the challenges to achieve the introduction of LNG and help resolve social issues.

Our predecessors' sophisticated business judgment and courage motivated the next generation. Today, natural gas is a basic source of energy that supports the Japanese society and economy.

In the 1960s, Japan experienced a sharp rise in energy demand following its population growth and remarkable postwar reconstruction. However, urban air and other pollution had emerged as social issues and Japan faced an urgent need to shift from conventional coal- and oil-based materials to environmentally friendly and reliable energy sources for the future that would not impair economic efficiency.

Tokyo Gas found liquefied natural gas (LNG) to be an optimal solution to those social problems, because it was expected to attain both environmental friendliness and economic efficiency. The company decided to introduce it.

### has changed society

Fifty years ago, natural gas, which was a third alternative in fossil fuels beyond coal and oil, was introduced to bring about dramatic changes to Japan's energy situation.

There were a number of unknown challenges behind its introduction.



Actions with an eye towards the widespread use of LNG

1964

### Gas pipeline construction

#### The main loop natural gas pipeline was completed at 220 km in length, surrounding the entire Kanto region.

A high-pressure pipe with a diameter of 750 mm was introduced. It was the first introduction of this type of pipeline in the Japanese city gas industry.

1969





### **Terminal construction** Construction of Japan's first LNG terminal was completed

The construction was so large in scale that it took

----- 1969

- three years and involved a cumulative total of 230,000 workers.
- Cutting-edge technologies in those days were incorporated to withstand ultra-low temperatures.

The Polar Alaska



#### Procurement Japan's first LNG procurement

- Joint purchase with Tokyo Electric Power (currently JERA) (A pioneering case of a joint purchase between a city gas company and an electric power company)
- Attempt at mass transport by ship (with equipment that withstands -162°C)

The introduction of LNG required extensive efforts, including those for securing consent from the public and cooperation from customers as well as actions to meet growing demand. Tokyo Gas carried out these actions to accomplish a major energy shift.

# Major energy shift: Attempted 50 years ago





#### Chiba main pipeline work

Full completion of the calorific value change in the area served by the Tokyo Higashi Branch Office

1988

### **Calorific value change**

underwater main pipeline crossing Tokyo Bay was completed

After three years of consideration, the massive construction project took extra four years. The work was done 24 hours a day, under a two-shift system.

1977

1975

Underwater main pipeline construction Globally unprecedented

The change in calorific value for the then 5.5 million consumers in the Greater Tokyo area took 17 years before it was completed. Tokyo Gas staff visited customers one by one to change the calorific value of gas appliances. Later, as a pioneering firm, Tokyo Gas helped at least 200 operators across the country with calorific value changes.

### COLUMN

### Calorific value change served social development

The calorific value change refers to an initiative for uniformly supplying natural gas 13A with a high calorific value. It was a large project joined by at least 200 operators nationwide to build a foundation for today's city gas operations. Tokyo Gas embarked on the change for all of its then 5.5 million customers in the Greater Tokyo area in 1972. Over 17 years, and involving 7.8 million employees, it was decisive for the future of the company. The shift to the universal supply of high-calorie natural gas 13A doubled the supply volume using the pipeline with the same diameter and length. This led to higher supply efficiency and eventually to social development.



Appliance adjustment work for calorific value change at a customer's residence

For the next 50 years

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The introduction of LNG and the universal supply of high-calorie natural gas 13A improved the city gas supply capacity and facilitated the widespread use of natural gas. They also paved the way for the advanced use of city gas. The application was expanded from conventional household consumption to business and industrial use. City gas acted as a driving force during the period of rapid economic growth. Today, Southeast Asian countries, who are exporters of natural gas, are experiencing a soaring energy demand amid their high-speed economic growth and the introduction of LNG is spreading. Tokyo Gas will contribute to social and economic development in Southeast Asia by offering its technologies and expertise in natural gas, LNG and city gas, which has nurtured over the past 50 years.

Natural gas is a basic energy source that supports society and the economy. It will play an increasingly significant role in building a low-

A combination of renewable energy with natural gas Natural gas is defined by the Japanese government as an effective low-carbon measure towards 2050 in its fifth Energy Basic Plan. It is expected to play a key role around the world as well. When renewable energy, which is susceptible to weather conditions, is positioned as a core power source, natural gas power generation will become significant for

two reasons. First, it can be flexibly operated. Second, it has a limited environmental impact. Expanded use of renewable energy will help expand the effective use of natural gas.

carbon society.

### 2000

2010



Kashima Offshore Wind Power Generation (conceptual drawing)

### COLUMN

### Serving as an official partner in the category of gas and gas utility services for the Tokyo 2020 Olympic and Paralympic Games

Tokyo Gas is an official partner in the category of gas and gas utility services for the Tokyo 2020 Olympic and Paralympic Games. It will work for successful sporting events by stably supplying energy, taking security and other actions. It will also take part in model projects for advanced environmental cities in the Harumi district and elsewhere to move forward with progressive efforts in terms of energy.



Tokyo 2020 Official Gas & Gas Utility Services Partner

### For the next 50 years LNG50th 🛢 TOKYO GAS INTEGRATED REPORT 2019

The United States 11.9

### **COLUMN**

ò

supply

### LNG's superiority

As a result of introducing and spreading the use of LNG, Tokyo Gas attained both a stable supply of energy and contribution to the environment.

### Stability **Energy security improvement**

There are natural gas reserves from which LNG is produced in many different locations around the world that offer stable production and supply regardless of circumstances. In addition, technological progress has paved the way for the development of shale gas. Today, it is said that natural gas reserves will be sufficient to meet global energy demand for at least 200 years.

The rest of the Middle East 13.1

14.4

Europe 3.9

### **High transport efficiency**

When natural gas is cooled to -162°C to form liquefied natural gas (LNG), its volume is around 1/600 of its usual size, facilitating efficient mass transport.

### Higher supply capacity

High in calorific value, LNG ensures a large supply capacity. It will thus meet future increases in demand and ensure stable supply.



### Gas cogeneration system

A gas cogeneration system is a system under which city gas is burned to produce electric power where it is used, while the heat generated from combustion is used for cooling, heating, hot water supply, steam generation and other purposes. It uses energy without being wasteful to exhibit high total energy efficiency, achieving energy conservation and CO2 reduction. When combined with renewable energy with unstable output, it helps disperse energy systems and makes significant contributions to the construction of a lowcarbon society.

### Smart energy network (SEN)

A smart energy network (SEN) is a regional energy network centered on a large, highefficiency gas cogeneration system that uses ICT technology for providing and receiving heat and electric power to and from different positions in an area according to the supply and demand. Surplus heat and electricity are supplied to places where they are needed to optimize the demand-supply balance in the area and to achieve energy conservation and CO2 reduction. It also ensures the stable procurement of energy in emergency situations. Solutions to local environmental, disaster control and other issues will increase real estate value.

1 Smart Energy Network Energy Management System \*2 Gas cogeneration system



Natural gas is clean and does not contain hazardous substances. Carbon dioxide emissions from its combustion are lower than those from coal and oil. It is an effective energy source for carbon reduction.

Canada

Proven recoverable natural gas reserve

96.9

trillion m



The rest of

4.6

Δs -Pacific

2.4

The Russian Federation 38.9

6.1

Asia Centra

23.8

Malaysia

2.4

Indo

2.8

-friendl

Iness

Iran 31.9

The United Arab Emirates

5.9

Qatar 24.7

Arab E

Hiroshi Anzai, the then president of Tokyo Gas shakes hands with the then Governor of Tokyo Ryokichi Minobe after the announcement of the cooperation on anti-pollution initiatives of the Tokyo Metropolitan Government

$\left( \begin{array}{c} \mbox{in which a value of 100 indicates} \\ \mbox{emissions from coal combustion} \end{array} \right)$			
	CO <sub>2</sub>	NOx (nitrogen oxide)	SOx (sulfur oxide)
Coal	100	100	100
Oil	80	70	70
Natural das	60	40	0

Comparison of emissions

from combustion.

Central and South America

8.4

BP Statistical Review of World

Energy 2019



\* Calculated under the preconditions determined by Tokyo Gas

#### Tamachi SEN Park



Supply to District I during a power failure (planned) - Information 🕂 Electricity - Heat

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

The Tokyo Gas Group has been constantly supplying gas and pursuing exhaustive initiatives for about 130 years to support economic development and customers' fulfilling lifestyles and to create its corporate value.

We regard this deregulation as an opportunity to propose and supply optimal energy systems as a set, including both electric power and gas. By continuing to implement our process of non-linear reforms (business changes unprecedented in its boldness and fundamental reform of our organizational structure), and by advancing our unique "GPS×G" (Gas & Power + Service × Global) management plan for creating new value by specifying concrete initiatives with regard to what we can do as a company, we will continue working to ensure further advancements and breakthroughs for the Tokyo Gas Group into the 2020s.

Gas sales volume (billion m<sup>3</sup>) —Electric power sales volume (billion kWh)

\* The numbers of gas customers and gas sales volumes are non-consolidated-based up to fiscal 2002 and consolidated-based from fiscal 2003. \* The gas sales volume for fiscal 2011 and later includes the volume used in-house under tolling arrangement and the LNG sales volume.





Gas built-in cook stove

Power plant

Hydrogen filling station

Residential fuel cell "ENE-FARM"

Toyosu Smart Energy

Center

# LNG value chain for value creation

The Tokyo Gas Group contributes to the sustainable development of society by advancing its LNG Value Chain.





**CEO's Message** 

### We will develop into a genuine, integrated energy company with a pioneering spirit that has been passed on from generation to generation.

Representative Director, President and CEO Takashi Uchida

### Getting the blue sky back in Tokyo

This year marks the 50th anniversary of the Tokyo Gas Group's first import of liquefied natural gas (LNG), when we became the first Japanese company to import LNG. When deciding to implement a large project that could shape the future of the company, the management team at that time devised the slogan: *Getting the blue sky back in Tokyo*. As it suggested, the introduction of LNG eliminated sulfur oxide (SOx) emissions, reduced nitrogen oxide (NOx) emissions from the levels of conventional coal- and oil-based fuel, and curbed photochemical smog, a social issue. It also cut carbon dioxide (CO<sub>2</sub>) emissions.

The spirit of carving out new energy frontiers with innovation is an intangible asset of Tokyo Gas that should be passed on to the next generation. During the period of rapid economic growth in the Showa era, natural gas gained attention as a source of clean energy with high calorific value to replace oil-based energy sources amid mounting energy demand and environmental deterioration. Our Group subsequently attempted to liquefy overseas natural gas and import it by ship. At that time, natural gas rarely used on a practical level and this attempt was considered technically challenging. We cleared a number of difficult hurdles, one after another, including refrigerated liquefaction technology. In November 1969, we welcomed the first ship from Alaska, *Polar Alaska*, to our Negishi LNG terminal, ushering in the era of LNG.

The introduction of LNG followed a change in calorific value, which took 17 years. We replaced the gas supplied with one that had a higher calorific value. This low-profile effort of visiting individual customers one by one to adjust their gas appliances involved 7.8 million employees. As a result, today natural gas is widely used and it supports Japan's development as a major energy source. This process helped to build close relationships of trust with customers. Now they are another invisible asset that provides an advantage over our competitors in today's deregulated energy market.

The shift to LNG coincided with our management stance of contributing to society through our core business. The change in calorific value was helpful in our subsequent growth. It is largely unknown that natural gas is so high in calorific value and supply efficiency that our Group's investment in pipeline construction was minimized. Before the change, the calorific value of the gas varied from region to region and from operator to operator. At least 10 different kinds of gas were supplied. Since the change, a single type of gas is supplied, which is beneficial for both customers and gas appliance manufacturers.





**CEO's Message** 

### The spirit of carving out energy frontiers with innovation is an invisible asset of Tokyo Gas that should be passed on to the next generation.

### We will continue to supply energy in a safe and reassuring manner to enhance consumer confidence.

Almost a year has passed since I became Representative Director and President in April 2018. Looking back on the past 12 months, I feel that the circumstances surrounding the energy industry became increasingly tougher.

Especially following the deregulation of the electricity and gas utility markets, competition among energy companies has intensified. The Tokyo Gas Group saw more of its city gas customers than expected switch to other operators while gaining electricity customers at a higher than expected pace. Overall, we have managed to benefit from deregulation. Some of our gas customers who had switched to other suppliers are slowly returning.

Pricing is not the only factor that draws consumers to a particular energy company. It is important to build trust by constantly supplying energy in a safe and reassuring manner. In 2018, Japan experienced a series of natural disasters in different locations, including earthquakes to the north of Osaka and in eastern Hokkaido as well as typhoons and heavy rain in Western Japan. These incidents renewed our awareness of our responsibility toward the stable supply of energy and disaster control, compelling us to reconfirm that we would work on them as high priority matters.

In addition, the call for carbon reduction is growing in Japan and around the world. Last year, I realized this through direct experience. Our Group considered building a coal-fired power plant in Sodegaura, Chiba Prefecture, with Idemitsu Kosan Co., Ltd. and Kyushu Electric Power Co., Inc.; however, we decided to withdraw from the joint development, because it was not feasible from the perspective of additional environmental measures. Local communities and investors in Japan and abroad praised us for that decision from an ESG perspective.

We were also greatly admired for our leadership in the joint procurement of LNG from Mozambique with UK-based Centrica plc in the world's first innovative action between Japanese and European businesses. This also applies to our expansion of LNG import sources to Canada, Mexico and other countries as well as the joint introduction with Shell Eastern Trading Pte Ltd of a revolutionary pricing system based on coal prices to ensure the long-term, stable procurement of more competitive LNG. We are delighted that our Group's sincere actions for LNG, which have continued since we started importing it in 1969, are recognized globally.

## We will carve out new market as energy frontiers with our continued long-term mindset.

The general public may think that the city gas industry is protected by regulation. However, it is often exposed to fierce competition, for example, when gas lamps and rice cookers were replaced with electric versions. Our Group started to hold cooking classes more than 100 years ago to help participants use gas with ease of mind and learn how to make full use of gas appliances along with cooking techniques. To survive that tough competition, our Group has created new markets by addressing people's lifestyles and fulfilling its social responsibility to attain continued growth.

ENE-FARM consists of residential fuel cells and is the result of our low-profile research and development efforts over more than 20 years. Despite the common belief that the commercialization of ENE-FARM was difficult, our Group managed to release it in 2009, with 110,000 units sold by last year. While LNG transport traditionally depended on trading companies, as an energy firm, we acquired LNG tankers to acquire more freedom in transactions. Our Group started to supply energy at low prices before our competitors. We are also proud that our Group made floor heating common as we see it today.

## In the second year of the Jump stage in GPS2020, we will continue to achieve steady development.

In November 2011, the Tokyo Gas Group announced its long-term management vision ending in fiscal 2020, *The Tokyo Gas Group's Vision for Energy and* 



*the Future: Challenge 2020 Vision.* It was aimed at achieving continued growth of the Group.

In the Hop stage (fiscal 2012-2014) and the Step stage (fiscal 2015-2017), we worked to significantly expand our business domains and areas, establish seven business domains and construct a new group formation, with the aim of becoming a global, integrated energy corporate group.

Taking over the managerial leadership, it is my duty to steadily implement the GPS2020 medium-term management plan for fiscal 2018-2020, which coincides with the final Jump stage of the vision, achieving targets ahead of schedule if possible, and pushing ahead with considerations for the next longterm management vision.

For fiscal 2018, which was the first year in the Jump stage, we successfully increased both net sales and profit and saw remarkable results in the electric power segment. We worked towards the goal of supplying the Tokyo Gas Group's electricity to 2.2 million customers by the end of fiscal 2020, and consequently attained a steady hike in electricity customers in the first fiscal year. We therefore revised the target upwards from 2.2 million to 2.4 million, and revised the target date to the end of fiscal 2019, one year ahead of the initial schedule, which has boosted the confidence of our employees.

We also made healthy progress in the energyrelated segment. Tokyo Gas Engineering Solutions Corporation (TGES), a subsidiary of Tokyo Gas, and other companies expanded their service areas and now serve the entire country, from Hokkaido to Okinawa. They engage in the construction and operation of LNG terminals, energy supply, fuel shifts, energy-saving services and offer wide-ranging value. In addition, they are expanding operations to Thailand, Bangladesh, the US and other countries.

In the real estate segment, we also made good progress, including redevelopment of the land that we own, which is directly linked to the east gate of JR Tamachi Station, acquisition of a new property in Toranomon in Minato-ku, and leasing operations at medium- and small-sized land lots. In addition, we integrated our three related subsidiaries into one to create a structure for more active operations.

### We will overcome harsh business circumstances by taking a long-term perspective.

Meanwhile, our overseas expansion is lagging. Regrettably, no massive growth in energy supply volume is likely in Japan, because of the aging and shrinking population with the decline in the birth rate, the decrease in households and improvement in heat insulation and draft-free characteristics of buildings. However, it is possible to expand business mainly to countries in Southeast Asia, where natural gas is becoming widely used. While striving to obtain a larger market share in the mature domestic market, we will focus on the expansion of overseas business.







# The next long-term management vision will target 2030.

Towards a target of achieving an environmentallyfriendly energy supply, mainly for natural gas, in overseas markets, we will enter new markets and contribute to the enhancement of customers' lifestyles and industrial development.

Our most important target is to stop the decrease in gas retail customers from surpassing the preset limit. New market entrants include not only TEPCO Energy Partner, Inc., but also CD Energy Direct Co., Ltd., in which CHUBU Electric Power Co., Inc. and Osaka Gas Co., Ltd. are stakeholders, in addition to JXTG Nippon Oil & Energy Corporation, the largest oil distributor in Japan. Today, we are competing with at least 20 companies, making it difficult to maintain our market share in the gas retail market. We think we need a long-term perspective with an eye toward the future of energy to restore the business.

### We will address EaaS with a focus on the four Ds.

In our next long-term management vision that will serve as the guidelines for our actions, we will define 2030 as a target and emphasize how the business structure may change in the future, paying attention to the four Ds for gaining insights into changes in the surrounding business circumstances.

The first D stands for deregulation. We will study how to respond and establish unbeatable operations. The second D refers to decarbonization. We must consider how to respond to the demand and prepare. The third D pertains to the decentralization of energy. This trend is already gathering momentum in society. We will explore how to combine gas cogeneration systems, storage batteries, photovoltaic and wind power generation and suchlike in addition to the traditional one-way energy transmission from large power plants. The fourth and final D means digitalization. It offers a perspective on what business should be created by using the latest digital technologies and how conventional business and work can change through digitalization.

We are planning to consider the balance of energy supplied in view of the four Ds and to create and develop Energy as a Service (EaaS) for the domestic market, where demand growth will be limited.

The smart energy network is an example of EaaS.

It has already been implemented in projects in Tamachi and Nihombashi Muromachi. Using clean city gas as fuel, its cogeneration system produces electricity, and at the same time the heat generated is supplied for cooling, heating, hot water supply and steam supply. The network also features ICT-based energy management. It is not only helpful for energy conservation and environmental preservation, but also delivers reassurance in the sense that electricity is available even in the event of a disaster.

### We will take steady steps towards evolving into a genuine, integrated energy company.

We are increasingly asked by investors about our actions towards complete freedom from carbon, transcending low-carbon society. I do not think that a society only built on unstable renewable energy sources, such as photovoltaic and wind power, can be built in a day, because a low-carbon society has yet to be achieved. The fastest path to building a low-carbon society will be to make effective and intensive use of natural gas, which will also pave the way for meeting the target set by the government for cutting greenhouse gas emissions by 26% (from the fiscal 2013 level) by fiscal 2030. This explains why we are focusing on natural gas and constructing a system for supplying it in combination with renewable energy.

Subsequently, we may see a carbon-free society created with the use of hydrogen or other means. Meanwhile, we will carry on with our research and development efforts.

Our Group has an entrepreneurial spirit, and more importantly, we are supported by more than 11 million customers. We will overcome the challenges that arise from deregulation and liberalization and steadily take steps toward evolving into a genuine, integrated energy company. We will thus work to construct foundations for supplying energy to the world.

We define the period until 2020 as an investment stage. However, we will firmly boost profit in a bid to maintain a total payout ratio of 60%. For the fiscal year ended March 31, 2019, we increased dividends per share by 5 yen to 60 yen. I hope that our stakeholders will look forward to the Tokyo Gas Group's future developments and continue to support it for years to come.





### CFO's message



### Tokyo Gas is committed to following its basic financial policy and maintaining continuous growth.

Senior Managing Executive Officer, CFO Koki Hayakawa

### **Basic Financial Strategy Policy**

Continue to maintain competitive shareholder returns (total payout ratio of 60%)



Steadily implement growth investments, with consideration given to investment efficiency and awareness of achieving an 8% ROE

 Maintain sound financial base, as a basis for stable management and securing the trust and confidence of stakeholders

### Capitalizing on experience to support continuous growth from a financial perspective

My name is Koki Hayakawa. I was just appointed chief financial officer (CFO). I have worked in energy production, sales planning, personnel affairs and other sections before acting as a manager on the frontline of obtaining gas and electricity customers over the past three years since the full deregulation of the electricity and gas retail markets. Under harsh competitive circumstances, I always considered how to boost our competitiveness and sow the seeds for future growth by investing in promising areas while streamlining operations and cutting costs.

Tokyo Gas's basic policy for its financial strategy is to achieve a balanced distribution of operating cash flow between full and stable shareholder payouts, growth investments, and maintaining sound financial base. This will continue when I am CFO. I believe that my duty is to steadily carry out the three tasks mentioned above.

Because energy markets are increasingly deregulated, competition will become fiercer and the industrial structure will face substantial changes. I therefore believe that it is important to return profits to



shareholders while maintaining an appropriate financial balance to beat the competition and make steady investments in supplying energy safely and securely to achieve continued growth.

### Actively investing overseas and in Japan while retaining stable financial foundations

We plan to make investments, including capital investment and financing, worth around 1 trillion yen during the three-year period from fiscal 2018 to fiscal 2020 under the GPS2020 medium-term management plan. This is about 1.5 times the amount under the previous medium-term plan. To meet the soaring demand for natural gas, we are constructing LNG tank No. 2 in the Hitachi LNG Terminal. Meanwhile, construction of a high-pressure gas pipeline called the Ibaraki Line is in progress towards its inauguration in fiscal 2020. It will connect two existing lines, the Kashima Waterfront Line and the Ibaraki-Tochigi Line, to advance construction of a loop of high-pressure gas pipelines. This will ultimately strengthen the supply stability in the Greater Tokyo area and boost the transport capacity of the entire supply network.

In addition, we will invest in mission-critical systems that link with customers. We will study the feasibility of constructing new, independent power plants and examine our overseas investments and financing for further growth in terms of the significance, economic efficiency and risks before implementation.

This investment is expected to bring about a temporary rise in the D/E ratio, to 0.9 in fiscal 2020, and I think it is within the allowable limit. With a remarkably low interest rate, corporate bonds may be issued under favorable conditions. We are promptly procuring funds at low interest rates under long-term conditions (10-40 years).

### Bolstering profit rate to maintain stable returns for shareholders

Improvement in profitability is the most significant issue from the financial perspective. Currently, Kobelco Power Moka Inc. is constructing a cutting-edge natural gas thermal power plant in Moka City, Tochigi Prefecture. After its completion, we will have more competitive procurement of power sources. Three years since the full deregulation of the electricity retail market, our pace of gaining electricity customers remains solid. I hope that the electricity business will drive our profit growth.

The GPS2020 medium-term management plan sets the ROE target at around 8%, while the actual ROE figure was 7.4% for the last fiscal year. ROE fluctuates depending on the temporary injection of money. While always paying attention to this target, we will work hard to develop a predisposition for seeking an approximate ROE level of 8% in the long run.

With respect to returns to shareholders, we have announced that we will maintain a total payout ratio of 60% until fiscal 2020. We have firmly fulfilled our commitment by properly combining dividends and the acquisition of treasury shares. Three years have passed since the last dividend increase. While steadily carrying out the GSP2020, our management team is becoming confident in the future. We have constructed a financial base that is resilient to an increase in dividends. We recently decided to raise dividends from 55 yen per share to 60 yen per share. In parallel with steady investments in promising areas, we will mildly increase dividends to return profits to shareholders. The company and I, as CFO, will continue to listen to shareholders and investors and strive for greater corporate value through constructive communication. We respectfully ask for your continued support and understanding.

### **Capital Expenditures and Gas Sales Volume**



\*1 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 gas volume used in-house under tolling arrangement and the LNG sales volume.)

### **Shareholder Returns**

(¥ billion) Share repurchases Shareholder returns - Total payout ratio



Tokyo Gas Group FY2018-2020 Medium-Term Management Plan **GPS2020** 





### Cash flow distribution method for FY2018-2020



figure for FY2011 are values estimated at the time of plan formulation.



New Procurement



### Mozambique LNG Project

In February 2019, Tokyo Gas and Centrica LNG Company Limited in the UK concluded a sale and purchase agreement with Mozambique LNG1 Company Pte. Ltd. for the offtake of liquefied natural gas (LNG) from the Mozambique LNG Project. This agreement paves the way for the revolutionary and innovative joint procurement of LNG between Japanese and European companies. Tokyo Gas and Centrica will, as foundation buyers, continue to support to the early launch of the project with abundant reserves, and proactively manage demand fluctuations across regions in Japan and Europe by taking advantage of different market circumstances.

t Benefits Tokyo Gas' first procurement from Africa based on a long-term contract
· ·
8
Introducing multiple price indices and destination free clauses
Constructing an LNG network that links between Asia and Europe, aiming to proactively manage demand fluctuations based on different market circumstances and to improve the liquidity in the LNG market

Japan relies heavily on LNG imports for procuring natural gas, and LNG import prices are generally determined by a mechanism linked to crude oil prices. With the aim of achieving stable and affordable LNG procurement under these conditions, the Tokyo Gas Group strives to achieve three types of diversification: diversification of supply sources, contact terms and conditions, and its LNG network.



One specific example comes from our revolutionary joint procurement between a Japanese and European company from the Mozambique LNG Project. The joint procurement came about from our long-term collaboration and a strong relationship with Centrica. This procurement is intended to secure high competitiveness and an ability to respond to demand fluctuations through flexible LNG transactions that combine two different markets in Asia and Europe.

Subsequently, we have continued talks for procurement from Canada and Mexico. We will continue to exhibit our strengths in LNG procurement including transport and trading globally, and will continue to further implement innovative procurement aiming to increase our competitiveness and flexibility. With our efforts we will contribute to the further development of the LNG industry.

Initiatives Towards Achieving the Sustainable Development Goals (SDGs)

### Diversification of supply sources leading to the expansion of the LNG network

- In May 2018, Tokyo Gas began receiving shipments of LNG produced at Cove Point, Maryland, United States.
   During FY 2018, Tokyo Gas began receiving LNG shipments from the Ichthys Project in Australia, and jointly signed a sale and purchase agreement regarding the Mozambique LNG Project with Centrica. With the addition of these and various other projects, Tokyo Gas Is advancing the diversification of its supply sources.
- In addition, by driving three types of diversification in procurement, such as in its initiative to exchange LNG in cargo-unit volumes based on the memorandum of understanding on a strategic alliance signed with Centrica, Tokyo Gas is accelerating the construction of an LNG network connecting Japan to the rest of the world.



curement Sec

s Resources

For the next 50 years
LNG50th



### Promotion and Expansion of Natural Gas Usage through Infrastructure Development

### Plans to invest ¥500 billion in gas business over a three-year period (FY2018-2020)

Under the GPS2020 management plan, Over a period of three years (FY2018-2020), Tokyo Gas plans to invest ¥500 billion, equivalent to approximately half of the total amount of investments for the overall plan, to enable the safe and stable delivery of city gas to customers. In addition to investments for security, stable supply, and promotion and expansion of city gas usage (maintenance and improvement of pipeline facilities, etc.), we will also carry out large-scale improvements to equipment and facilities, including the completion of the Ibaraki Line, expansion of the Hitachi LNG Terminal, and the construction of a customer information management system.

### Significant potential demand in the Northern Kanto area

Tokyo Gas puts particular strategic emphasis on the Northern Kanto area, which has strong potential demand for natural gas owing to its numerous large-scale industrial districts. We aim to expand gas sales volume from 19.1 billion m<sup>3</sup> in fiscal 2017 (forecast at the time of formulation of GPS2020) to 20.7 billion m<sup>3</sup> by promoting and expanding the widespread use of natural gas by extending the length of our pipeline network and lorry supply; and providing energy solutions including energy conservation, CO<sub>2</sub> reductions and cost reductions via the use of natural gas and gas appliances.

### Promoting the widespread use and expansion of distributed energy/systems

Cogeneration systems supply electricity and heat by using city gas as fuel. In addition to the installation of facilities at the point of demand, cogeneration systems help 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.

Having identified cogeneration system as a strategic product, Tokyo Gas is promoting adoption of the residential fuel cell system ENE-FARM and, for commercial and industrial customers, optimal cogeneration systems matching their demand. Installation Results (March 2019)



Cogeneration System (Commercial, Industrial)



\* Energy efficiency stated above is calculated based on certain assumptions made by Tokyo Gas.

### Wider Energy Supply Business Area-wide Energy supply to Kiyohara Industrial Park

An energy center mainly consisting of a 30 MW-class cogeneration system will come into operation in fiscal 2019 to supply electricity and heat to facilities (three companies and seven facilities) in the Kiyohara Industrial Park in Utsunomiya City, Tochigi Prefecture.

The Tokyo Gas Group, to achieve maximum efficiency in serving these customers, will monitor the fluctuating load of each facility and engage in optimally balanced operation to supply energy. This will be one of the largest area-wide energy supply undertakings in an inland industrial park in Japan. We are promoting widespread use and expansion of distributed energy systems and tapping industrial demand.





### Promoting and expanding the widespread use of gas in the Northern Kanto area

### Achievements of the Chiba-Kashima Line

The Chiba-Kashima Line commenced operation in March 2012, and has succeeded in dramatically increasing our gas sales volume in Kashima waterfront industrial zone. As a result, our gas sales volume in that area has grown to such an extent that it now accounts for approximately 10% of our total consolidated gas sales volume.

### Securing Potential Demand in the Kanto Area

In October 2015, Tokyo Gas commenced operation of its Saito Line (connecting Soka, Saitama and Koga, Ibaraki). This was followed by the opening of our Hitachi LNG Terminal and the Ibaraki-Tochigi Line (between Hitachi, Ibaraki and Moka, Tochigi) in March 2016; and the Koga-Moka Line (between Koga, Ibaraki and Moka, Tochigi Prefecture) in October 2017. By linking our three LNG terminals in Tokyo Bay and our existing trunk line network, we have completed a loop of high-pressure pipelines in our primary supply area, and improved the stability of our supply infrastructure. Capitalizing on our infrastructure development efforts, Kobelco Power Moka Inc. is constructing a natural gas-fueled thermal power plant in Moka City, Tochigi Prefecture. In addition to an expected increase in gas sales volume by supplying gas to this power plant, we are also working to further develop potential demand. Additionally, we are constructing a new Ibaraki Line that will connect the cities of Hitachi and Kamisu in Ibaraki Prefecture, aiming to commence operation in fiscal 2020. The completion of this line will enable even greater widespread promotion and expansion of natural gas usage in the Kanto region.

## Expanding business operations through alliances with other LPG business operators, etc.

In July 2018, we set up Gas Crew Co., Ltd. It operates LPG filling and distribution services in the Kanto region. In collaboration with various LPG industry players, we will work to enhance efficient delivery and improve safety and customer services. We will thus aim to deliver LPG to one million customers by fiscal 2020.

### Utilizing LNG cold energy to manufacture and supply industrial gases

We make effective use of LNG cold energy, to manufacture and supply affordable high-grade industrial gas. We are also seeking to enhance our sales capabilities by offering one-stop solutions to large-account customers by combining LNG, engineering, and other Tokyo Gas services.



Established Gas Crew Co., Ltd. logistics management company (July 2018) Astomos Energy Corporation, ENEOS GLOBE Corporation Comprehensive alliances

Astomos Energy Corporation (October 2016) Saisan Co., Ltd. (February 2017)

Test project to validate IoT-based remote meter-reading/ telemetry (June 2017)

Azbil Corporation, Azbil Kimmon Co., Ltd. Release of an LPG container delivery plan optimization system using AI (April 2019) Azbil Kimmon Co., Ltd., Lyna Logics, Inc.

### Lorry-based LNG sales

Even in regions where gas pipelines have not been laid, Tokyo Gas is enabling the use of natural gas by transporting LNG using lorries. We have a track record of 50 years transporting LNG in this way since 1969, and have the largest scale lorry-based supply business in Japan, with over 190 vehicles.



### Liquid gas business

 Outline
 Tokyo Gas operates a liquid gas business, in which it sells LPG to customers in locations outside its city gas supply area and/ or those who otherwise do not use Tokyo Gas gas, and utilizes LNG cold energy to manufacture and sell industrial gases.

 Number of customers (LPG)
 Segment profits

 Direct sales
 60 thousand FY2018

 Distributors
 230 thousand FY2018



25

# INVISIBLE ASSETS

# Safe and stable energy supply infrastructure

Contributing to the achievement of Sustainable Development Goals (SDGs)



We are working to secure diversity in our LNG procurement and stable transport, serving as the safe and stable energy supply infrastructure for more than 11 million customers in the greater Tokyo area. We boast city gas production and supply facilities with sufficient quake resistance to withstand tremors comparable with those in the 2011 Great East Japan Earthquake. We also engage in a wide variety of actions that include segmentation of the pipeline network for minimizing the impact of supply stoppages in the event of disasters, monitoring at normal times for ensuring safety in gas utilization, and the establishment of a system for staff deployment in case of an emergency.

### Diversifying LNG procurement and achieving efficient and stable transportation of LNG

- Diversifying procurement sources We procure LNG from 14 projects in 6 countries, including the United States as well as Southeast Asia and Australia
- Ensuring stable transportation of LNG We utilize our own fleet of 13 ships, owned and managed by Tokyo Gas

Natural gas reserves are abundant in various parts of the world. The Tokyo Gas Group was among the first to notice the potential of natural gas, and in 1969 we became the first in Japan to import LNG from Alaska.

To achieve stable procurement of LNG, by seeking to diversify our procurement sources (resource suppliers), we are working to ensure that interferences to LNG procurement do not arise, even in cases where there are evident geopolitical risks such as disasters or human conflicts. We also operate stable transportation of LNG through the efficient deployment of ships (including ships owned and managed by Tokyo Gas).

### Safe and secure production and supply facilities

 Four LNG terminals (Three in Tokyo Bay, one in Northern Kanto)

Pipeline network with total length of over 60,000 km

High level of resistance to seismic activity, even in the case of major earthquakes such as the Great Hanshin-Awaji (Kobe) Earthquake, or the Great East Japan Earthquake

(High- and medium-pressure gas pipelines)

We import LNG by tankers and store it in tanks at LNG terminals. It is then reconverted into gas and adjusted in calorific value to produce city gas, and supplied to 11 million customers via our pipeline network. Based on almost 50 years of experience and knowledge since our introduction of LNG to Japan in 1969, we adopted structural designs with superior anti-seismic properties for LNG terminals, and introduced materials that are resilient to ground deformation to our pipeline network. This ensures a high level of quake resistance for the infrastructure. Since city gas is made by conversion from LNG to natural gas at an LNG terminal and then distributed via pipeline, there is no energy conversion loss or transport loss to the point of consumption.





In order to constantly deliver natural gas safely and steadily to over 11 million customers, we are continually developing human resources involved in safety. 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 even in times of emergency. The trust of customers that has been earned as a result of safety-related expertise developed over the course of our long history, and its continuation, is one of our greatest strengths.

We have also developed a disaster-readiness system, which protects entire local areas by automatically cutting off the supply of gas when it detects an earthquake that poses the possibility of affecting our pipeline network and/or other structures. In order to minimize the impact of supply stoppages, we subdivide our supply areas, enabling us to stop the supply of gas remotely, in block units, depending on the extent of the damage.

### Facilitating safe use of gas

- Safety inspections of gas facilities
- Monitoring and control of the status of operation of city gas production and supply facilities
- Readiness for swift emergency dispatch in response to gas leak reports





### **Periodic Safety inspections**

We conduct periodic safety inspections of gas-related equipment and facilities for all customers, as frequently as required by law. We visit customers to conduct inspections for gas leaks on customer premises (as a general gas pipeline operator), and to examine gas appliances and supply and exhaust equipment (as a gas retailer).

### Supply Command Center (Monitoring and control at normal times)

The Supply Command Center performs 24/7 monitoring and control on the status of operation of city gas production and supply facilities. It facilitates the analysis of damage, remote operation to stop gas supply and other initial actions for preventing secondary damage following an earthquake. It conducts around 100 initial action drills per year.

### Gaslight 24 (Emergency response actions)

The Safety Command Center receives gas leak reports from customers. It receives information about their situations without omission to give safety advice and to ask Gaslight 24 to send personnel. Gaslight 24 operates emergency dispatch bases for prevention of accidents such as arising from gas leaks. Upon receipt of a report, its personnel will immediately visit the reporting customer to take swift action even on holidays or at night. Electric power business

# ELECTRIC POWER BUSINESS

Outline	Since 2000, when the Tokyo Gas Group & supply electricity, it has engaged in a cor business activities that extend from fuel p generation and sales. Among the new en following the start of deregulation, we ow stations in the Greater Tokyo region, and wholesale and large-lot customers. With electric power retail sector in April 2016,	nprehensive range of procurement to power trants to the sector in one of the largest power sell generated power to the full deregulation of the	Number of Retail Customers Electricity Sales Volume Segment Profits	1.774 million 15.48 billion kWh ¥10.1 billion	As of the end of March 2019 FY2018 FY2018
among the Community Enesta, etc.	electricity to residential and commercial e largest-scale, most highly-efficient power sou new power suppliers in the Greater Tokyo regio -based sales network (operated by Tokyo Gas .) and over 11 million customers as a base ce infrastructure, operational know-how and sy h both wholesale and retail sales	urces on Lifeval, Strengths Risks	power generation materials and fur Potential damag	competitiveness of natura n, associated with change els e to power generation fac iterials and fuels, stemmir	es in prices of raw ilities and supply
Net sales a (¥ billion) 400	and Segment Profit		ctricity Sales Volum <sup>kWh)</sup> Electricity sales volume	e and Number of Ret	(millio
300 200 100 Г		22.5 15 15.0 10 7.5 5			2.2
0	14.3 2015.3 2016.3 2017.3 2018.3 2019.3 202 (Plar	0 0 0	2014.3 2015.3 20	6.3 2017.3 2018.3 2019.3	2020.3 (Planned)

### The era of single-source providers of electricity and gas

For many years, customers in Japan were only able to buy electricity from electric power companies, and gas from gas companies. With the full deregulation of the electric power and gas retail markets, consumers in Japan can now purchase both electricity and gas from a single supplier, just as in the EU and the US.

Based on this, the Tokyo Gas Group will aim to expand its energy business through the proposal and deployment of optimal energy systems.

#### Full Deregulated Market of the Electricity and Gas

	Number of companies*	Approximate potential customers (million)	Approximate market size (¥ trillion)
	10	85	8.0
Electricity	Within TEPCO's domain	29	2.8
City gas	203	26	2.4

\* Former general electric power operators and former general city gas operators \* From materials officially announced by the Ministry of Economy, Trade and Industry

For the next 50 years
LNG50th



### Selling approximately 5% of electricity demand in the Greater Tokyo Area

The Tokyo Gas Group launched its electric power business in the year 2000. Seizing the opportunity of the full deregulation of the electric power retail market in 2016, the Group expanded its sales to residential and commercial customers, in addition to the existing wholesale segment, selling an electricity volume of around 15.5 billion kWh in fiscal 2018. This volume is equivalent to around 5% of total demand in the Greater Tokyo Area. By 2020 we plan to expand this volume to 31.0 billion kWh, equivalent to around 10% of total demand in the Greater Tokyo Area.

## Achievements over the past three years since the full deregulation of the electric power retail market

We have marketed and provided the "Always Plan," a one-stop package that delivers gas, electricity, and various other services, to support our expansion into the electricity retail market. As of March 31, 2019, we are now supplying electricity to 1.77 million customers. For fiscal 2018, we held the largest market share in low-voltage services among new electric power market entrants for the third consecutive fiscal year. Announced in October 2017, our management plan for fiscal 2018-2020, GPS2020, envisioned that the Tokyo Gas Group would deliver its electricity to 2.2 million customers by the end of fiscal 2020. However, in April 2019 we announced that we would increase the number of our electricity customers to 2.4 million by the end of fiscal 2019. We are working to attain the target one year earlier.

We will continue to develop service options that many people will find beneficial in an effort to gain more customers for our one-stop service of supplying gas, electricity and other services.



Initiatives Towards Achieving the Sustainable Development Goals (SDGs)

#### Sustainable Development Goals Helping to prevent global warming through power generation

**Electricity Sales Volume** 

14.7kWh

4.6

FY2017

2.3

Wholesale Retail

12.0kWh

FY2016

(billion kWh)

40

30

20

10

11.0kWh

FY2015

With its high-efficiency gas-fired thermal power stations, adopting the latest cutting-edge gas turbine combined cycle technology, and wind power generation facilities, Tokyo Gas is contributing to the prevention of global warming.

19.9kWh

FY2019

(Planned)

15.5kWh

6.6

FY2018

We have also decided to accept supply of electric power from Moka Power Station, which is currently under construction by Kobelco Power Moka Inc., and are driving the development of renewable energy power sources such as photovoltaic and wind power generation, such as through the signing of a capital partnership agreement with Shizen Energy Inc.



### Expand power sources

Prompted by the full deregulation of the electric power retail market in 2016, Tokyo Gas began delivering electricity to low-voltage residential and commercial customers, in addition to serving the wholesale market.

To accomplish this and match the growth of our sales stock with the aim of delivering electric power to 2.4 million retail customers by the end of fiscal 2019, we will continue to increase and expand our network of Tokyo Gas-owned power sources. To meet our targets of achieving an approximate total power output of 3.0 million kW by fiscal 2020 and 5.0 million kW in the next decade, we are developing our own power sources while purchasing electricity from other companies through direct negotiations and from Japan Electric Power Exchange.

It has already been determined that we will receive power from the Moka Power Station constructed by Kobelco Power Moka Inc. as well as from the Tokyo Gas Group's power stations.

In addition to our competitive natural 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 the issue of preventing climate change.

### Expansion of Tokyo Gas-owned power sources

Construction of the Moka Power Station (gas-fired power generation, approximately 1.2 million kW, all to be purchased by the Tokyo Gas Group) is progressing smoothly towards starting operations in fiscal 2019. For the further expansion of power sources, we are considering the construction of natural gas thermal power plants in Sodegaura City and in Ibaraki Prefecture.







Tokyo Gas Baypower Co., Ltd.

 Generation capacity
 Owned power

 0.10 million kW
 0.10 million kW

 0.1 million×1 unit
 0.10 million kW

Start of operations **2003** Tokyo Gas interest **100%** 



Tokyo Gas Yokosuka Power Co., Ltd.

 Generation capacity
 Owned power

 0.24 million kW
 0.18 million kW

 0.24 million×1 unit
 0.18 million kW

Tokyo Gas interest 75%

### Expand electricity sales to low-voltage customers

The Tokyo Gas Group has constructed a network with 11 million customers through its city gas business. We will offer the most suitable energy for the actual use of customers and combine lifestyle-related services to improve value for economy, peace of mind, simplicity and convenience.

### Community-based sales network

The Tokyo Gas Group has established a community-based sales network with around 180 outlets in the Kanto region (including Tokyo Gas Lifeval, Enesta and Enefit), enabling us to tailor our services to fit the needs of individual customers. Through its 14,000 employees, Lifeval has built strong relationships of trust with customers. As the "face" of Tokyo Gas Group, Lifeval employees interact directly with customers and engage in a wide array of services ranging from the sale and maintenance of gas appliances and opening/closing of gas fixtures when customers move house, to gas appliance safety checks and gas meter reading. In retail sales of electricity, too, through push-type marketing making effective use of such opportunities for direct contact with customers, we will continue to steadily accumulate more contracts to enhance our customer base.

### Alliances with various industry partners

Tokyo Gas has formed business partnerships with a total of 48 companies (including wholesale customers such as gas business operators and LPG vendors) regarding the sale of low-voltage electric power. Through this network, we will continue to sell electricity to customers in the Greater Tokyo Area.

TOKYO GAS INTEGRATED REPORT 2019

### Development of renewable energy sources

The Tokyo Gas Group has been working to secure renewable energy power sources mainly for onshore wind power generation. In fiscal 2017, we embarked on our activities for photovoltaic and offshore wind power generation. We will accelerate joint project participation with business partners in Japan and around the world in a bid to initially obtain renewable energy power sources with an approximate output of 1 million kW (of which 400 MW is in Japan and 600 MW is overseas).



Kashima Offshore Wind Power Generation (Conceptual drawing)

Feb. 2017	Formed a business alliance with Shizen Energy Inc. (with the objective of acquiring around 60 MW of photovoltaic solar power generation sources)	Jun. 2018	Signed an agreement with Photon Japan LLC. (with the aim of jointly developing photovoltaic power stations with a power generation capacity of 30 MW)
Apr. 2018	Invested in a large-scale project of the Kashima Port offshore wind power generation plant.	Jan. 2019	Acquired Kyoto Ayabe Solar Power LLC (4.872 MW)
May 2018	Acquired a partial stake in SFK Power LLC. (SFK Power has a total power generation capacity of 9.7 MW.)	Apr. 2019	Joint renewable energy development project in Mexico 899 MW (including 450 MW owned by Tokyo Gas)

**Renewable Energy Projects** 



Generation Co., Ltd. **Generation capacity** Owned power

0.84 million kW 0.42 million kW 0.42 million×2 units

> Start of operations 2008 Tokyo Gas interest 49%



Ohgishima Power Co., Ltd.

**Generation capacity** Owned power 1.22 million kW 0.90 million kW 0.407 million×3 units Start of operations 2010 Tokyo Gas interest 75%



**Moka Power Station Generation capacity** Owned power 1.20 million kW 1.20 million kW 0.6 million×2 units All the power generated will be purchased by the Tokyo Gas Group. Start of operation: 2019 or later (scheduled)

Tokyo Gas interest: 0% Unit 1: H2 of 2019 (scheduled) Unit 2: H1 of 2020 (scheduled)

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

Through the establishment of Ennet in 2000, as a joint venture with NTT FACILITIES and Osaka Gas, we have worked to expand our electricity sales. In October 2015, we established Synergia Power Co., Ltd., as a joint venture with Tohoku Electric Power Co., Inc. As of April 2016, Synergia began selling electricity to high-voltage and extra-high-voltage customers in the Kanto region, primarily in the Northern Kanto area.

	Corporate name	Established	Main business	Shareholders
Ennet	ENNET Corporation	July 7, 2000	Electricity trading and electricity generation	NTT FACILITIES, INC. 32.7%, Nippon Telegraph and Telephone Corporation 18.3% Tokyo Gas Co., Ltd. 24.5%, Osaka Gas Co., Ltd. 24.5%
SYNERGIA Syner	Synergia Power Co., Ltd.	October 1, 2015	Electricity retail supply to high-voltage and extra-high-voltage customers in the Kanto region, mainly in its northern area	Tohoku Electric Power Co., Inc. 50% Tokyo Gas Co.,Ltd. 50%

# INVISIBLE ASSETS

### Relationship of trust with 11 million customers

Contributing to the achievement of Sustainable Development Goals (SDGs)





### Lifeval, Enesta and Enefit act as the faces of Tokyo Gas in local communities

Our bonds and relationships of trust with our 11 million customers, developed over the past 130 years, are our greatest strength. Tokyo Gas Lifeval, Enesta and Enefit have 180 outlets and over 10,000 employees to act as the faces of Tokyo Gas in different communities. They offer close services matched with customers' needs and serve as one-stop providers of products and services that help increase the quality of life for building close ties with individual customers.



### The face of Tokyo Gas, across the entire Kanto area

We believe strong relationships of trust with customers based on this community-based sales organization is the driving force that has enabled us to maintain our position as No. 1 new electric power market entrant in fiscal 2018, the third year after entry. In the retail gas business, too, which marks its third year since full deregulation, we are determined to augment and strengthen our relationships of trust with customers.



### Wide-ranging services that cement bonds with customers

We offer optimal lifestyle suggestions that are uniquely available from the Tokyo Gas Group, gained from paying close attention to customers' lifestyles and delivering gas and electricity to them. In a bid to ensure that customers think of Tokyo Gas when facing lifestyle-related difficulties, we will offer reassuring lifestyle-related services that match each life stage and the requests of individual customers in addition to gas and electricity on a one-stop basis to strengthen bonds.



Gas Fixture

Special Support

subscription fee offers

appliances and hot water

the purchase expenses for

replacement. It thus provides

accommodating services to support life with gas.

services for city gas

### Always Reliable Services

Our Always Reliable Services provide reassurance in terms of gas appliances and others concerning the overall aspects of customers' lives.



Gas Fixture Troubleshooting Support

Tokyo Gas' gas customers The payment of a monthly are entitled to the visiting unlimited access to repair repair service with no visiting charge. That allows them to call for a visit without terminal appliances made hesitation in the event of by Japanese manufacturers. failure of their city gas water This service also covers a heater or stove. predetermined portion of



**Emergency Home Assist** Service

This service responds to unexpected issues with plumbing products, entrance kevs and others on a 24/7 basis to reduce customers' anxiety.

**Electricity Fixture** Troubleshootina Support

Tokyo Gas also deals with electricity-related issues. This support service is provided for customers that subscribe to Tokvo Gas' electricity services. We offer reassurance in the event of unexpected issues not only for gas, but also for the electricity that supports everyday lives.



#### **Residential Monitoring** Services

These services enable customers to remotely check whether the gas is used, the door and windows are locked, and if any family member is at home. They are for monitoring the children in double-income families and elderly family members that live separately.



### **Always Home Support**

It is a package with a variety of services aimed at solving overall issues related to customers' residences. It provides customers with comfort and safety at home.



Minor home improvements, repairs and renovations

We offer a wide variety of services ranging from minor repairs including the replacement of wallpaper and screen doors and the adjustment and replacement of door knobs to the renovation of bathrooms. kitchens, lavatories and other household equipment.



Plumbing trouble response

Our staff will visit customers to address issues with plumbing products, such as water leakage and clogging of drainage conduits.



Repair of gas appliances

We will deal with abrupt failures and other issues with gas appliances. We receive requests 24/7.



Home safety measures

We will propose safety measures at home, including the installation of fire alarms and handrails and the sales of fire extinguishers and other disaster management items.



### Housekeeping service

Our customers can enjoy house cleaning, delivery cleaning and home services from Kajitaku Co., Ltd., an AEON Group company providing these services, at beneficial prices by applying for services via the Tokyo Gas Group.

33

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Out

	<b>ERVICE</b> BU	SINESS
	For almost half a century, since introducing LNG to Japan for the first time in 1969, Tokyo Gas has consistently handled processes across the entire LNG value chain, including both upstream and downstream processes,	
ıtline	from procurement and transportation to manufacturing and supply, sales and energy solutions.	Net sales ¥146.9 billion FY2018
	Utilizing the technological capabilities and know-how developed	Segment profits ¥6.2 billion EY2018

through these processes, Tokyo Gas provides one-stop solutions to match the needs of customers both in Japan and overseas, including LNG terminals, pipelines, district heating and cooling, and energy services.

### Providing individual solutions as a bundle

We offer optimal services by bundling a selection of engineering solutions that meet the needs of customers based on those owned by Tokyo Gas Engineering Solutions Corporation (hereinafter "TGES").



### From Kanto to the whole of Japan, and to the world

TGES was established in April 2015 to integrate the Tokyo Gas Group's capabilities in engineering and energy solutions. It has branches in Nagano, Fukuoka and Okinawa. In Ehime, it jointly established Niihama LNG Co., Ltd. with four companies that are engaged in business with local firms and other organizations.

Overseas, it operates an energy service business through

Gas Malaysia Energy Advance Sdn. Bhd. (GMEA) in Malaysia and through TGES America Ltd. in the U.S. An LNG terminal construction project is in progress in Thailand.

By partnering with energy suppliers in various regions and utilizing its technological capabilities and know-how, TGES provides engineering solutions to customers both in Japan and overseas.



## For the next 50 years

### Providing engineering solutions leveraging technological capabilities and know-how developed over almost half a century

The Tokyo Gas Group has handled processes across the entire LNG value chain for almost half a century, including both upstream and downstream processes. We offer the knowledge and expertise that we have accumulated through actually using

### Engineering business

Based on accumulated user's know-how, the Tokyo Gas Group provides total, optimal engineering solutions, including those for after facilities commence operation. Since the 1980s, the Group has built up a track record of achievements both in Japan and overseas, and is involved in numerous projects in regions such as Asia, where growth in demand is becoming increasingly evident.

#### Case 1

### Thailand: LNG receiving terminal construction PMC (January 2018)

In 2014, TGES was awarded an order for assignment as a project management contractor (PMC) for the capacity expansion construction project at PPT LNG Map Ta Phut LNG Receiving Terminals, Thailand. TGES was subsequently awarded another PMC contract by PTT LNG to manage its Nong Fab LNG Receiving Terminal construction project, and is currently engaged in associated project management duties.

In recognition of its technological strengths and abundant experience

accumulated through the construction, operation and maintenance management at LNG receiving terminals in Japan and overseas, TGES won this order. It will carry out the overall management of the project, including the technological and contractual aspects, to ensure the design, procurement, construction (safety, quality and process) and trial operation performed by the construction contractor

will be implemented as planned.



Nong Fab LNG Receiving Terminal

### Example of bundled services

#### Implementation of the Niihama LNG Project

It is a joint project with four other companies: Shikoku Electric Power Co., Inc., Sumitomo Chemical Co., Ltd., Sumitomo Joint Electric Power Co., Ltd., and Shikoku-Gas Co., Ltd. The five companies made joint investments to establish Niihama LNG. Currently, a new LNG terminal is being constructed on the premises of the Ehime Works of Sumitomo Chemical. Niihama LNG will accept LNG at the terminal and operate the terminal, including gasification. Natural gas and LNG will be supplied to the Ehime Works, the natural gas thermal power plant built by Sumitomo Joint Electric Power and the neighboring district. This project will spread the use of natural gas.

TGES will capitalize on its engineering abilities in design, construction and operation for the construction of the terminal and the pipeline. It will push ahead with demand cultivation using its diverse know-how gained by engaging in energy solutions.



Niihama LNG Termina

#### New business development in Southeast Asia

My duties are to develop the district heating and cooling business outside Japan. In Southeast Asia, economic growth is accelerating urban development. The introduction of district heating and cooling systems is predicted to quicken. TGES has around 50 years of experience as Japan's largest district heating and cooling operator, although it is a new entrant overseas, where it lacks a track record. In the tough competitive environment, we are careful to respond swiftly and sincerely in business talks and involve concerned parties to persistently advertise the Tokyo Gas Group's latest technologies, proven track record and reliability. Now it is vital to win a first project that will serve regional development using the technologies cultivated in Japan. We will continue to work with an eye towards developing peripheral businesses, such as energy services and the expansion of the smart energy network.

### Message Masahiro Suzuki

Overseas Business Division Tokyo Gas Engineering Solutions Corporation



the LNG terminals, pipelines, district heating and cooling centers and various other facilities and equipment that we have designed and built during that time as engineering solutions based on user's know-how, to clients both in Japan and overseas.

### **Energy service business**

Through its energy service business, TGES supplies heat, electricity, water and air by building systems—which focus primarily around gas cogeneration, but also incorporate renewable and unharnessed energy sources—to meet customer needs that include energy-saving, CO<sub>2</sub>-reducing, cost and labor saving, and BCP (Business Continuity Planning) solutions. We also continue to evolve and adapt by engaging in new initiatives such as smart energy networks and regional lending.

#### Case 2

### Utility services at the Iwaki City Medical Center (Iwaki City, Fukushima Prefecture)

Reconstructed at a new location in winter 2018 and designated as a core disaster hospital, lwaki City Medical Center has introduced gas cogeneration to enhance its business continuity and reduce the environmental impact. TGES carried out one-stop management of gas cogeneration and other energy equipment and built facilities through stationed personnel to provide an environment that allows the client to concentrate on hospital management. During the introduction, it

collaborated with Jobankyodogas Co., Ltd. on gas supply and energy services. The client, the gas operators and service operators respectively contribute to local medical care in their own roles.



Iwaki City Medical Center

# **SERVICE BUSINESS**

### **Urban Development Service (Real Estate)**

Over the course of 130 years in business, the Tokyo Gas Group has acquired large-scale and medium-scale properties (areas of land) with high utilization value, in high-profile areas such as Shinjuku, Ginza, Tamachi and Toyosu. Utilizing sites which it owns but which are no longer required for Outline business purposes, and with a primary focus on city center areas, the Group operates an office and residential real estate leasing business, working around the basic concept of securing stable revenues and improving asset value. It will work on joint projects with business partners in an effort to expand the regional development services business.

Service business



Chiyoda-ku

### Office leasing business msb Tamachi (musubu Tamachi)

At our property which connects directly to the East Exit of Tamachi Station on the JR Yamanote Line, we are engaged in the development of a smart energy network and enhanced Business Continuity Planning (BCP) functionality (such as by installing dual-fuel emergency generators that can run on both heavy fuel oil and city gas). Through this project, we aim to contribute to the local community by creating an advanced and appealing urban development and real estate leasing business. Phase I of the development (Tamachi Station Tower S and Pullman Tokyo Tamachi) was completed in May 2018, and it is now followed by Phase II (Tamachi Station Tower N). We are striving to finish it in fiscal 2020.

Note: Phase I: Land leasing business, Phase II: Office leasing business (based on Tokyo Gas capital investment)

### Type 1 Urban Redevelopment Project in the **Toranomon 2-Chome District**

The Tokyo Gas Group takes part in the consortium for the construction of a large complex that will mainly accommodate offices (scheduled to be completed in November 2023) and for the acquisition of its reserve floor area in the redevelopment project at the former site of the Toranomon Hospital, near Toranomon Station on the Tokyo Metro Ginza Line and Tameike-Sanno Station on the Ginza Line and on the Namboku Line.

Around the project site, there are a number of other ongoing redevelopment projects. The district is gaining significant attention, because it will undergo a dramatic change in the next couple of years. We will be committed to the project to contribute to energization of the entire area.





Net sales

Segment profits



¥44.6 billion FY2018

¥9.1 billion FY2018

msb Tamachi (musubu Tamachi)

Type 1 Urban Redevelopment Project in the Toranomon 2-Chome District

Shiba Park Building



#### \*2 Commercial Building

### Shiba Park Building

It is a rare, large office building in Tokyo, with a single floor area of approximately 6,000m<sup>2</sup> and located within walking distance from JR Hamamatsucho Station, and Daimon Station and Shiba-Koen Station on the Toei Subway. We have acquired it and now jointly operate it with five companies, including Kanden Realty & Development Co., Ltd.

We and Kansai Electric Power Co., Inc., a parent company of Kanden Realty & Development, Co., Ltd. have concluded a strategic partnership in the real estate business. Acquisition of this property is the first achievement of the partnership between the two companies. We will continue to share know-how, consider joint projects and take other actions that enrich the partnership.
### 36

## For the next 50 years LNG50th = TOKYO GAS INTEGRATED REPORT 2019

### **Residential leasing business**

We are also engaged in proactive leasing business operations on small to medium-sized properties (as of March 2019, 13 buildings with 326 residential units). As we head towards the 2020s, we will aim to achieve further business growth and expansion. as we acquire more real estate properties in order to create good quality assets that are well-suited to leasing. In October 2019, construction of a rental housing complex in Nerima-ku, Tokyo, provisionally named Toyotama Rental Housing Complex, is scheduled for completion.

GAS & POWER

+ SERVICE × GLOBAL

The Toyosu area is situated in a prime location, approximately 4km away from Tokvo Station. With significant events such as the opening of the new Toyosu Fish Market in October 2018 and the coming hosting of the Olympic and Paralympic Games in 2020, the area is now attracting even greater attention. The Tokyo Gas Group aims to create a new mixed land area development in Toyosu that will include both residential and commercial properties, in a development area covering approximately 17ha.



#### Initiatives Towards Achieving the Sustainable Development Goals (SDGs)

We are conducting urban development to construct urban districts where communities are in harmony with the environment. Using gas cogeneration systems, renewable energy and suchlike, the smart energy network improves energy conservation, eco-friendliness and disaster control gualities.





Broadening the array of Service items through co-creation

The Tokyo Gas Group will combine services matched with customers' lifestyles through its proposal of gas and electricity supply to provide greater economic value, peace of mind, simplicity and convenience for customers. To further satisfy their requests, we are expanding the co-creation of services developed with business partners, including business ventures. We will consider investing in partner companies if a higher level of synergy is expected.

G	Tariff for gas; General Tariff, Always	Extended	Delivering vitality		
Gas	Gas, Specified Gas		g reassurance		Food and health
Power (Electricity	Tariff for electricity; Always Electricity 1S, Always Electricity 1~3	Safety and reassurance - Always Reliable Services including Gas Fixture Special Support and Residential Monitoring Services	Housing fixtures - Always Home Support including minor home improvements and renovations, home services such as cleaning, tidying up and storage		- Broadening the array of products and services against heat shock response - Home services (meal preparation) and others
		A wide variety of services that build closer ties with customers			Utilization of IoT and
		Utilization of IoT and	digital technologies		digital technologies 2
Services	Lifestyle-related services	<ul> <li>Service content to be expandent of the service of the</li></ul>	iers	support se	Sleep and fatigue relief support services - Voice content services
	Overall facilities	<b>Existing</b> Gas and electric appliances, housing fixtures and renovations, leasing and credit		d eq	

### **Expansion of co-creation** and consideration of investment

We will integrate our knowledge and expertise with business partners to provide vitality in addition to reassurance.

### 1 (Co-creation) Home services

We offer home services to customers in collaboration with Kajitaku Co., Ltd., which operates meal preparation, cleaning and tidying and storage services. Especially for the meal preparation service, Tokyo Gas offers premade recipes to KAJITAKU CO., Ltd based on its know-how cultivated by running cooking classes since 1913 and giving food preparation guidance to its employees.

### 2 (Co-creation and investment) Sleep and fatigue relief support services

We have formed a capital and business partnership with EcoNaviSta Co., Ltd. to jointly develop services that will support customers' health.

### 3 (Co-creation and investment) Voice content services

We have formed a capital and business alliance with OTOBANK Inc. to jointly develop voice content that is helpful for putting young children to sleep, meal preparation and other daily situations.



We have expanded and increased overseas bases and staff, and have participated in LNG or natural gas related business projects in Australia, North America, and Southeast Asia, all in order to make overseas business another major source of growth for the **Outline** Tokyo Gas Group, as indicated in the Challenge 2020 Vision. Looking ahead, in addition to conducting discussions with a view to further business development, we will also work to ensure efficient distribution of management resources as we advance our overseas business operations.

Know-how in the midstream and downstream businesses accumulated in Japan

Global network established through activities such as material procurement and business participation

# Net sales ¥50.9 billion FY2018 Segment profits ¥15.3 billion FY2018

Business operations may be stalled, or the burden of expenses may increase, as a result of country-specific laws, regulations and/or business practices

Fluctuations in crude oil/gas prices and foreign exchange rates may impact the revenues and expenditures of all overseas business operations



Strengths

Risks

# Aiming to develop and advance our overseas business operations as a global integrated energy corporation

Leveraging our experience related to the global LNG value chain, we will enhance and expand businesses in accordance with the characteristics of each region where we operate in an attempt to increase recognition of Tokyo Gas as an LNG specialist.

We will continue to invest in projects that contribute to the construction of energy infrastructure, with a primary focus on midstream to downstream businesses, for which we can expect to see stable returns. We will aim to build a portfolio with the least impact from fluctuations in energy prices, and continue working to increase the added value of our existing projects. In addition, we will consider renewable energy and other future business fields with growth potential, entry into regions where we can expect to see market growth and where we can leverage our strengths.

The Tokyo Gas Group's operations currently span 13 business locations in nine countries (including North America, Southeast Asia and Australia).

# For the next 50 years LNG50th

	Upstream Business	Midstream- and Downstream Business		Business Location	
North America	Operation and management of shale projects	<ul> <li>Natural gas-fired power generation</li> <li>Renewable energy</li> </ul>	Tokyo Gas America Ltd. Houston, Texas	TGES America Ltd. South Carolina	Acario Ventures Silicon Valley
Southeast Asia	_	LNG terminal business Natural gas-fired power generation Gas supply Energy service	Tokyo Gas Asia Pte. Ltd. Singapore Bangkok Representative Office Thailand	Jakarta Representative Office Indonesia Ho Chi Minh & Hanoi Representative Offices Vietnam	Manila Representative Office Philippines Kuala Lumpur Representative Office Malaysia
Australia	Operation and management of LNG projects	_		Tokyo Gas Australia Pty Ltd. Perth & Brisbane	
Other regions	_	_		Paris Representative Office France	

# Aiming to construct LNG value chains and expand renewable energy



Monitoring commodity price trends and carefully estimating the productivity and reserves of gas fields, we are proceeding to form appropriate alliances with experienced operators and invest in prime assets. Tokyo Gas has so far participated in three natural gas development projects in the United States.

Project Name	Start of Participation	Investment ratio
U.S.A. Barnett shale gas development	Mar. 2013	25%
U.S.A. Eagle Ford shale gas development	Jun. 2016	25%
U.S.A. East Texas gas development business	May. 2017	30%



Birdsboro Power Plant

### North America

In North America, energy is in high demand and the natural gas market is expected to rise for a long time. The energy market is deregulated with active transactions. In this region, we will accelerate our participation in upstream, midstream and downstream businesses and renewable energy business. We will strive to acquire know-how that will be useful for future businesses worldwide while working to establish a revenue base.

Midstream- and Downstream Business

Renewable energy

When planning natural 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 environments on a state-by-state basis. We have recently participated in two natural gas fired power generation businesses in the East Coast region, where there is large-scale demand.

In April 2019, we announced our intention to secure a 50% stake in a renewable energy exploration and operation company based in Mexico, established by Engie S.A., which is a company headquartered in France. We will work on the renewable energy business in Mexico using the company as a platform with Engie.

Project	Name	Start of Participation	Investment ratio
Mexico	Natural gas-fired power plant business (Bajio Power Plant)	Oct. 2004	49%
Mexico	Natural gas-fired power plant business (MT Falcon Power Plant)	Jun. 2010	30%
U.S.A.	Industry-oriented energy services business (TGES America)	Feb. 2015 (Foundation)	100%
U.S.A.	Natural gas-fired power plant business (Empire Power Plant)	Oct. 2016	25%
U.S.A.	Natural gas-fired power plant business (Birdsboro Power Plant)	Apr. 2017	33.33%
Mexico	Joint project for renewable energy exploration	2019 (scheduled)	50% (scheduled)

### Southeast Asia





Following rapid economic growth, natural gas demand and LNG imports are forecasted to rise in Southeast Asia. We will contribute to the introduction of LNG and natural gas and the construction of an energy infrastructure in collaboration with governments and companies in each country. Specifically, we will work on midstream and downstream businesses, such as LNG terminals, gas-fired power generation, gas distribution and energy services.

As bases for implementing these actions, we launched branch offices in Malaysia, Singapore, Indonesia, Thailand, Vietnam and the Philippines.



Jakarta Representative Office

#### Midstream- and Downstream Business

The Tokyo Gas Group will provide a wide range of value, from natural gas engineering to expertise to operational know-how and energysaving services, to contribute to the development of natural gas infrastructure by capitalizing on its knowledge and experience in the utilization of LNG and natural gas. We will take part not only in tangible aspects such as the construction of LNG terminals, power stations and other energy infrastructure expected in various countries, but also in intangible aspects such as LNG demand cultivation, LNG terminal operation, and LNG procurement. In this way, we will increase our involvement and presence across the entire LNG value chain.

In 2017, we invested in gas distribution businesses in Vietnam and Indonesia, while in 2018, we commenced the first independent gas supply as a private business to industrial consumers in Thailand through a local gas distribution operator in which we had invested. In addition, we concluded a joint development agreement concerning the construction and operation of an LNG receiving terminal in the Philippines.

In the field of engineering, in 2017 we were awarded an order for feasibility studies and engineering work concerning the construction of LNG receiving terminals in Bangladesh, while in 2018, we were awarded an order to provide project management consultant services for the construction of LNG receiving terminals in Thailand.

Project Name	•	Participation
Philippines	Submitted declaration of interest regarding formation of an LNG value chain	Oct. 2017
Philippines	Concluded a joint development agreement for construction and operation of an LNG receiving terminal in the Philippines	Dec. 2018
Vietnam	Invested/acquired a stake in a gas supply business company and formed a strategic alliance	Jul. 2017
Thailand	Invested/acquired a stake in a natural gas-fired thermal power generation project	Oct. 2016
Thailand	Secured an order to provide PMC services in the construction of the Nong Fab LNG receiving terminal	Jan. 2018
 Thailand	Invested/acquired a stake in a gas supply business company	Jan. 2018
	Started gas distribution business	Dec. 2018
Indonesia	Invested/acquired a joint stake in a gas supply business company	Oct. 2017
Bangladesh	Secured an order for work relating to LNG receiving terminals	Jul. 2017



# Message

Lady Trishia Gonzales Manila Representative Office In the Philippines, the country's introduction of LNG amid the future exhaustion of domestically produced gas is predicted, and its government is working to attract domestic and overseas businesses for the construction of LNG receiving terminals. My duty is to collect information on trends in energy policies and LNG-related regulations that are being dramatically changed as well as stakeholders' activities though everyday communication with government bodies and private energy-related firms, and participation in energy-related seminars and forums. I ensure that the information is up-to-date and accurate, which will be broadly shared among those concerned in the company. The Philippines has never used LNG, which is why government officials among others are highly motivated to learn about the LNG industry. Every day, we receive inquiries on the business of LNG receiving terminals and LNG import and procurement, as well as requests for visits of our terminals. I hope to gain knowledge and expertise in the overall LNG value chain through this experience and contribute to building close relationships of cooperation between the Philippines and Japan.

# For the next 50 years LNG50th

# Investing our energies into the operation and management of existing projects

Australia



### Upstream Business

We have invested in five LNG projects in Australia, which has grown into a major LNG supply base to East Asia. One of these is the lchthys Project that recently came into operation. We will continue to operate and manage these projects with a view towards maximizing their value.



Ichthys LNG Project



Tokyo Gas Australia Pty Ltd. (Perth)

Project Name	LNG Production Capacity (Million tons / year)	Start of Participation	Tokyo Gas Interest	Start of Production (Operation)
Darwin	3.0	2003	3.07%	Jan. 2006
Pluto	4.9	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
lchthys	8.9	2012	1.575%	Oct. 2018



Message

Wataru Nakayama Tokyo Gas Australia Pty Ltd. Aiming to achieve stable LNG supply and revenue expansion, Tokyo Gas Australia participates in five large-scale LNG projects and engages in project management.

In October 2018, the Ichthys LNG Project started shipment, which meant that all our projects in Australia were in operation. The Ichthys project is the first in history to be operated by a Japanese business and joined by major Japanese gas and electric power companies, including Tokyo Gas. We contributed to increasing the project value by offering advice on project operation when shifting from the construction phase to the operation phase, as well as offering suggestions on a gas production well drilling plan for higher efficiency and lower risks based on our experience gained through participation in the four projects in Australia that were already in operation.

Tokyo Gas Australia has participated in the joint operation of projects with a number of major oil companies. It also works intensively to train personnel for overseas businesses. We actively engage in education activities based on the work experience of personnel to quickly develop people who will contribute to the maximization of value for overseas business.

### Initiatives Towards Achieving the Sustainable Development Goals (SDGs) –

#### Taking up the challenge of creating an LNG value chain in Southeast Asia

In 2017, we invested and acquired stakes in gas supply businesses in Vietnam (July) and Indonesia (October). In January 2018, we acquired a stake in a similar business in Thailand. In December 2018, we signed a joint development agreement regarding construction and operation of an LNG receiving terminal in the Philippines.



By leveraging our Group's technological capabilities and know-how to provide energy solutions and construct infrastructure, we are seeking to promote the widespread adoption of clean, environmentally-friendly natural gas. We also hope that contributing to the creation of jobs and economic development through our local business operations will lead to an increase in educational opportunities and help to eliminate disparities in wealth and living standards in those countries.

# **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.

Description Corporate Governance www.tokyo-gas.co.jp/IR/english/gvnnc/pdf/policy.pdf

# **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 9 directors, 4 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: 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 and 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 managementrelated 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.)

### Analysis and Evaluation of Effectiveness of the Board of Directors

Starting in Fiscal 2018, the Board of Directors has analyzed and evaluated its effectiveness by having each of its Directors complete a questionnaire-based self-evaluation. The Board then held discussions and exchanged opinions



based on the outcome of those self-evaluations, to maintain and enhance the Board's effectiveness.

Based on the results of the questionnaire and the exchange of opinions at the Board of Directors' meetings, it was determined that measures for improving the Board's effectiveness are functioning effectively through efforts to improve and enhance site inspection visits and to increase opportunities for Executive Officers to attend Board meetings.

On the other hand, ceaseless efforts are required to further increase the Board's effectiveness. Accordingly, initiatives to contribute to the strengthening of the supervisory functions of the Board, including further enhancement of site inspection visits by the Directors, will be examined and implemented in the future.

# 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 representative 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 Boad 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.

### Corporate governance

### **Corporate Governance System**



Overview of Corporate Governance System (As of June 27, 2019)				
Number of directors	9	Participation of outside directors and outside Audit & Supervisory Board members in selecting director candidates	Yes	
Average age of directors	61	Number of meetings of Board of Directors*	12	
Number of outside directors	4	Attendance rate of outside directors at meetings of Board of Directors*	100%	
Number of Audit & Supervisory Board members	5	Term of office of directors	One year	
Number of outside Audit & Supervisory Board members	3	Performance-linked remuneration	Yes	
Number of independent officers	7	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	2018 to March 2019	

\* Total for the period from April 2018 to March 2019

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

We have established in-house committees—such as the Management Ethics Committee, chaired by the President and CEO—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.

### - Investment Evaluation Committee

Of the matters to be discussed at the Corporate Executive Committee, the Investment Evaluation Committee chaired by the Executive Officer in charge of financial affairs evaluates matters that require the evaluation of the significance, economy and risks related to investment and postinvestment follow-up and reports to the Corporate Executive Committee.



# **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

- 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 companywide 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.

Composition of Remuneration for Directors \* Monthly remuneration of outside directors are fixed remuneration only. Fixed remuneration

Total Remuneration for Directors and Audit & Supervisory Board Members (Fiscal 2018)						
		Total value of	e (¥ million)			
Classification of officers	remuneration	Fixed remuneration	Performance-linked remuneration		Retirement	Number of eligible
	(¥ million)	(Monthly remuneration)	Monthly remuneration	Bonuses	benefits	officers
Directors (excluding outside) directors <b>368</b>		253	59	56	-	8
Audit & Supervisory Board members ( excluding outside (Audit & Supervisory Board members	74	74	-	-	-	2
Outside Directors	34	27	-	6	-	3
Outside Audit & Supervisory Board Members	33	33	-	-	-	4

\*The number of officers includes 3 Directors and 1 Audit & Supervisory Board member who retired upon the conclusion of the 218th Annual General Meeting of Shareholders.

It was resolved that the amount of monthly remuneration of all Directors (including Outside Directors) should be under ¥50 million at the 205th Annual General Meeting of Shareholders and that the amount of annual bonus for all Directors should be under ¥90 million at the 206th Annual General Meeting of Shareholders. 'It was resolved that the amount of monthly remuneration of all Audit & Supervisory

"It was resolved that the amount of monthly remuneration of all Audit & Supervisory Board members (including outside members of the Audit & Supervisory Board) should be under ¥12 million at the 190th Annual General Meeting of Shareholders.

# **Advisory Committee**

In February 2005, we established the Advisory Committee to assure objectiveness and transparency in management. The committee has up to five members, consisting of the Chairman, the President and CEO, and up to three directors selected by the Board of Directors; with over half of its membership consisting of outside directors, and the committee chairman also being an outside director.

Advisory Committee Membership (as of June 27, 2019)				
Committee chairman	Hitoshi Saito (Outside Director)			
Committee members	Kazunori Takami (Outside Director) Yoshihiko Morita (Outside Audit & Supervisory Board Member) Michiaki Hirose (Director, Chairman of the Board) Takashi Uchida (Representative Director, 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.

### Corporate governance

### **Internal Control System**

To secure management soundness and transparency, and to realize its management philosophy, the company has formulated the "Basic Policy on Development of Corporate Structures and Systems for Internal Control System," and 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: Yoshihide Takehisa, Toshiyuki Tamura and Yoshihiro Uehara. For these auditors, the number of consecutive years of auditing service is 3 years, 2 years and 4 years, respectively (as of June 27, 2019).

Compensation for Independent Auditor	s (Fiscal 2018)
Compensation for auditing services	¥264 million
Compensation for non-auditing services	¥31 million
Total	¥295 million

## Compliance

### **Compliance Structure**

We have established the Management Ethics Committee, chaired by the President and CEO. This committee discusses at the executive 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. The Compliance Department operates counseling service counters, distributes information within and beyond the Tokyo Gas Group companies, and promotes a thorough awareness of ongoing activities related to our Code of Conduct, which represents a compliance standard of the Tokyo Gas Group. The Compliance Department also supports a wide range of compliance-related activities for each department. These include development of compliance promotion systems, encouragement awareness and educational campaigns about the Code of Conduct, and compliance risk reduction measures.

### **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. Furthermore, the Internal Audit Department conducts internal audits of the Company and its subsidiaries, focusing on the probability that risks will materialize and their degree of importance from the viewpoint of strict compliance with laws and regulations, corporate ethics and social norms. The status of improvement concerning any recommendations made as a result of the internal audits is checked in a follow-up audit in the following year to ensure stable improvement in risk management.





## **Risk Management System**

### Enterprise Risk Management System

The company has established an enterprise risk management (ERM) system, and drawn up risk management regulations that include documented rules concerning major risks faced by the group.

The Risk Management Committee was established with the aim of improving the management level of the ERM system. The Committee checks progress regarding the establishment and operational status of the ERM system, including periodic risk assessments. It also reports to the Corporate Executive Committee and obtains the necessary approvals.

Under the framework, around 150 Risk Management Promotion Officers are deployed in the business departments of Tokyo Gas and its subsidiaries 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 Regulations. In case of major crises, including major natural disasters, such as earthquakes, or production or supply disruptions arising from major accidents at pipelines or LNG terminals, as well as new strains of influenza, terrorism, failures in mission-critical IT systems, and compliance problems, the Emergency Response Organization is established to respond 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 a new strain of influenza, etc. This plan is in place to reinforce the company's risk management system.



## Emergency Response Organization



# **Board of Directors**

(As of June 27, 2019)



Director, Chairman of the Board Michiaki Hirose

#### April 1974 Joined the Company

June 2009	Director, Senior Executive Officer and in charge
	of Corporate Planning Dept., Corporate
	Communications Dept. and Affiliated
	Companies Dept.
April 2012	Representative Director, Executive Vice
	President and Chief Executive of Living Energy
	Div.
A =	Depresentative Director Dresident

April 2014 Representative Director, President April 2018 Director and Chairman of the Board

Reason for appointment Over the course of his career, Reason for appointment Over the course of his career, Michiaki Hirose has engaged mainly in planning and living-related work duties. For four years, from April 2014 until March 2018, he served as President. Since April 2018, as Director and Chairman, he has served as chairman of the Board of Directors. He is highly knowledgeable, and has extensive work experience with the company.



Representative Director, President and CEO Takashi Uchida

April 1979	Joined the Company
April 1979	Joined the Company

P	
June 2015	Director, Senior Executive Officer and Chief
	Executive of Energy Resources Div.
April 2016	Representative Director, Executive Vice
	President and Chief Executive of Residential
	Sales and Service Div.
April 2018	Representative Director, President and CEO
April 2018	

Reason for appointment In his career, Takashi Uchida Reason for appointment In his career, lakashi Uchida has engaged mainly in pipeline, resources and overseas business-related work duties. Since April 2018, he has served as President and CEO, with ultimate responsibility for the execution of duties within the company. He is highly based based based these streaments and based base knowledgeable, and has extensive work experience with the company.



### Director Outside Chika Igarashi

April 1997	Registered as an attorney at law
April 1997	Joined a law firm in Tokyo Metropolitan area
July 2006	Joined Asahi Law Office (Currently Nishimura & Asahi)
June 2007	Registered as an attorney at law in New York State, USA
June 2016	Director of the Company



# Hitoshi Saito

- Joined Mitsui Fudosan Co., Ltd April 1976 Executive Managing Director and Executive Managing Officer of Mitsui Fudosan Co., Ltd. June 2011 Managing Director and Senior Executive Managing Officer of Mitsui Fudosan Co., Ltd. April 2013 Managing Director, Senior Executive Managing Officer and Chief Executive of International Div. April 2015
  - of Mitsui Fudosan Co., Ltd.
- June 2017 Advisor of Mitsui Fudosan Co., Ltd. June 2019 Director of the Company

Reason for appointment Chika Igarashi is highly knowledgeable, and possesses high-level legal expertise and a broad-minded perspective, developed through her many years of involvement in corporate legal affairs. We hope that she will make use of these qualities in helping to manage Tokyo Gas.

Reason for appointment Mr. Hitoshi Saito is expected to use his international perspective acquired from overseas businesses in the real estate industry, as well as his management capabilities, broad outlook and in-depth knowledge gained through a wide range of business development for the Company's management.



Director Outside Kazunori Takami

April 1978	Joined Matsushita Electric Industrial Co., Ltd. (Current Panasonic Corporation)
June 2009	Managing Director of Panasonic Corporation
April 2012	Representative Director, Senior Managing Executive Director and President of Appliances Company of Panasonic Corporation
April 2015	Representative Director, Executive Vice President and in charge of Japan, Customer Satisfaction, and Design of Panasonic Corporation
June 2017	Corporate Advisor of Panasonic Corporation
March	Retired from Corporate Advisor of Panasonic
2018	Corporation
June 2019	Director of the Company

Reason for appointment Mr. Kazunori Takami is expected to use his management capabilities, broad outlook and in-depth knowledge acquired through a wide range of business development in the electrical industry for the Company's management.

#### Significant joint responsibilities

Outside Director of Tokyo FM Broadcasting Co., Ltd. Outside Director of Nojima Corporation Outside Director of FUJITA KANKO INC.

Significant joint responsibilities

Lawyer at Nishimura & Asahi Law Office

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# Representative Director Masaru Takamatsu

April 1980 Joined the Company

April 1900	Joined the Company
June 2016	Director, Senior Executive Officer and in charge
	of Personnel Dept., Secretary Dept., General
	Administration Dept., Compliance Dept., and
	Internal Audit Dept.
April 2018	Representative Director, Executive Vice

President and Chief Executive of Residential Sales and Service Div.

Reason for appointment During his career, Masaru Takamatsu has engaged mainly in living and planningrelated work duties. He currently serves as Executive Vice President. He is highly knowledgeable, and has extensive work experience with the company.



# Representative Director Takashi Anamizu

April 1985	Joined the Company
June 2017	Director, Senior Executive Officer, Chief
	Executive of Global Business Div.
April 2018	Representative Director, Executive Vice

President and Chief Executive of Energy Solution Div. and Power Business Div.

Reason for appointment In his career, Takashi Anamizu has engaged mainly in living, resources and overseas business-related work duties. He currently serves as Executive Vice President. He is highly knowledgeable, and has extensive work experience with the company.



### Director Kunio Nohata

April 1984	Joined the Company
June 2017	Director, Senior Executive Officer of the Company, Chief Executive of Power Business Div., In charge of Environmental Affairs Dept.
April 2018	Director, Senior Managing Executive Officer, Chief Executive of Global Business Div.

Reason for appointment Over the course of his career, Kunio Nohata has engaged mainly in energy sales, resources and overseas business-related work duties. He currently serves as Senior Managing Executive Officer, and is responsible for the company's Global Business Division. He is highly knowledgeable, and has extensive work experience with the company.

# **Executive Officers**

President and CEO	Takashi Uchida	
Executive Vice Presidents	Masaru Takamatsu	Chief Executive of Residential Sales and Service Div.
	Takashi Anamizu	Chief Executive of Energy Solution Div. and Power Business Div.
Senior Managing	Kunio Nohata	Chief Executive of Global Business Div.
Executive Officer	Satoru Sawada	The Japan Gas Association
	Koki Hayakawa	CFO, in charge of Financial Management Dept., Accounting Dept., Purchasing Dept., Compliance Dep and Internal Audit Dept.
Managing	Tadashi Komiyama	Chief Executive of Region Div.
Executive Officer	Kentaro Kimoto	Chief Executive of Gas Resources & Energy Production Div.
	Hiroshi Kishino	In charge of Personnel Dept., Secretary Dept., Genera Administration Dept., Corporate Communications Dep and Sustainability Dept.
	Shinichi Sasayama	Chief Executive of Digital Innovation Div., in charge of Corporate Planning Dept. and Business Transformatic Dept.
	Ayumi Shigitani	General Manager of CIRIUS Project Dept., Digital Innovation Div. and President, Representative Director TOKYO GAS i NET CORP.
	Takashi Higo	President, Representative Director of Tokyo Gas Engineering Solutions Corporation
	Isao Hosoya	Chief Executive of Pipeline Network Div.
Executive Officers	Akihiko Matsuda Satoshi Tanazawa	ohei Nitta Tomoyuki Yoshioka Yoshiharu Kikuyama Hiroshi Hanada Akihiro Saito Masayuki Kado Shinsuke Ogawa Yasuhiro Konishi Hirofumi Sato o Sugesawa Eito Tsuji



### Director Outside Junko Edahiro

April 2003	Representative Director of Edahiroba Inc. (Current e's Inc.)
May 2006	Director and Chairperson of Change Agent Inc.
August 2018	Professor, Graduate School of Leadership and Innovation, Shizenkan University
June 2019	Director of the Company

Reason for appointment Ms. Junko Edahiro is expected to use her experience as a corporate manager, advanced specialization related to the environment and in-depth knowledge as an environmental journalist for the Company's management.

### Significant joint responsibilities

Representative Director of e's Inc. Director and Chairperson of Change Agent Inc. Professor of Shizenkan University Graduate School of Leadership & Innovation

### Corporate governance

# Audit & Supervisory **Board Members**

(As of June 27, 2019)



Audit & Supervisory Board Member

# Hideaki Arai

April 1979	Joined the Company
April 2013	Senior Executive Officer, Chief Executive of
	Pipeline Network Div.
March 2017	Retired as Senior Executive Officer
June 2017	Audit & Supervisory Board Member of the
	Company

Reason for appointment Hideaki Arai is highly knowledgeable, and has extensive work experience with the Company. He has engaged mainly in pipeline and wide-area sales-related work duties, and has also served as a Senior Executive Officer.



Audit & Supervisory Board Member Isao Nakajima

April 1982	Joined the Company
April 2015	Senior Executive Officer, CFO and in charge of Finance Dept., Accounting Dept., Purchasing
	Dept. and Real Estate Management Dept.
April 2018	Senior Managing Executive Officer, CFO and
	in charge of Finance Dept., Accounting Dept., Personnel Dept. and Purchasing Dept.
March 2019	Retired as Senior Managing Executive Officer
June 2019	Audit & Supervisory Board Member of the Company

Reason for appointment Isao Nakajima is highly knowledgeable in financial affairs and accounting, and has extensive work experience with the Company. He has carried out financial and accounting operations and has served as Senior Managing Executive Officer.



Audit & Supervisory Board Member Outside

# Yoshihiko Morita

Joined Export-Import Bank of Japan
Vice Governor of Japan Bank for
International Cooperation
Representative Director and Senior
Managing Executive Officer of Japan
Finance Corporation, Deputy CEO of Japan
Bank for International Cooperation
Retired as Deputy CEO of Japan Bank for
International Cooperation
Audit & Supervisory Board Member of the
Company

Reason for appointment Yoshihiko Morita is highly knowledgeable and has a broad international outlook, developed through his experience in fields such as international finance and overseas economic cooperation. We hope that he will make use of these qualities in his role as an Audit & Supervisory Board member for Tokyo Gas.



Audit & Supervisory Board Member Outside Masato Nobutoki

April 1981	Joined Mitsubishi Corporation	

April 2007	Joined City of Yokohama
	Director General of City Growth Strategy
	Promotion Department, Economic Affairs
	Bureau, City of Yokohama
April 2016	Consultant of Future City Promotion, Climate

Change Policy Headquarters, City of Yokohama June 2017 Audit & Supervisory Board Member of the Company

Retired from Yokohama Ciy as a consultant

Reason for appointment Masato Nobutoki is highly knowledgeable and has extensive experience, both as a company employee and as a member of staff at regional public bodies. We hope that he will make use of these qualities in his role as an Audit & Supervisory Board member for Tokyo Gas.



Audit & Supervisory Board Member Outside

### Sawako Nohara

December 1988	Joined Life Science Institute Co., Ltd.
July 1995	Joined InfoCom Research, Inc.
December 2001	President and Representative Director of IPSe Marketing. Inc.
November 2009	Project Professor, Graduate School of Media and Governance, Keio University
June 2018	Audit & Supervisory Board Member of the Company

Reason for appointment Sawako Nohara is highly knowledgeable, and possesses corporate management experience and high-level IT-related expertise. We hope that she will make use of these qualities in her role as an Audit & Supervisory Board member for Tokyo Gas.

Significant joint responsibilities President and Representative Director of Dise Marketing. Inc. Outside Director of Sompo Holdings, Inc. Outside Director of JAPAN POST BANK Co., Ltd. Outside Director of DAIICHI SANKYO COMPANY, LIMITED

# **Messages from Outside Directors**



### Utilizing my experience in corporate management and overseas business, I will monitor business growth and corporate governance impartially and present my opinions.

Since I joined Mitsui Fudosan Co., Ltd., I have gained experience in overseas business, financial affairs, residential business, commercial facilities, building development and other areas. During that period, I was posted to overseas offices twice, Los Angeles and New York.

At Mitsui Fudosan Co., Ltd., I worked primarily to expand its overseas business as the person responsible for promoting globalization while serving as Managing Officer and Director. I also focused on enhancing corporate governance and compliance on the back of rapid business expansion supported by proactive investment.

I look forward to working as Outside Director for Tokyo Gas, a company with a strong commitment to public service. The major role of Outside Director is corporate governance, in other words management supervision and advice. However, overly strong supervision can hinder the seeds of growth. I believe that my role will be to properly monitor the offense-defense balance from an independent standpoint and present my opinions to the management.

In the GPS2020 medium-term management plan, Tokyo Gas aims to evolve from being the leading city gas company in Japan to being a global integrated energy corporation, and make overseas business into another major source of growth for the future. I would like to find opportunities where I can help to achieve this goal as much as possible by applying my work experience and knowledge.

### Highly regarding ties with customers, I shall be committed to helping the Company continue to be the closest infrastructure that protects customers' lives.

Since joining Matsushita Electric Industrial Co., Ltd. (currently Panasonic Corporation), I was exclusively engaged in sales activities for 20 years. Later, I served as General Manager of the Corporate Planning Office and General Manager of a business department and assumed other posts, and then as Executive Vice President of Panasonic Corporation. What has remained constant throughout my career is the idea of putting customers and employees first. I have been making resolute decisions based on discussions with many people, which is essential for achieving sustainable corporate growth.

In 1969, Tokyo Gas decided to introduce LNG to Japan for the first time. At that time, it was impractical to import LNG because it entailed sophisticated import technologies and high costs. However, this decision supported the energy demand during the high economic growth period and became a catalyst for improving air pollution, which was recognized as a social problem.

Tokyo Gas spent several decades adjusting the gas appliances of all customers to help them use LNG safely and with peace of mind. The core idea is the same as that of Panasonic, who connected with customers as the electrical appliance center in each local community, earning their trust and confidence. I shall present my opinions by using my past experience.

Social problems, including the falling birth rates and aging population, are becoming increasingly serious. By constantly questioning: "Is the present state sufficient?" I hope to focus on helping the Company continue to be the closest infrastructure that protects customers' lives and I will make proposals for smarter lifestyles.



Kazunori Takami



Director Outside
Junko Edahiro

### Energy lies at the foundation for achieving the SDGs. I shall contribute to this by applying my knowledge and experience accumulated from my commitment to environmental issues over many years.

For more than 20 years, I have been involved in environmental issues. Believing that solving environmental concerns requires a focus on the concepts of happiness, economy and society, I have established the Institute for Studies in Happiness, Economy and Society and have been engaged in a variety of activities.

Global warming is an energy issue. Energy also lies at the foundation for achieving the SDGs. Among the global trend of reducing the use of coal, the gas industry has the key to increasing renewable energy and will simultaneously need to make a significant change in its business model. I am very honored and humbled to have been appointed as an Outside Director in this phase of major change. I hope to present my opinions by using my knowledge and global network fostered through a variety of initiatives over a long period.

In addition, believing that leadership development is important for organizations, I am teaching systems thinking and challenges in sustainability to adult students from 22 countries at Shizenkan University Graduate School of Leadership & Innovation. Strengthening the abilities to look to the future, understand the structure of reality and enlist people, which are necessary skills to survive in an age of instability and uncertainty, will lead to solving social issues. I wish to apply my knowledge and experience to help Tokyo Gas strengthen these three abilities and contribute to solving social issues.

# **INVISIBLE ASSETS**

Achieving sustainable growth by refining the invisible assets that underpin our GPS×G ([Gas & Power + Service] × Global) strategy

Safe and stable energy supply infrastructure P25 See details in the "Business overview."

Relationships of trust with 11 million customers P31 See details in the "Business overview."

Relationships of trust with business partners

Digitalization and technology development capabilities (Innovation)

Human resources

ESG Initiatives Environmental, Social, Governance

### For the next 50 years LNG50th TOKYO GAS INTEGRATED REPORT 2019

# Relationships of trust with business partners

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



### LNG value chain

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

PetroVietnam Gas	Signing of a Memorandum of Understanding for Coopration on the Development of the LNG Value Chain in Vietnam
PT Pertamina	Signing of a Memorandum of Understanding with Pertamina towards Forming a Strategic Alliance-Cooperation for Development of LNG Value Chain in Indonesia
Petronas LNG Ltd.	Signing of a Memorandum of Collaboration
PT Miura Indonesia	Signing of a Memorandum of Understanding on Mutual Cooperation in Indonesia
First Gen	Signing of a Joint Development Agreement on the construction and operation of the LNG receiving terminal in the Philippines

#### **Power generation**

Expand competitive power sources.

JXTG Nippon Oil & Energy Corporation (Kawasaki Natural Gas Power Station)

Kobe Steel, Ltd. (KOBELCO) (Moka Power Station)

Idemitsu Kosan Co., Ltd. (Ohgishima Power)

Idemitsu Kosan Co., Ltd. and KYUSHU ELECTRIC POWER CO., INC. (Chiba-Sodegaura Energy)

ENGIE, France (Renewables joint-venture company in Mexico)

### Service fields

Expand synergetic alliance with business partners to accelerate initiatives to provide gas, electricity and services as a packaged service.

OTOBANK Inc.	Audio book services
KAJITAKU CO., Ltd.	Cooking services
ENECHANGE Ltd.	Use of the basis for new services

### LNG procurement

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

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

#### Electricity sales

Expanding electricity sales to high-voltage and extra-highvoltage customers

Tohoku-Electric Power Co, Inc.	NTT Group	OSAKA GAS CO., LTD.
(Synergia Power Co., Ltd.)	(ENNET Corporation)	(ENNET Corporation)

#### Expanding electricity sales to low-voltage customers

Business alliances with 21 companies including gas operators which are our city gas wholesale customers (approx. 630,000 city gas customers)

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

Enhance the electricity sales structure through cross-industrial alliance with partners, including real estate companies who have contact points and relationships with customers.

Example	es of	compa	nies	in	alliance

Cable TV	Real estate agency	Housekeeping service	
Energy saving service	Management company	Moving	

#### City Gas Retail Services

Jupiter Telecommunications (J:COM) and 19 J:COM Group companies (42 channels) (Plan to accept orders from the first half of fiscal 2019)

# **Invisible Assets**

# Digitalization and technology development capabilities (Innovation)

Contributing to the achievement of Sustainable Development Goals (SDGs)



The history and future of our innovation

						technologies
Tokyo Gas hist	tory of innovation					
Ŷ	Ŷ	Ŷ	Ŷ	Ŷ	Ŷ	Ŷ
1885	1902	1969	1981	2001	2009	2017
Tokyo Gas established	First gas equipment to receive a patent in Japan	First LNG Cargo came to Japan	First natural gas cogeneration system introduced to Japan	Commenced operation of SUPREME earthquake disaster prevention	Launched sales of world's first residential fuel cell system	Established Acario Ventures

# Applying and deploying advanced examples around the world in the Japanese market

Through information gathering on U.S. venture firms, and investment in and collaboration with energy-related venture capitals by Acario Ventures, which we established in Silicon Valley, we absorb new technologies and business models in the energy service business areas around the world to apply and deploy them in the Japanese market, while making smart use of our advantages.



Creating new businesses and services

In light of the recent rapid advance in technology innovation in

our previous R&D focused on gas energy to an open innovation style of R&D focused on a broad range of innovative energy

technologies. We will acquire distributed energy systems, AI, IoT and other digital technologies, and business models that make

technologies to enhance convenience to our customers, promote

2017 Commenced initiatives to

develop new

the distributed energy system fields, including solar power, storage battery, and electric vehicles (EVs), we are shifting from

use of them to accelerate initiatives to create new energy businesses and new services. We will also use digital

efficiency and sophistication in operations and solve

management issues.

system



### Creating new energy businesses

By combining energy-saving and eco-friendly gas cogeneration systems and storage cells, we will create new value, such as advanced energy management for customers and providing load adjustment capabilities required with the widespread use of renewable energy (participated in the verification tests in the UK).

### Creating new services

We will combine our service and energy capabilities in a specific market, such as sales and maintenance of gas equipment and energy, to create business and provide high added value to customers and society. We will create business on a broad front, eyeing possibilities, such as development of sub-brands.



For the next 50 years
LNG50th



### Society in the future

Low-carbon society Hydrogen-oriented society Smart society Earthquake disaster prevention and stable supply Comfortable, convenient and secure living

### Future innovation



### Use of data in solving management issues



Through unified management of operation status data concerning equipment for gas production and power generation equipment, and information on demand, prices, and ship deployment, and by AI-enabled forecasting of equipment operation and sales planning, we work on solving management challenges, including optimization of equipment management and the entire value chain.



**Optimizing market trade** 

### Improving productivity through Business Process Reform (BPR), etc.



Establishment of the Corporate Innovation Project Department

# Invisible Assets

# Human resources

Contributing to the achievement of Sustainable Development Goals (SDGs)



Because we see human resources as the underlying source of creation of corporate value, the Tokyo Gas Group is striving to develop employees who have high-level expertise and integrity, and respond flexibly to changes in society and the business environment. In line with this policy, we are working to implement workstyle reforms and promote diversity, to ensure maximum effective utilization of the knowledge, skills and experience of personnel working in the Tokyo Gas Group.

Strengthening personnel to ..... support growth

Creating an environment ..... conducive to maximizing the effective use of knowledge, skills and experience

# Personnel hiring and development

We are engaged in the hiring and development of human resources with a strong sense of duty and responsibility, who can take the initiative to think and act for themselves, and who can grow while cooperating with their fellow colleagues; who can become core personnel and act as a strong driving force for business operations in a diverse range of fields.

#### Hiring personnel with high levels of expertise

Workstyle

reform

Improving

productivity and

achieving a healthy

work-life balance

In addition to hiring new graduates for specific job types (in humanities, sciences and the professional domain), we also engage in flexible hiring of experienced and highlyspecialized mid-career personnel.

#### Strategic shift to growth domains

In addition to our gas business, we also prioritize assignment of personnel to strategically-important fields such as our electric power and overseas business operations. In this way, we are promoting growth and expansion in a diverse range of fields

### Developing business leaders

Driving

GAS & POWER

+ SERVICE × GLOBAL

We train business leaders who will lead the Tokyo Gas Group in the future, with a training program that focuses primarily on development through a wide range of on-the-job training (OJT) experiences gained by means of transfers and rotations, combined with additional off-the-iob education and training (OFF-JT).

Hiring, fostering and placing of personnel who support promotion of "GPS × G"



Workstyle reform (Improving productivity and achieving a healthy work-life balance)

In order to enable each and every one of our employees to work energetically and make maximum effective use of their abilities, we are working proactively to rectify and reduce long working hours, and to implement workstyle reforms with awareness of "the value of time," which we regard as important issues for management involvement.

### Specific initiatives

Promoting workstyles with awareness of the value of time Prohibiting overtime work after 20:00 (as a general rule) and encouraging employees to declare in advance what time they will be leaving work, etc.

Personnel

hiring and

development

**Promoting** 

diversity

Promoting active

roles for diverse

personnel

- Environmental improvement to allow diverse personnel to display their full potential
- Introducing a "Work Anywhere" program which eliminates Working to create workplaces that enable innovation to occur restrictions on working location (Work at home, mobile work) • "Work in a Free-form Animated Manner" (Online video
- Building satellite shared offices
- Improving the office environment toward further improvement in productivity



conferencing, office reforms, etc.) • Promoting automation / mechanization using ICT, and more sophisticated use of data (utilizing RPA, audio AI, etc.)

### Promoting diversity (Promoting active roles for diverse personnel)

### **Top Management Commitment**

The Tokyo Gas Group is working to promote diversity (promoting active roles for diverse human resources), with a view to future growth and advancement. Even in the midst of this great competitive age of energy, the Group aims to grow and advance as a global integrated energy corporation by coming to terms with every one of its customers, having them choose Tokyo Gas products and services, and contributing to creation of a better society and secure and comfortable lifestyles. One important issue for the entire Group to tackle in order to achieve this, is the promotion of diversity. In order to satisfy the continually diversifying needs of each and every customer, it is essential for us to create an environment in which every Group employee can take an active role and work as part of a team, making maximum effective use of his or her knowledge, skills and experience. Moving forward, we will continue working proactively to develop and enhance more schemes for supporting this ideal, to foster greater employee awareness and create a better corporate culture within our organization, and aim to create a corporate group in which all employees can take an active role, regardless of their gender, age, presence or absence of disabilities, employment type, nationality, sexuality, gender identity, or any other such attributes.

> Takashi Uchida Representative Director, President and CEO Tokyo Gas Co., Ltd.

### **Specific Initiatives**

Promoting	2016: First female executive officer appointed 2018: First female senior executive officer appointed
empowerment of women in	Almost 100% return-to-work rate for female employees returning from childcare leave
workplace	Almost no difference in gender in terms of average years in service of the company
Employment of people with disabilities	<ul> <li>Employment rate of 2.46%, exceeding the mandatory rate (as of June 2019)</li> <li>Established a liaison committee to promote employment of disabled people as a group</li> <li>Working to create safe and comfortable working environments</li> </ul>
Career development support for employees in their 50s and	Established the "Grand Career System" to support career development for employees in their 50s and over, through training sessions and interviews with career consultants, etc.

# Basic Policy Regarding Promotion of Diversity

### 1 Realize diversity in working styles, and productivity enhancement

We aim to achieve the realization of an organization (with diverse working styles and increased productivity) in which every person accepts each other's working style while enhancing productivity.

### 2 Promoting empowerment of women in workplace

We regard promoting the success of women as the beginning of the promotion of diversity, and will continue to undertake this proactively.

### 3 Diversity Promotion Team

We will establish a "Group Diversity Promotion Team" and promote diversity throughout the entire group, in an integrated manner together with management.

# People differ from each other. We believe this makes them great assets.

We have established a Concept Message as a tool to more simply communicate our vision that "each and every employee makes use of his or her diverse strength and helps grow the Group" as described in the Top Management Commitment. In order to raise awareness and actions by more group employees, we set November 2018 as a "Month of Diversity" and held various seminars concerning diversity, which was attended by around 800 people.

# Occupational safety and health

Health and safety are the essential basis for the existence of any company, in protecting the lives and health of their employees. The Tokyo Gas Group is working to reduce risks with a view to eliminating work-related accidents, and to maintain and improve the health of its employees through mental health initiatives and measures to prevent lifestyle-related illnesses. In terms of health management, we work to ensure that 100% of our employees take regular health checkups, and make effective use of early-stage detection of disease outbreaks and external healthcare institutions.



### **External** Evaluation

is appealing in terms of its proactive efforts to encourage and empower women



Granted Kurumin certification

Tokyo Gas was certified by the Ministry of Health, Labour and Welfare (MHLW) as a company that has formulated an action plan, achieved targets and met certain criteria in accordance with the Act on Advancement of Measures to Support Raising the Next Generation of Children.



### Selected as a Health & Productivity Stock

Tokyo Gas was selected as a Health & Productivity Stock, as a company that considers and strategically approaches employee health management from a corporate management perspective



# **Invisible Assets**

# ESG initiatives Environmental, Social, Governance

Tokyo Gas Sustainability Report 2019
 tokyo-gas.disclosure.site/en



### CSR priority issues (materialities) and contributing to the achievement of Sustainable Development Goals (SDGs)

CSR priority i	issues (materialities)	Materiality	
Strategy	Stable supply of energy both in Japan and	<ul> <li>Stable supply of gas and electricity</li> <li>Stable procurement of raw materials</li> </ul>	P25
	overseas	Construction of energy infrastructure in developing countries	P39
	Robust energy platform	<ul> <li>Safety and disaster prevention / readiness</li> <li>Sustainable urban development and comfortable lifestyles</li> </ul>	P25
	Conversion of society overall to a low-carbon society through the supply of energy	<ul> <li>Measures against global warming</li> <li>Promoting recycling of resources</li> <li>Promoting conservation of biodiversity</li> </ul>	P05
		Creating an organization full of energy and vitality	P55
Infrastructure	_	Building good relationships with stakeholders	P31 P52
		Fulfilling our public duty as an energy company	P25
	Governance a	nd compliance	

Under the Basic Policy on CSR to tackle social challenges through our business activities, we seek to maintain the security and safety of people's lives by providing a stable supply of energy, which is the foundation of daily life and industry, and to play our part in building a sustainable society by supplying energy that excels in environmental consideration. As for promoting activities, we make assessment and improvement of targets that have been identified for each materiality, while making clear the relationship between materialities and SDGs to help achieve the SDGs through CSR management.









Leveraging our insights and technologies accumulated in from over 130 years of operations in the energy business, we focus on Sustainable Development Goals (SDGs) 7, 9, 11, and 13 and promote initiatives that contribute to solve social issues by engaging with our stakeholders.

### Social

As a general gas pipeline operator, we provide clean city gas to over 11 million customers via a gas pipeline network of over 60,000 km. We had no supply disruption arising from major accidents in fiscal 2018.



### Further promoting CSR management

Given heightened expectations and requests nowadays to companies to help realize sustainable society, we unified the Environmental Affairs Department and the CSR Room of the Corporate Communications Department and established the Sustainability Promotion Department in April 2019. In addition, we have reorganized the CSR Promotion Committee chaired by an officer in charge to a Sustainability Committee chaired by President, with the aim of further promoting CSR management.



### Governance

We made changes to further increase the proportion of outside members in our Board of Directors and Audit & Supervisory Board by reducing the number of inside members by three in comparison with the previous year (from 10 to 7) in fiscal 2018, and increasing the number of outside members by one (from 6 to 7) in fiscal 2019. Corporate governance > [P41]

Changes to the makeup of our Board of Directors and Audit & Supervisory Board



# Deregulation

# City Gas and Electric Power Businesses

# After Full Deregulation

After the phased and subsequent full deregulation of the electric power retail market in April 2016 and of the retail gas market in April 2017, Japan's energy market has become fully deregulated.



Deregulation has progressed in phases, shifting from large-lot to small-lot sales.



### Electric power service area



All electric power grids across the whole of Japan, from Hokkaido in the northeast to Kyushu in the southwest, are connected by power distribution lines. This infrastructure enables power exchange (lending) across the conventional barriers between individual power companies, and supports the stable supply of electricity and efficient operation of power generation facilities.

Although in Japan electricity is distributed at frequencies of either 50Hz (East Japan) or 60Hz (West Japan) depending on the region, the installation of specialized transformer equipment in Nagano and Shizuoka prefectures has enabled the transformation and mutual exchange (lending) of certain volumes of electric power even between east and west.



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the majority of our raw materials, and have established a supply infrastructure, within the scope of reason, by constructing LNG terminals in proximity to major consumer areas. Because of this history, the development of a nationwide gas pipeline network has not progressed in the same way as the electric power business.

In the Japanese government's gas system reforms, too, experts have pointed out the necessity for developing an overall optimal pipeline network, and considerations are currently underway with regard to this.

# **Financial data**

# 11-Year Consolidated Financial Highlights As of March 31, 2019

	2009.3	2010.3	2011.3	2012.3	
Net Sales (¥ million)	1,660,162	1,415,718	1,535,242	1,754,257	
Operating Profit (¥ million)	65,204	85,229	122,451	77,075	
Operating Profit Margin (%)	3.93	6.02	7.98	4.39	
Ordinary Profit (¥ million)	58,337	83,519	121,548	75,620	
Profit attributable to owners of parent (¥ million)	41,708	53,781	95,467	46,060	
Equity (¥ million)	772,365	813,886	858,920	839,166	
Total Assets (¥ million)	1,764,185	1,840,972	1,829,661	1,863,885	
Interest-bearing Debt (¥ million)	593,230	555,919	584,169	625,830	
Operating Cash Flow (¥ million)	182,791	199,898	244,803	194,565	
Free Cash Flow (¥ million)	36,862	51,712	94,600	48,152	
EBITDA (¥ million)	206,287	231,346	271,788	225,580	
Capital Expenditure (¥ million)	145,929	148,186	150,202	146,413	
Depreciation (¥ million)	141,083	146,117	149,336	148,505	
EPS (Earnings per Share, fully diluted) (¥)	15.37	19.86	35.63	17.70	
BPS (Book Value per Share) (¥)	284.72	301.58	320.70	324.67	
Number of Issued Shares (Common Stock) (thousands of shares)	2,717,571	2,703,761	2,684,193	2,590,715	
Dividend per Share (¥)	8	9	9	9	
DOE (Dividends on Equity) (%)	2.78	3.07	2.88	2.74	
Payout Ratio (%)	51.18	45.32	25.26	50.85	
Total Payout Ratio (%)	63.35	60.11	60.87	61.36	
Current Ratio (%)	118.99	120.93	142.26	156.89	
D/E (Debt-Equity) Ratio (times)	0.77	0.68	0.68	0.75	
Equity Ratio(%)	43.78	44.21	46.94	45.02	
ROE (Return on Equity) (%)	5.41	6.78	11.41	5.42	
ROA (Return on Assets) (%)	2.41	2.98	5.20	2.49	
Total Asset Turnover (times)	0.96	0.79	0.84	0.95	
TEP (¥100 million)	-48	186	640	91	
WACC (%)	3.4	3.2	3.3	3.1	
Number of city gas customers (thousand)	10,513	10,637	10,739	10,855	
Gas Sales Volume (million m <sup>3</sup> )	13,942	13,666	14,745	15,190	
2020 vision basis*	_	_	_	15,833	
Number of electricity retail customers (thousand)	_				
Electric power sales volume (billion kWh)	_	_	_	8.27	
			1	1	

- \* Depreciation includes amortization of long-term prepaid expenses. \* The financial information contained in this integrated report is based on annual securities report. However, it has not been audited by certified public accountants.
- \* The Company carried out a share consolidation at a ratio of 5 common shares to 1 on October 1, 2017.

The dividend per share of 55.0 yen is calculated on the post-consolidation basis (the interim dividend of 5.50 yen per share before the share consolidation and the year-end dividend of 27.50 yen per share after the share consolidation).

Notes: \* 2020 Vision basis ... The figures represent baseline values for sales volume targets set forth in our management vision, Challenge 2020 Vision. They are obtained by adding volume for in-house use and LNG sales volume (excluding volume for Nijio) to consolidated gas sales volume.



2013.3	2014.3	2015.3	2016.3	2017.3	2018.3	2019.3
1,915,639	2,112,117	2,292,548	1,884,656	1,587,085	1,777,344	1,962,308
145,633	166,044	171,753	192,008	58,365	116,302	93,704
7.60	7.86	7.49	10.19	3.68	6.54	4.78
147,453	159,613	168,169	188,809	55,688	111,546	89,386
101,678	108,451	95,828	111,936	53,134	74,987	84,555
927,634	1,011,787	1,069,515	1,100,271	1,101,498	1,136,027	1,159,055
1,992,403	2,176,816	2,257,662	2,251,518	2,230,269	2,334,316	2,428,149
642,550	713,823	730,739	715,769	713,596	724,940	803,216
240,448	248,831	237,680	257,122	217,439	240,328	246,436
56,651	827	13,084	25,089	14,081	31,583	22,655
284,403	306,424	313,605	337,194	222,670	281,643	255,585
183,797	248,004	224,596	232,033	203,358	208,745	223,781
138,770	140,380	141,852	145,187	164,305	165,342	161,881
39.52	43.10	39.15	46.68	23.02	164.12*	187.60
360.70	402.91	438.28	460.35	479.74	2,487.58*	2,575.99
2,577,919	2,517,551	2,446,778	2,396,778	2,302,856	458,073*	451,356
10	10	10	11	11	55*	60
2.91	2.59	2.34	2.42	2.29	2.25	2.35
25.30	23.20	25.55	23.57	47.79	33.51	31.98
60.70	60.00	60.80	60.10	60.71	60.17	60.31
162.16	156.67	150.63	155.48	142.69	135.59	156.01
0.69	0.71	0.68	0.65	0.65	0.64	0.69
46.56	46.48	47.37	48.87	49.39	48.67	47.73
11.51	11.18	9.21	10.32	4.83	6.70	7.37
5.27	5.20	4.32	4.96	2.37	3.29	3.55
0.99	1.01	1.03	0.84	0.71	0.78	0.82
598	507	434	676	-62	244	68
3.2	3.2	3.6	3.4	3.0	3.1	3.0
10,978	11,111	11,263	11,398	11,536	11,678	11,818
15,390	14,735	15,541	15,436	15,720	15,568	15,198
16,741	17,225	18,360	18,587	19,053	19,052	18,397
	_		_	667	1,130	1,774
9.98	9.71	10.61	10.96	12.65	14.66	15.48

#### Computations

Operating Cash Flow = Profit attributable to owners of parent + Amortization of Long-term Prepaid Expenses + Depreciation

Free Cash Flow = Profit attributable to owners of parent + 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) = Profit after taxes and before interest payments - Cost of capital (invested capital x WACC)

WACC calculation data (fiscal 2018 actual)

Interest-bearing debt cost: Real interest rate of 0.85% (after tax)

- Cost of shareholders' equity
  Risk-free rate: 10-year JGB yield of 0.06%
  Risk premium: 5.5%, Beta coefficient of 0.75

# **Financial data**











Electric power sales volume





# For the next 50 years LNG50th CKYO GAS INTEGRATED REPORT 2019

# **Consolidated Balance Sheet**

2018.3.31         2019.3.31           Assets			(¥ million)
Non-current assets         Property, plant and equipment           Production facilities         236,334         234,433           Distribution facilities         560,216         548,529           Service and maintenance facilities         506,221         548,529           Service and maintenance facilities         316         316           Construction in progress         157,913         145,160           Total property, plant and equipment         1,413,246         1,425,634           Intargible assets         92,167         119,052           Total intangible assets         92,167         119,052           Total intangible assets         93,422         120,359           Investment securities         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit asset         1,851,165         1,901,403           Current assets         1,851,165         1,901,403           Current assets         126,331         93,092           Notes and acounts receivable - trade         216,234         63,745           Current assets         126,341         12,730           Raw asterials and supplies         45,454         63,735           Other current assets         2		2018.3.31	2019.3.31
Property, plant and equipment         234,433           Production facilities         236,334         234,433           Distribution facilities         560,216         548,529           Service and maintenance facilities         52,244         49,586           Other facilities         316         316           Inactive facilities         316         316           Construction in progress         157,913         145,160           Total property, plant and equipment         1,413,246         1,425,634           Intrangible assets         92,167         119,052           Total intangible assets         92,167         119,052           Total intangible assets         12,54         1,306           Other intagible assets         12,337         92,929           Autore intermet benefit asset         17         24           Deferred tax assets         36,693         47,950           Allowance for doubtil accounts         (378)         (382)           Total non-current assets         1,851,165         1,901,403           Current assets         128,331         93,092           Nets and accounts receivable - trade         216,234         226,225           Lass receivables and ininshed goods         2,494         2,	Assets		
Production facilities         236,334         234,433           Distribution facilities         560,216         548,529           Service and maintenance facilities         316         316           Construction in progress         157,913         145,160           Total property, plant and equipment         1,413,246         1,425,634           Intangible assets         92,167         119,052           Total intangible assets         93,379         225,212           Investments and other assets         117         24           Investment securities         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         126,234         266,225           Lease receivables and investment assets         24,447         2,730           Raw materials and supplies         145,454         63,735           Other oursets         126,331         93,092           Notes and accounts counts			
Distribution facilities         560,216         548,529           Service and maintenance facilities         52,244         49,586           Other facilities         316         316           Construction in progress         157,913         1145,604           Intangible assets         92,167         119,052           Coodwill         1,254         1,306           Other intangible assets         93,422         120,359           Investment securities         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit asset         1,254         1,90,163           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         126,331         93,092           Notes and accounts receivable - trade         216,234         225,225           Lease receivables and investment assets         2,186         19,647           Securities         128,331         93,092           Notes and accounts receivable - trade         216,234         226,225           Lease receivables and investment assets         5,6897         71,306           Securities         12,417<		236 334	234 433
Other facilities         406,221         447,608           Inactive facilities         316         316           Construction in progress         157,913         145,160           Total property, plant and equipment         1,413,246         1,425,634           Intangible assets         92,167         119,052           Total intangible assets         93,422         120,359           Investment securities         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit asset         36,693         47,950           Allowance for doubtul accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         248,4497         335,409           Total non-current assets         1,851,165         1,901,403           Current assets         2,831         93,092           Nets and accounts receivable - trade         216,234         265,225           Lasse receivables and investment assets         2,484         2,194           Work in process         12,471         12,730           Raw materials and supplies         45,454         63,755           Total current assets         2,434,49			
Inactive facilities         316         316           Construction in progress         157,913         145,160           Intangible assets         1,254         1,306           Goodwill         1,254         1,306           Other intangible assets         92,167         119,052           Total intangible assets         93,422         120,359           Investments and other assets         17         24           Deferred tax assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         128,31         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         2,417         2,730           Rew materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         2,334,316         2,428,149           Uabore current liabilities         10,393			
Construction in progress         157,913         145,160           Total property, plant and equipment         1,413,246         1,425,634           Intangible assets         92,167         119,052           Total intangible assets         92,167         119,052           Investments and other assets         93,422         120,359           Investments and other assets         1,254         1,306           Investment securities         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit asset         36,633         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         1,851,165         1,901,403           Current assets         128,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and inshed goods         2,494         2,194           Work in process         12,471         12,730           Raw materials and supplies         45,454         63,755           Total current assets         2,334,316         2,428,149           Uabilitites	Other facilities	406,221	447,608
Total property, plant and equipment         1,413,246         1,425,634           Intangible assets         1,254         1,306           Ocdwill         1,254         1,306           Other intangible assets         93,422         120,359           Investments and other assets         239,379         225,212           Long-term loans receivable         279,229         40,158           Retirement benefit asset         17         24           Deferred tax assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         12,737         12,730           Raw materials and supplies         45,454         63,735           Other current assets         2,849         2,149           Work in process         12,417         12,730           Raw materials and supplies         484,150         526,745           Total current assets         2,334,316         2,428,			
Intrangible assets         1,254         1,306           Other intangible assets         92,167         119,052           Total intangible assets         93,422         120,359           Investments and other assets         17         24           Long-term loans receivable         27,929         40,158           Peterred tax assets         17         24           Deferred tax assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         168,1165         1,901,403           Current assets         15         -           Merchandise and finished goods         1,447         12,331           Passets         128,331         93,092           Nets and accounts receivable - trade         216,234         265,225           Lass receivables and investment assets         2,188         19,647           Securities         128,331         93,092           Merchandise and finished goods         2,444         2,194           Work in process         12,417         12,730           Rati materials and supplies         45,454         63,735			
Go <sup>-</sup> dwill         1.254         1.306           Other intangible assets         92,167         119,052           Total intangible assets         93,422         120,359           Investment sand other assets         27,929         245,212           Long-term loans receivable         27,929         240,158           Retirement benefit asset         17         24           Deferred tax assets         40,656         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         22,188         19,647           Securities         15         -           Merchandise and finished goods         2,494         2,194           Work in process         12,471         12,730           Raw materials and supplies         45,454         63,735           Ottal current assets         2,834,316         2,428,149           Uabilities         10,898         17,517           Raw materials and supplies         45,454         63,735           Ottal current assets         2,834,316         2,428,149	Total property, plant and equipment	1,413,246	1,425,634
Other intangible assets         92,167         119,052           Total intangible assets         93,422         120,359           Investment securities         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit asset         17         24           Deferred tax assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         128,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         2,188         19,647           Securities         15            Merchandise and finished goods         2,444         2,194           Work in process         12,417         12,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         2,334,316         2,2428,149           Total current assets         2,334,316         2,428,149           Total assets         2,334,316	•	4 05 4	1 000
Total intangible assets         93,422         120,359           Investments and other assets         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit asset         17         24           Deferred tax assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         28,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         1,2417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         2,334,316         2,428,149           Iabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Total current assets         2,34,316         2,428,149           Labilities         1,9394         14,057           Provision for as payable         2,949,98         334,998           Long-term liabilities         1,		,	
Investments and other assets         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit asset         17         24           Deferred tax assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total investments and other assets         344,497         335,409           Current assets         1,851,165         1,901,403           Current assets         2,831         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15         -           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         2,334,316         2,428,149           Liabilities         10,898         17,517           Total current liabilities         10,898         17,517           Provision for safety measures         3,107	· · · · · · · · · · · · · · · · · · ·		
Investment securities         239,379         225,212           Long-term loans receivable         27,929         40,158           Retirement benefit asset         17         24           Deferred tax assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         22,188         19,647           Securities         15            Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         2,334,316         2,428,149           Labilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for safety measures         3,115         1,776           Provision for safety measures         3,115         1,776           Provision for paputade certifficates         835         1,450 </td <td></td> <td>55,422</td> <td>120,009</td>		55,422	120,009
Long-term loans receivable         27,929         40,158           Retirement benefit asset         17         24           Deferred tax assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         128,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15         -           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         2,834,316         2,428,149           Liabilities         0.898         17,517           Retirement benefit liability         73,161         75,262           Provision for gas holder repairs         3,107         2,990           Long-term loans payable         284,943         14,057           Provision for gas holder repairs         3,107 <td></td> <td>239 379</td> <td>225 212</td>		239 379	225 212
Deferred tax assets         40,856         42,425           Other investments and other assets         36,693         47,950           Allowance for doubtful accounts         (378)         (362)           Total investments and other assets         344,497         335,409           Total non-current assets         1,851,165         1,901,403           Current assets         128,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15         -         -           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         77,306           Allowance for doubtful accounts         (884)         (1,186)           Total assets         2,334,316         2,428,149           Labilities         10,898         17,517           Raw materials and supplies         358,680         394,542           Deferred tax liabilities         10,898         17,517           Retirement benefit liability <td></td> <td></td> <td></td>			
Other investments and other assets         36,693         47,950           Induxance for doubtful accounts         (378)         (362)           Total non-current assets         1,851,165         1,901,403           Current assets         128,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15            Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         2,6897         71,306           Allowance for doubtful accounts         (844)         (1,186)           Total current liabilities         10,898         17,517           Total assets         2,334,316         2,428,149           Labilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for apalica warranties         9,984         14,057           Provision for applicance warranties         9,984         14,057           Provision for applicance warranties <td></td> <td></td> <td></td>			
Allowance for doubtful accounts         (378)         (362)           Total investments and other assets         344,497         335,409           Total non-current assets         1,851,165         1,901,403           Current assets         128,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15         —           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total assets         2,334,316         2,428,149           Liabilities         10,898         17,517           Retirement banefit liability         73,161         75,262           Provision for gasholder repairs         3,107         2,990           Provision for galance warranties         9,984         14,057           Provision for poliance warranties         9,984         14,057           Provision for poliance waranties <td></td> <td>,</td> <td></td>		,	
Total investments and other assets         344,497         335,409           Total non-current assets         1,851,165         1,901,403           Current assets         216,234         265,225           Cash and deposits         128,331         93,092           Notes and accounts receivable and investment assets         22,188         19,647           Securities         15         -           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         2,334,316         2,428,149           Liabilities         10,898         17,517           Test assets         2,317         73,611         75,262           Provision for safety measures         3,115         1,776           Provision for safety measures         3,115         1,776           Provision for point card certificates         835         1,450           Asset retirement obligations         13,200         11,940           Other non current liabilities			
Total non-current assets         1,851,165         1,901,403           Current assets         28,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15            Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         2,334,316         2,428,149           Liabilities         10,898         17,517           Total current liabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for gas holder repairs         3,107         2,990           Provision for safety measures         3,115         1,776           Provision for point card certificates         835         1,450           Asset retirement obligations         13,200         11,940           Other non current liabilities			
Current assets         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15         -           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         2,334,316         2,428,149           Liabilities         0,898         17,517           Non-current liabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for agatory measures         3,115         1,776           Provision for applance warranties         9,984         14,057           Provision for applance warranties         9,984			
Cash and deposits         128,331         93,092           Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15         -           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1186)           Total current assets         2,334,316         2,428,149           Liabilities         0         334,998         334,998           Long-term loans payable         294,998         334,998           Long-term loans payable         294,998         334,998           Deferred tax liabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for agafay measures         3,115         1,776           Provision for appliance warranties         9,984         14,057           Provision for appliance warranties         9,984         14,057           Provision for appliance		1,851,165	1,901,403
Notes and accounts receivable - trade         216,234         265,225           Lease receivables and investment assets         22,188         19,647           Securities         15         -           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         283,150         526,745           Total current assets         294,998         334,998           Long-term loans payable         294,988         334,998           Long-term loans payable         356,680         394,542           Deferred tax liabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for safety measures         3,115         1,776           Provision for safety measures         3,115         1,776           Provision for point card certificates         835         1,450           Asset retirement obligations         13,200         11,940           Other non current liabilities <td></td> <td>108 331</td> <td>03 002</td>		108 331	03 002
Lease receivables and investment assets         22,188         19,647           Securities         15         -           Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubful accounts         (884)         (1,186)           Total current assets         2,334,316         2,428,149           Liabilities         0,884         17,517           Bonds payable         294,998         334,998           Long-term loans payable         358,680         394,542           Deferred tax liabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for ags holder repairs         3,107         2,990           Provision for appliance warranties         9,984         14,057           Provision for appliance warranties         9,984         14,057           Provision for appliance yable - trade         80,819         69,605           Short-term loans payable         7,800         5,133           Income taxes payable         30,237	1		
Securities         15            Merchandise and finished goods         2,494         2,194           Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         483,150         526,745           Total assets         2,334,316         2,428,149           Liabilities          8           Non-current liabilities         10,898         17,517           Bonds payable         294,998         334,998           Long-term loans payable         398,017,517           Retirement benefil liability         73,161         7,5262           Provision for gas holder repairs         3,107         2,990           Provision for safety measures         3,115         1,776           Provision for point card certificates         835         1,450           Asset retirement obligations         13,200         11,940           Other non current liabilities         61,572         64,640           Total non-current liabilities         15,566         Notes and accounts payable <td< td=""><td></td><td>,</td><td></td></td<>		,	
Work in process         12,417         12,730           Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         2,334,316         2,428,149           Liabilities         0,898         334,998           Non-current liabilities         10,898         17,517           Retirement bane payable         294,998         334,998           Long-term loans payable         358,680         394,542           Deferred tax liabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for gas holder repairs         3,107         2,990           Provision for safety measures         3,115         1,776           Provision for point card certificates         835         1,450           Asset retirement obligations         13,200         11,940           Other non current liabilities         58,094         51,566           Notes and accounts payable         7,800         5,133           Income taxes payable         30,237         31,283           Other current liabilities         1,78,	Securities		
Raw materials and supplies         45,454         63,735           Other current assets         56,897         71,306           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         483,150         526,745           Total assets         2,334,316         2,428,149           Liabilities         2,334,316         2,428,149           Liabilities         10,898         17,517           Bonds payable         294,998         334,998           Long-tern loans payable         358,660         394,542           Deferred tax liabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for safety measures         3,115         1,776           Provision for safety measures         3,152         1,450           Asset retirement obligations         13,200         11,940           Other non current liabilities         58,094         51,566           Nortes and accounts payable - trade         80,819         69,605           Short-term loans payable         7,800         5,133           Income taxes payable         30,237         31,283           Other current liabilities         1,78,582 <td< td=""><td></td><td>,</td><td></td></td<>		,	
Other current assets         56,897 (884)         71,306 (1,186)           Allowance for doubtful accounts         (884)         (1,186)           Total current assets         483,150         526,745           Total assets         2,334,316         2,428,149           Liabilities         2,334,316         2,428,149           Liabilities         10,898         17,517           Bonds payable         358,680         394,542           Deferred tax liabilities         10,898         17,517           Retirement benefit liability         73,161         75,262           Provision for gas holder repairs         3,107         2,990           Provision for paliance warranties         9,984         14,057           Provision for point card certificates         835         1,450           Asset retirement obligations         13,200         11,940           Other non current liabilities         58,094         51,566           Notes and accounts payable         7,800         5,133           Income taxes payable         70,237         31,283           Other current liabilities         1,185,882         1,256,803           Net assets         1,185,882         1,256,803           Shareholders' equity         1,076,736 <td></td> <td></td> <td></td>			
Allowance for doubtful accounts(884)(1,186)Total current assets483,150526,745Total assets2,334,3162,428,149Liabilities294,998334,998Long-term loans payable294,998334,998Long-term loans payable10,89817,517Retirement benefit liability73,16175,262Provision for gas holder repairs3,1072,990Provision for safety measures3,1151,776Provision for safety measures3,1151,776Provision for point card certificates8351,450Asset retirement obligations13,20011,940Other non current liabilities61,57264,640Total non-current liabilities58,09451,566Current liabilities7,8005,133Income taxes payable7,8005,133Income taxes payable7,8005,133Income taxes payable30,23731,283Other current liabilities1,185,8821,256,803Net assets1,185,8821,256,803Shareholders' equity2,636,35976,550Treasury shares(3,642)(4,111)Total shareholders' equity1,076,7361,115,918Accumulated other comprehensive income30,28222,756Valuation difference on available- for-sale securities30,28222,756Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment33,20624,770Remeasuremen			
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LiabilitiesNon-current liabilitiesBonds payable294,998Sonds payable358,680Deferred tax liabilities10,898T,517Retirement benefit liability73,16175,262Provision for gas holder repairs3,1072,990Provision for safety measures3,1151,776Provision for appliance warranties9,98414,057Provision for point card certificates8351,450Asset retirement obligations13,20011,940Other non current liabilities829,554919,176Current portion of non-current liabilitiesCurrent portion of non-current liabilitiesCurrent portion of non-current liabilitiesCurrent portion of non-current liabilitiesCurrent liabilities11,940Other current liabilities12,830Other current liabilities13,20114,841141,844<	Total assets	2,334,316	2,428,149
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Current portion of non-current liabilities         58,094         51,566           Notes and accounts payable - trade         80,819         69,605           Short-term loans payable         7,800         5,133           Income taxes payable         30,237         31,283           Other current liabilities         179,376         180,037           Total current liabilities         179,376         180,037           Total current liabilities         1,185,882         1,256,803           Net assets         1,185,882         1,256,803           Shareholders' equity         1,898         1,634           Capital stock         141,844         141,844           Capital stock         141,844         1,634           Retained earnings         936,635         976,550           Treasury shares         (3,642)         (4,111)           Total shareholders' equity         1,076,736         1,115,918           Accumulated other comprehensive income         Valuation difference on available-         30,282         22,756           Deferred gains or losses on hedges         (251)         1,604         Foreign currency translation adjustment         33,206         24,770           Remeasurements of defined benefit plans         (3,945)         (5,994)		p.	,
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Income taxes payable30,23731,283Other current liabilities179,376180,037Total current liabilities356,328337,626Total iabilities1,185,8821,256,803Net assetsShareholders' equityCapital stock141,844Capital stock141,844Capital stock141,848Capital stock1,898Retained earnings936,635976,650976,650Treasury shares(3,642)Valuation difference on available- for-sale securities30,28222,75624,770Remeasurements of defined benefit plans(3,945)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,405Total net assets1,148,4331,171,345			
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Net assetsShareholders' equity Capital stock141,844 1,898 1,634Capital stock141,844 1,634Capital surplus1,898 1,634Retained earnings936,635 976,550Treasury shares(3,642)(4,111)Total shareholders' equity1,076,7361,115,918Accumulated other comprehensive income Valuation difference on available- for-sale securities30,282 (251)Deferred gains or losses on hedges(251) (251)Total accumulated other comprehensive income59,291 (43,137Non-controlling interests12,405Total net assets1,148,4331,171,345			
Shareholders' equity141,844Capital stock141,844Capital surplus1,898Retained earnings936,635976,550Treasury shares(3,642)(4,111)Total shareholders' equity1,076,7361,115,918Accumulated other comprehensive incomeValuation difference on available- for-sale securities30,28222,756Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment33,20624,770Remeasurements of defined benefit plans(3,945)(5,994)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345		1,100,002	1,200,000
Capital stock141,844141,844Capital surplus1,8981,634Retained earnings936,635976,550Treasury shares(3,642)(4,111)Total shareholders' equity1,076,7361,115,918Accumulated other comprehensive income Valuation difference on available- for-sale securities30,28222,756Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment33,20624,770Remeasurements of defined benefit plans(3,945)(5,994)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345			
Capital surplus1,8981,634Retained earnings936,635976,550Treasury shares(3,642)(4,111)Total shareholders' equity1,076,7361,115,918Accumulated other comprehensive incomeValuation difference on available- for-sale securities30,28222,756Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment33,20624,770Remeasurements of defined benefit plans(3,945)(5,994)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345		1/1 8//	1/1 8//
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Total shareholders' equity1,076,7361,115,918Accumulated other comprehensive income Valuation difference on available- for-sale securities30,28222,756Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment Remeasurements of defined benefit plans33,20624,770Romeasurements of defined benefit plans(3,945)(5,994)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345	-	936,635	
Accumulated other comprehensive income Valuation difference on available- for-sale securities30,28222,756Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment Remeasurements of defined benefit plans33,20624,770Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345	Treasury shares	(3,642)	(4,111)
Valuation difference on available- for-sale securities30,28222,756Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment33,20624,770Remeasurements of defined benefit plans(3,945)(5,994)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345	Total shareholders' equity	1,076,736	1,115,918
for-sale securities30,28222,756Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment33,20624,770Remeasurements of defined benefit plans(3,945)(5,994)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345			
Deferred gains or losses on hedges(251)1,604Foreign currency translation adjustment33,20624,770Remeasurements of defined benefit plans(3,945)(5,994)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345		30,282	22,756
Foreign currency translation adjustment Remeasurements of defined benefit plans33,206 (3,945)24,770 (5,994)Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345		(251)	1,604
Total accumulated other comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345	Foreign currency translation adjustment	33,206	24,770
comprehensive income59,29143,137Non-controlling interests12,40512,289Total net assets1,148,4331,171,345	Remeasurements of defined benefit plans	(3,945)	(5,994)
Non-controlling interests12,40512,289Total net assets1,148,4331,171,345		59,291	43,137
Total net assets         1,148,433         1,171,345	· · · · · · · · · · · · · · · · · · ·		
Total liabilities and net assets2,334,3162,428,149	Total net assets	1,148,433	1,171,345
	Total liabilities and net assets	2,334,316	2,428,149

# **Consolidated Statement of Income**

		(¥ million)
	2017.4.1-2018.3.31	2018.4.1-2019.3.31
Net sales	1,777,344	1,962,308
Cost of sales	1,203,991	1,407,345
Gross profit	573,353	554,963
Selling, general and administrative expenses		
Supply and sales expenses	392,680	392,466
General and administrative expenses	64,370	68,791
Total selling, general and administrative expenses	457,050	461,258
Operating profit	116,302	93,704
Non-operating income		
Interest income	1,158	1,612
Dividend income	2,967	2,812
Rent income	1,637	1,668
Share of profit of entities accounted for using equity method	2,493	2,794
Miscellaneous income	4,800	4,883
Total non-operating income	13,057	13,771
Non-operating expenses		
Interest expenses	11,619	11,091
Miscellaneous expenses	6,193	6,997
Total non-operating expenses	17,813	18,089
Ordinary profit	111,546	89,386
Extraordinary income		
Gain on sales of non-current assets	3,403	29,306
Gain on sales of investment securities	3,049	6,420
Total extraordinary income	6,452	35,727
Extraordinary losses		
Impairment loss	3,213	-
Loss on valuation of investment securities	—	7,865
Total extraordinary losses	3,213	7,865
Profit before income taxes	114,784	117,248
Income taxes - current	31,527	26,113
Income taxes - deferred	7,957	6,823
Total income taxes	39,484	32,936
Profit	75,300	84,311
Profit (loss) attributable to non- controlling interests	312	(244)
Profit attributable to owners of parent	74,987	84,555

### Consolidated Statement of Comprehensive Income

		(¥ million)
	2017.4.1-2018.3.31	2018.4.1-2019.3.31
Profit before minority interests	75,300	84,311
Other comprehensive income		
Valuation difference on available-for- sale securities	3,145	(7,528)
Deferred gains or losses on hedges	666	221
Foreign currency translation adjustment	(3,537)	(6,735)
Remeasurements of defined benefit plans, net of tax	(8,784)	(2,073)
Share of other comprehensive income of entities accounted for using equity method	407	(78)
Total other comprehensive income	(8,101)	(16,193)
Comprehensive income	67,198	68,118
Breakdown of comprehensive income Comprehensive income attributable to owners of parent	66,856	68,401
Comprehensive income attributable to non-controlling interests	341	(283)

# **Financial data**

### **Consolidated Statement of Cash Flows**

	2017.4.1-	(¥ million
	2018.3.31	2018.4.1- 2019.3.31
Cash flows from operating activities		
Profit before income taxes	114,784	117,248
Depreciation	161,093	157,574
Amortization of long-term prepaid expenses	4,248	4,306
Loss on retirement of property, plant	1,845	2,248
and equipment		
Loss (gain) on sales of non-current assets	(3,397)	(29,283)
Loss (gain) on sales of investment securities	(3,042)	(6,385)
Loss (gain) on valuation of investment securities	435	7,865
Increase (decrease) in retirement benefit liability	(12,461)	1,039
Increase (decrease) in reserve for safety measures	(1,596)	(1,338)
Increase (decrease) in reserve for fixtures assurance	(314)	4,073
Interest and dividend income	(4,125)	(4,425)
Interest expenses	11,619	11,091
Share of loss (profit) of entities accounted for using equity method	(2,493)	(2,794)
Decrease (increase) in notes and accounts receivable - trade	(20,602)	(46,191)
Decrease (increase) in inventories	(4,948)	(18,336)
Increase (decrease) in notes and accounts payable - trade	(631)	(5,321)
Increase (decrease) in accrued consumption taxes	3,000	(3,002)
Decrease (increase) in accounts receivable - other	1,265	(2,541)
Other, net	36,578	(16,526)
Subtotal	281,258	169,300
Interest and dividend income received	12,295	9,387
Interest expenses paid	(11,502)	(10,809)
Income taxes paid	(22,312)	(26,571)
Net cash provided by (used in) operating activities	259,738	141,306
Cash flows from investing activities	200,700	
Purchase of investment securities	(47,898)	(17,603)
Proceeds from sales and redemption of investment securities	5,021	12,082
Purchase of property, plant and equipment	(177,671)	(168,144)
Purchase of intangible assets		(39,491)
Purchase of long-term prepaid expenses	(27,638)	
Proceeds from sale of non-current assets	(1,653) 3,799	(8,561) 25,050
Purchase of shares of subsidiaries resulting in	3,799	25,050
change in scope of consolidation Proceeds from sales of shares of subsidiaries	-	(1,054)
resulting in change in scope of consolidation	99	1,768
Payments of long-term loans receivable Collection of long-term loans receivable	(3,101) 2,801	(12,238) 4,074
Net decrease (increase) in short-term	(580)	3,686
loans receivable Other, net	(340)	(3,030)
Net cash provided by (used in) investing activities	(247,162)	(203,462)
Cash flows from financing activities	(211,102)	
Net increase (decrease) in short-term loans payable	(2,645)	(1,466)
Net increase (decrease) in commercial papers	-	10,000
Repayments of lease obligations	(1,526)	(1,613)
Proceeds from long-term loans payable	60,471	59,354
Repayments of long-term loans payable	(62,065)	(23,726)
Proceeds from issuance of bonds	20,000	70,000
Redemption of bonds	-	(40,000)
Purchase of treasury shares	(7,082)	(20,051)
Cash dividends paid Other, net	(25,187) 1,385	(24,936) 68
Net cash provided by (used in) financing activities	(16,651)	27,628
Effect of exchange rate change on cash and cash equivalents	(220)	(710)
Net increase (decrease) in cash and cash	(4,294)	(35,238)
equivalents ` ´ ´ ´ Cash and cash equivalents at beginning of period	132,566	128,271

# 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

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





# Our Potential Energy demand concentration in the Kanto Region

We are extending our pipelines across the Kanto region, our market area, to meet the huge potential demand for natural gas mainly from industrial districts where many plants using heavy oil are located.





Financial and Industry Data (EXCEL Spreadsheet Data Available) **Investors' Guide** www.tokyo-gas.co.jp/IR/english/library/invguid\_e.html

Quarterly Financial Results **Earnings Announcements** www.tokyo-gas.co.jp/IR/english/event/earn\_e.html





**Consolidated Financial Results Bulletin** www.tokyo-gas.co.jp/IR/english/library/earn\_e.html

Details of The Tokyo Gas Group FY2018-2020 Management Plan (GPS2020) Tokyo Gas Group - Initiatives for Energy and for the Future (Released in October 2017) www.tokyo-gas.co.jp/Press\_e/20171005-02e.pdf





Details of Corporate Governance **Corporate Governance Report** www.tokyo-gas.co.jp/IR/english/gvnnc/index\_e.html

Sustainability activities **Tokyo Gas Group** Sustainability Report 2019 tokyo-gas.disclosure.site/en



Supporting you Always and bettering every day.



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