



Osaka Gas Group is now Daigas Group

2019 ANNUAL REPORT

Osaka Gas Group is now Daigas Group
Challenges in New Business Areas



Daigas Group Management Principle

The Daigas Group Management Principle consists of What the Daigas Group Aims To Be, the Daigas Group Declaration and our Corporate Motto. The Daigas Group carries out its business activities based on the Daigas Group Management Principle.

What the Daigas Group Aims To Be

Daigas Group powers continuous advancement in consumer and business life

Daigas Group Declaration

Daigas Group is creating four values

The Daigas Group is committed to creating value primarily for customers, as well as for society, shareholders, and employees.

Corporate Motto

Service First

Editorial Policy

In Annual Report 2019, we pay particular attention to non-financial information in order to present how assets accumulated to date will lead to future value creation and realize sustainable growth to our stakeholders, which include shareholders and investors. We will continue to pursue further improvement of its content.

Forward-Looking Statements

These materials include forecasts on future performance, plans, and strategies, which are based on the judgment of the Group upon currently available information. Please note that actual financial results may differ from forecasts due to various factors. Factors that can affect actual financial results include economic trends in Japan, sharp fluctuations in exchange rates and crude oil prices, and extraordinary weather conditions.

Scope of This Report

Osaka Gas Co., Ltd. and its group companies

Period Covered

April 1, 2018, to March 31, 2019
*Matters on other periods are partially included.

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Inclusion in SRI Indices

Osaka Gas was included in the following socially responsible investment (SRI) indices and an investment universe (candidates for inclusion in indices) as of June 2019.

Dow Jones Sustainability Indexes



FTSE4Good Index Series



ECPI world ESG Equity



MSCI ESG Indices



Ethibel Excellence register



Morningstar Socially Responsible Investment Index



MSCI Japan ESG Select Leaders Index



MSCI Japan Empowering Women Index



FTSE Blossom Japan Index



SNAM Sustainability Index



Our Commitment



Chairman
Hiroshi Ozaki

President
Takehiro Honjo

Our Commitment

To be an innovative energy and service company
that continues to be the first choice of customers and
achieve sustainable growth

To maximize value for all stakeholders

We are delighted to extend our warmest greetings to all stakeholders as we issue this Annual Report 2019.

It currently continues to be difficult to foresee the future business environment due to increasingly volatile overseas situations, unstable economic conditions, and continued competition in the gas and electricity business in Japan. In addition, our business environment is drastically changing more than ever as a result of factors including frequently occurring large-scale disasters in recent years, intensifying low-carbonization and decarbonization movement reflecting heightened awareness of climate change risks, advancement in digitalization, and diversification of customers' sense of values.

Under this severe business environment, however, we seek to pursue sustainable growth, and we have been making steady efforts to realize the vision of "being an innovative energy & service company that continues to be the first choice of customers," which is what we aim to be, as we formulated in the Long-term Management Vision and the Medium-term Management Plan "Going Forward, Beyond Borders" announced in March 2017.

Through our efforts so far, we have made progress in our domestic and overseas businesses operations toward realizing what we aim to be. Although the environment surrounding the Daigas Group is expected to continue to change drastically, we will further accelerate efforts while flexibly responding to changes in the business environment during the fiscal year ending March 31, 2020, which is the third year of the Medium-term Management Plan.

Furthermore, we will focus on execution of ESG (Environment, Society and Governance) -conscious management for enhancement of customers' lives and businesses, which will create value for customers and lead to the creation of value for society, value for shareholders, and value for employees. We are committed to sustainably generating these four types of value for all stakeholders of the Daigas Group.

Thank you for your continued support and encouragement.

September 2019

Chairman



Hiroshi Ozaki

President



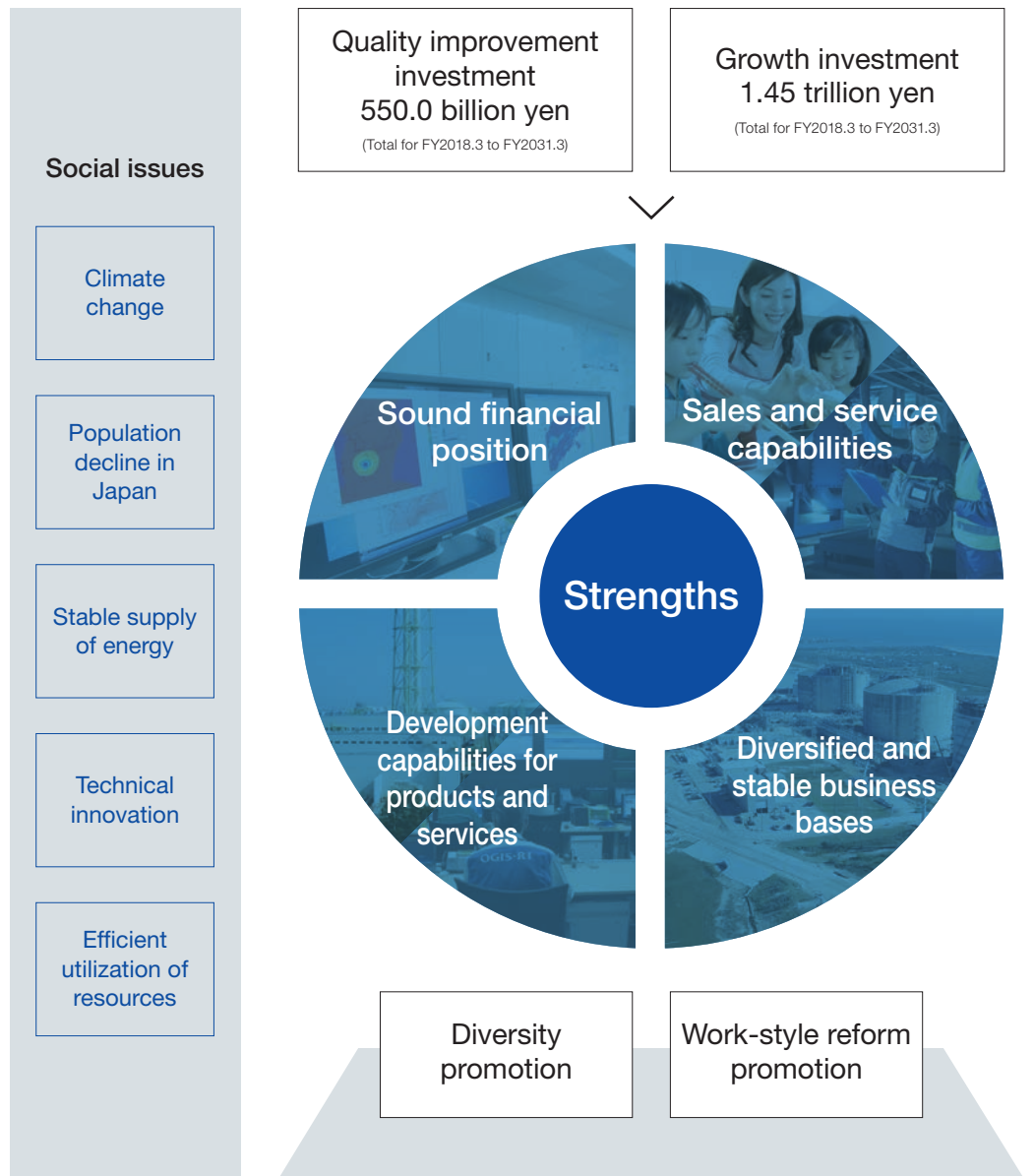
Takehiro Honjo

Value Creation Model

Dynamic and Innovative,
Genuine and Studious

What the
Daigas Group
Aims To Be

Daigas Group
powers
continuous
advancement in
consumer and
business life



Go beyond borders

Go beyond customer expectations

Always aim to provide services that go beyond customer expectations

Go beyond business boundaries

Expand business domains to contribute to the advancement of society, communities, and customers

Business domains

		
Domestic energy	International energy	LBS
P.20	P.28	P.32
1 Gas manufacturing and sales*	4 International upstream and trading	6 Real estate
2 Gas distribution	5 International middle and downstream	7 Materials
3 Electric power generation and sales		8 IT
9 New business fields and others		

* Includes equipment sales, service sales, LNG sales, etc.

Go beyond corporate boundaries

Actively promote alliances and M&A and broadly deploy businesses in Japan and overseas

Innovative energy and service provider



Creation of value for customers

Continuously meet customer expectations by creating services in diversified fields that contribute to higher levels of customer comfort, convenience, and security

Creation of value for society

Endeavor to ensure fairness and transparency in business activities and contribute to sustainable development of society and improvement of the global environment

Creation of value for shareholders

Based on a sound financial position, sustain long-term and stable growth and maximize corporate value

Creation of value for employees

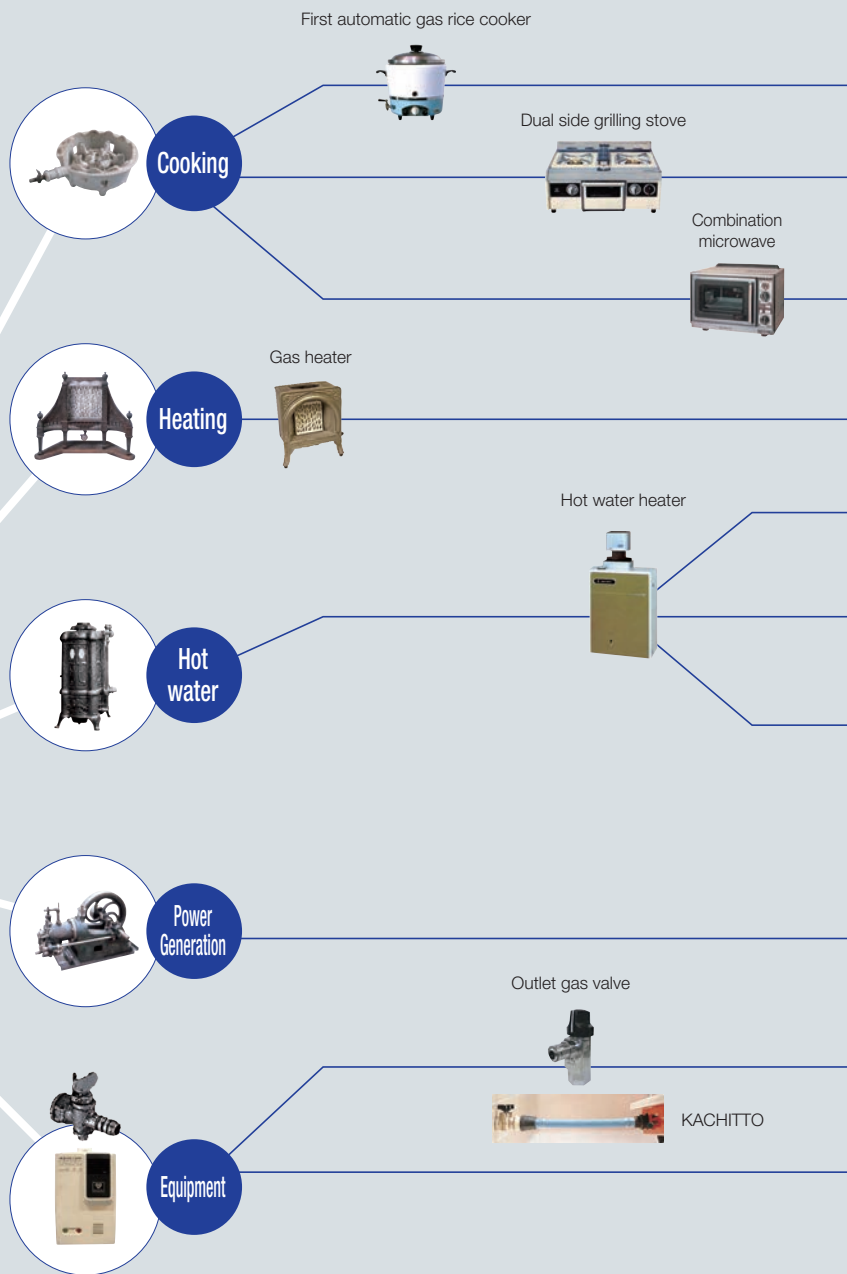
Respect employees' individuality and support them so that they can carry out work with a sense of purpose and grow as individuals

A Path of Growth

Overcoming Difficulties with a Bold Spirit of Promoting New Initiatives

The Daigas Group's gas business began with gas supply in 1905. In the over 110 years since, the gas business that started with lighting gas lamps has expanded into gas use for cooking, heating, hot water, and power generation, overcoming many obstacles as society evolved and lifestyles changed.

Starting with **lamps** to illuminate the city



1900

1960

A Strong Relationship with Our Customers

With our corporate motto "Service First," we have built a strong relationship with customers by working closely with localities and customers themselves and by providing products and services that meet their needs. We use this strong relationship as a basis for expanding into new territories, from gas into electricity and home services to evolve into a corporate group that provides various products, services, and solutions.

- 1897** Osaka Gas Co., Ltd. established with capital of ¥350,000
- 1905** Iwasaki Plant established; gas supply begins
- 1924** Cooking classes at the head office begin
- 1933** Construction of Osaka Gas Building completed
- 1940** Operations begin at Torishima Plant (shut down in 1994)
- 1945** Company performs first and second merger
- 1949** Kinki Coke Distribution Co., Ltd. established (currently Osaka Gas Chemicals Co., Ltd.)



Osaka Gas Building



Cooking class

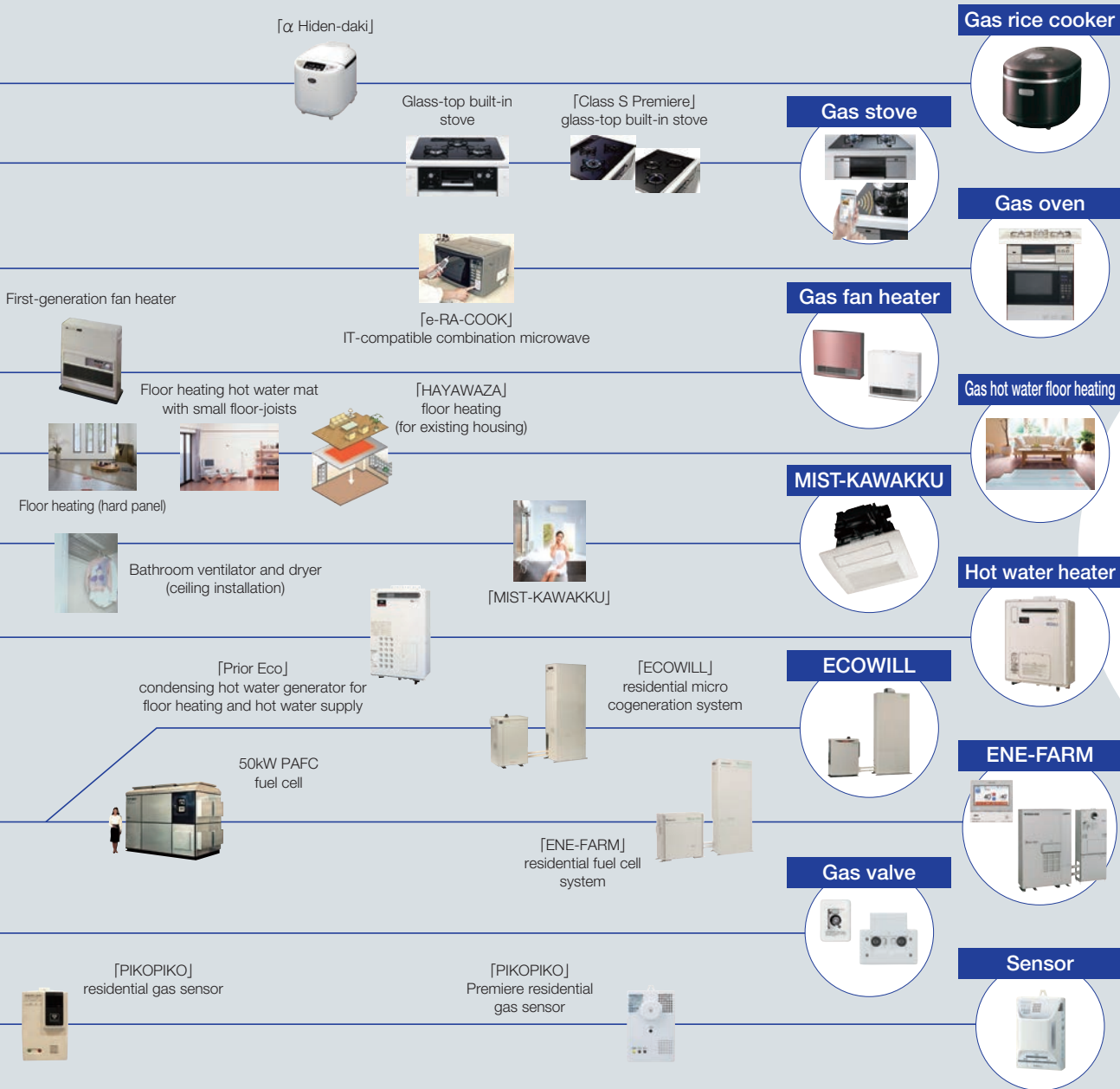
- 1955** First Gas Convention held
- 1960** Operations begin at Hokko Plant (shut down in 1989)
- 1963** Operations begin at Sakai Plant (shut down in 1990)
- 1965** Osaka Gas Real Estate Co., Ltd. established (currently Osaka Gas Urban Development Co., Ltd.)
- 1971** Operations begin at Senboku Plant
- 1972** Importing of LNG from Brunei begins
- 1975** Natural gas conversion begins (from 4,500 kcal/m³ to 11,000 kcal/m³)
- 1977** Operations begin at Senboku LNG Terminal II



Senboku Plant at start of operations (Osaka Prefecture)

Gas sales volume (Fiscal year)





Developing advanced products

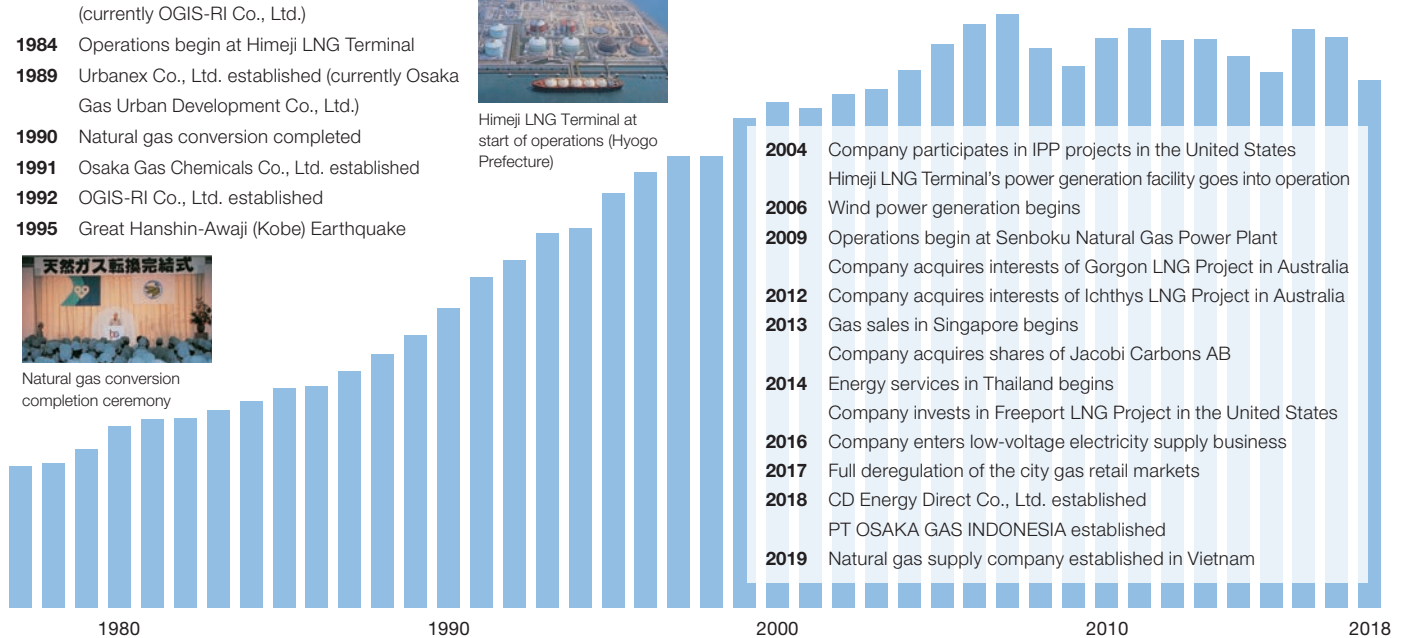
- 1983** OG Information System Co., Ltd. established (currently OGIS-RI Co., Ltd.)
- 1984** Operations begin at Himeji LNG Terminal
- 1989** Urbanex Co., Ltd. established (currently Osaka Gas Urban Development Co., Ltd.)
- 1990** Natural gas conversion completed
- 1991** Osaka Gas Chemicals Co., Ltd. established
- 1992** OGIS-RI Co., Ltd. established
- 1995** Great Hanshin-Awaji (Kobe) Earthquake



Himeji LNG Terminal at start of operations (Hyogo Prefecture)



Natural gas conversion completion ceremony



Value Chain Data as of March 31, 2019

The Daigas Group is involved in the full range of processes from procurement and transportation of natural gas to production, power generation, supply, sales, and security of city gas. We are now exploring ways to strengthen the value chain. We aim to accomplish this by actively expanding new business domains both in Japan and internationally that utilize the expertise that we have gained through our operations to date.

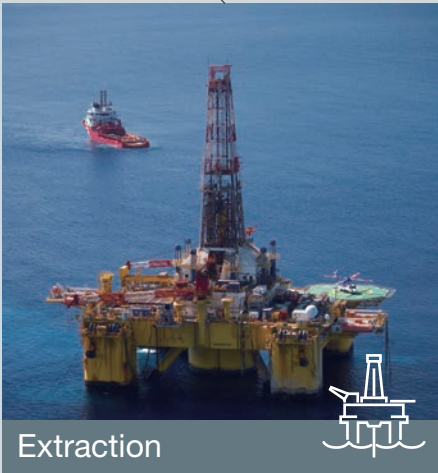
LNG suppliers
8 countries

Amount of LNG purchased (including fuel used for power generation and wholesale)
Approx.
9.42 million tons per year

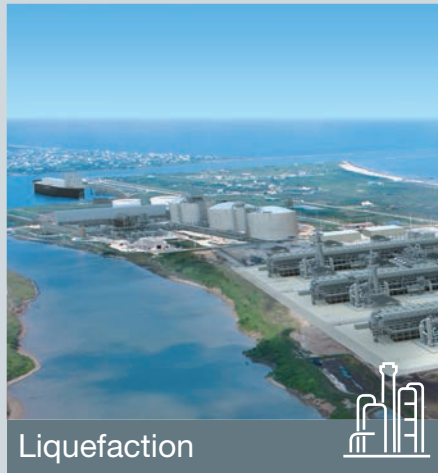
Of which, renewable energy Approx.
0.215 GW
Approx.
2.01 GW in Japan

Of which, renewable energy Approx.
0.104 GW
Approx.
1.912 GW overseas

Our group carrier fleet
7 ships



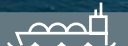
Extraction



Liquefaction



Transportation



We pursue stable procurement by concluding long-term purchase agreements and diversifying suppliers. In addition, we aim to achieve stable prices by diversifying price indicators through operation of the Freeport LNG terminal in the United States.

We utilize our group carrier fleet to stabilize procurement and reduce transportation costs.

International Energy Business(upstream to middle and downstream)

Participation in upstream businesses and liquefaction businesses

We realize low-cost and stable procurement of LNG by participating in upstream businesses and liquefaction businesses.



Ichthys LNG Project



East Texas Shale Gas Project



Freeport LNG Terminal (artist's rendition)

Total length of pipeline extensions Approx.
62,700 km

Creation of Power Supply Portfolio

We aim to establish a competitive and environmentally friendly power supply portfolio by actively focusing on the development of renewable energy sources.



Torishima Solar Power Plant

Service chain partners
Approx.
200 stores

Domestic Energy/Electricity Business

We operate power generation facilities with varying power sources, from natural gas-fired thermal power plants including the Senboku Natural Gas Power Plant to cogeneration and renewable energy sources, etc.



Electricity is supplied using the grid operated by Kansai Electric Power Co., Inc., to offer the same level of reliability and quality as always.



We accept requests 24 hours a day, 365 days a year to assure security and safety for our customers.



Expansion of Wide-Area Businesses including the Greater Tokyo area

Expansion to the Greater Tokyo Area



Business development in Southeast Asia



We established a complete production system with two LNG terminals in Senboku and Himeji as well as 28 LNG tanks.



To support stable supply of city gas, we promote planned facility upgrades and development of the gas pipeline network.



We provide the best solutions that meet the various needs of households, factories, and offices.

Domestic Energy/Gas Business

We actively apply technologies and expertise we have accumulated in the energy business, developing businesses that differ from the energy field to diversify business risk.



Number of customer accounts*
Approx.
8.75 million

Of which, number of low-voltage electricity supply customers
Approx.
0.95 million customers

Of which, number of gas supply customers
Approx.
5.58 million customers

LBS Business

*Total number of contracts, including city gas, electricity, LPG, ENE-FARM, Sumikata Service, and utility agent contracts.

Message from the President



President

本庄武宏

Takehiro Honjo

Introduction

Two years have passed since the announcement of the “Long-term Management Vision and Medium-term Management Plan: Going Forward, Beyond Borders” in March 2017. During that time, in addition to the harsh business environment, such as the declining population in the Kansai area and the fully deregulated retail markets of gas and electricity in Japan, which were recognized in the Long-term Management Vision, there have been various changes that were not anticipated when the vision was formulated, such as increasingly volatile overseas situation and unstable economic conditions, frequent large-scale disasters, low carbonization and decarbonization movement reflecting heightened awareness of climate change risks, advancements in digitalization, and diversification of customers' sense of values.

While responding flexibly to these changes, we will push ahead with initiatives going beyond customer expectations, business boundaries, and corporate boundaries in order to realize what we aim to be for sustainable growth.

Efforts Toward Sustainable Growth

In the fiscal year ended March 31, 2019, we managed to increase the number of customer accounts, expand the Wide Area Business, and develop power source in the Domestic Energy Business, and build upstream businesses and middle and downstream businesses in the International Energy Business.

In addition to building each business, we also made efforts in the Domestic Energy Business to ensure stable energy supply that enables customers to use it safely and securely, including responses to frequent large-scale disasters.

Development of the Domestic Energy Business for a New Era

- 1 Gas manufacturing and sales*
- 2 Gas distribution
- 3 Electric power generation and sales

Acceleration of the International Energy Business Development

- 4 International upstream and trading businesses
- 5 International middle and downstream businesses

Expansion of the LBS Business

- 6 Real estate
- 7 Materials
- 8 IT

Expansion of New Business Fields

- 9 New business fields and others

* Includes equipment sales, service sales, LNG sales, etc.

ツナガルde機能



Style Plan



Style Plan S

For customers who wish to be prepared for housing problems



Style Plan P

For customers who wish to make life convenient and comfortable with Amazon shopping



Style Plan d

For customers who wish to automatically earn a pile of d Points



Style Plan E

For customers who wish to choose electricity with more consideration of the environment

Expansion of the Number of Customer Accounts

In the Domestic Energy Business, we increased the number of customer accounts from 8.27 million at the end of March 2018 to 8.75 million at the end of March 2019 by offering products, services, and rate plan options that respond to the diversification of customers' sense of values and advancement in digitalization. For residential products and services, we expanded the IoT service options through products such as the Sumikata Plus service and voice-controlled gas appliance operation through smart speakers. The Sumikata Plus service is used by over 300,000 customers. We also aggressively sold ENE-FARM, achieving cumulative sales of 100,000 units.

For commercial and industrial products and services, we expanded ICT services, such as by increasing the ekul service options, and in April 2019, we also launched solution provision services that use IoT to improve factory productivity.

As for rate plan options, we released in stages electricity rate plan options that meet various lifestyles of customers, such as Style Plan P in partnership with Amazon and Style Plan d in partnership with NTT DOCOMO, INC, in order to win new customers. In November 2019, we will start a service to purchase surplus electricity generated by solar power systems.



Expansion of Wide Area Business

Regarding the expansion of the Wide Area Business, CD Energy Direct Co., Ltd. started sales activities in the Greater Tokyo area in the fiscal year ended March 31, 2019, and we won approximately 70,000 customers as of the end of March 2019. Outside of the Greater Tokyo area, we are also steadily exploring and making proposals for customer needs and building our track record in energy services.

Biwako Blue Energy Co., Ltd., which we acquired in December 2018, started a gas retail business that we took over from Otsu City in April 2019 and provides comprehensive energy services that combine our electricity, gas equipment, Sumikata Service, and other services.

In addition, we are expanding the Wide Area Business by establishing Nagaoka Tansan Co., Ltd. in Niigata Prefecture, which operates the liquefied carbon and dry ice business, developing the LNG terminal business through Himuka LNG Co., Ltd. in Nobeoka City, Miyazaki Prefecture, and developing LNG sales business through Progressive Energy Corporation in Okinawa Prefecture.

Expansion of Power Source Development

In the fiscal year ended March 31, 2019, we decided to participate in three biomass power generation projects in Ichihara City, Chiba Prefecture, Himeji City, Hyogo Prefecture, and Tokushima City, Tokushima Prefecture. As a result, we expanded the renewable energy power source capacity to approximately 600,000 kW, including projects under construction.

We will continue to work on the development of offshore wind power generation and geothermal power generation, aiming to have a one million kW renewable energy power source by fiscal 2030.

In March 2019, we also established Green Power Fuel Corporation, a company that procures and sells domestically grown woody biomass for biomass power generation fuel, which is currently mainly imported. On the back of long-term demand for fuel at biomass power plants which the Group is operating or planning the commercialization of, we will work on sustainable use of domestic forest resources while exploring competitive suppliers of domestically grown woods and securing long-term stable procurement of domestically grown woody biomass.

Meanwhile, we decided to withdraw from the plan to build a new coal-fired power plant in Nishiokinoyama, Ube City, Yamaguchi

Prefecture, which we were pursuing with Electric Power Development Co., Ltd. and Ube Industries, Ltd. The decision is the result of a comprehensive evaluation based on the company's investment criteria in light of the changing business environment of the electric power industry and future risks.



Matsusaka Biomass Power Generation Plant

Development of International Energy Business

We are planning to significantly grow the International Energy Business in order to realize what we aim to be in fiscal 2030.

In the fiscal year ended March 31, 2019, in North America, we acquired interests in three IPP projects in Michigan and Connecticut and in a shale gas production and development project in Texas that has been producing gas. These projects not only increased profit contributions but also aided in accumulating business expertise.

In particular, we aim to accumulate more expertise through further expansion of business operations in North America to enhance the business value of each project and to discover new ones by using synergies with expertise cultivated in the Domestic Energy Business in Japan.

Outside North America, with the aim of expanding businesses by utilizing our expertise of the Domestic Energy Business, we are also accelerating business development in Southeast Asia, such as the establishment of a natural gas joint marketing company in Indonesia and a natural gas supply company in Vietnam.

In addition, we are steadily implementing actions for existing projects, such as efforts to start the operation of the Freeport LNG terminal and the Fairview natural gas-fired thermal power plant, smooth operation of the Gorgon LNG Project, and production commencement of the Ichthys LNG Project.



Freeport LNG Terminal (artist's rendition)



Earning the Trust of Stakeholders

We think that it is necessary to perform ESG-conscious management and earn the trust of stakeholders in order to grow our business sustainably. Our company was established in 1897 with the aim of solving the problem of oil lamps that frequently caused fires at that time by replacing them with gas lamps. Since then, we have grown our business by solving energy-related issues, such as by introducing natural gas in order to achieve a stable supply and contribute to the environment. This approach remains unchanged.

Going forward, we continue to exercise environmentally-conscious management, under which we will further accelerate the introduction of high-efficiency equipment to customers and the development of renewable energy power sources such as wind and solar power. Through society-conscious management, we continue with workstyle reform to maintain a healthy and sound Daigas Group and ensure stable supply and security, while promoting human rights activities and appropriate labor practices. Concerning governance, we pursue continuous enhancement of our PDCA activities that respond to changes in the business environment and information disclosure, so that we continue receiving high evaluations from investors and assessment bodies inside and outside Japan, as well as ensure fair business practices.

Responses to Large-Scale Disasters

The fiscal year ended March 31, 2019, saw a series of major disasters, such as the earthquake centered in northern Osaka Prefecture, the West Japan Heavy Rain Disaster, and Typhoon Jebi. As an energy infrastructure operator, we strongly reaffirmed the significance of our responsibility for supporting our customers' lives and businesses, as well as for supporting restoration and recovery efforts in disaster-stricken areas.

Due to the earthquake that centered in northern Osaka Prefecture in June 2018, the first major wide-area disaster that our company experienced since the Great Hanshin-Awaji (Kobe) Earthquake, we suspended gas supply to about 110 thousand households. In the face of the disaster, we successfully managed to recover the gas supply on the seventh day after the earthquake, owing to the efforts we made thus far to improve our disaster response capabilities and the assistance and cooperation of gas service providers across the country. Furthermore, we enhanced our capability of dispatching information on the status of recovery by introducing a system to visualize the recovery situation and utilizing SNS flexibly.



Business Results

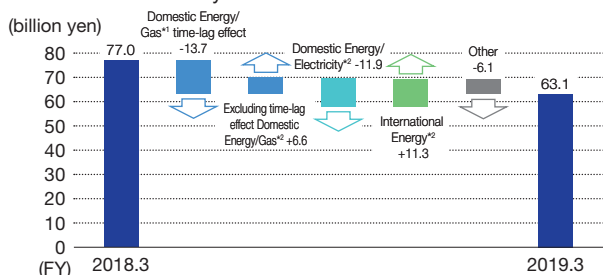


Executive Vice President
Takeshi Matsui

Review of the Fiscal Year Ended March 31, 2019

Consolidated ordinary profit for the fiscal year ended March 31, 2019, decreased by ¥13.9 billion year-on-year to ¥63.1 billion, mainly due to the impact of high air and water temperatures and the time-lag effect in the Domestic Energy / Gas Business, and a decrease in profits in the Domestic Energy / Electricity Business. However, excluding the ¥13.7 billion decline in profits due to the time-lag effect, consolidated ordinary profit remained almost at the same level as the previous year. In the Domestic Energy / Gas Business, excluding the large impact from profit decline due to the time-lag effect, segment profit increased ¥6.6 billion year-on-year due to a decrease in gas business expenses, which outweighed the effect of a decrease in gas sales volume caused by high air and water temperatures and gas switching. In the Domestic Energy / Electricity Business, segment profit decreased ¥11.9 billion year-on-year, with an increase in electricity sales volume from new customer acquisitions offset by external factors such as a decrease in sales volume caused by high air temperatures, lower wholesale unit prices, the time-lag effect caused by a rise in crude oil prices, and the impact of competition. In the International Energy Business, segment profit increased ¥11.3 billion year-on-year, mainly due to an increase in LNG sales volume of the Gorgon LNG project and a rebound from a loss on the sale of stakes in the IPP project in North America in the previous fiscal year. For growth investment, we spent ¥165.9 billion mainly in the International Energy Business in the fiscal year ended March 31, 2019, making the cumulative investment amount from the fiscal year ended March 31, 2018, to the fiscal year ended March 31, 2019, amount to ¥239.2 billion, which suggests that we are making steady progress toward the investment plan outlined in the Medium-term Management Plan.

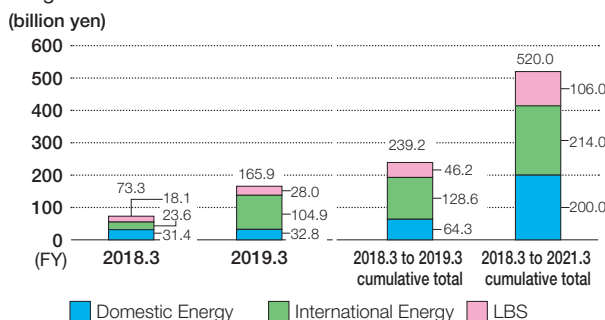
Consolidated Ordinary Profit



*1 Factor that causes a temporary increase / decrease in profit due to a time lag between fluctuations in raw material costs and their reflection in the unit selling price of city gas under the gas resource cost adjustment system

*2 Describe the impact on segment profit

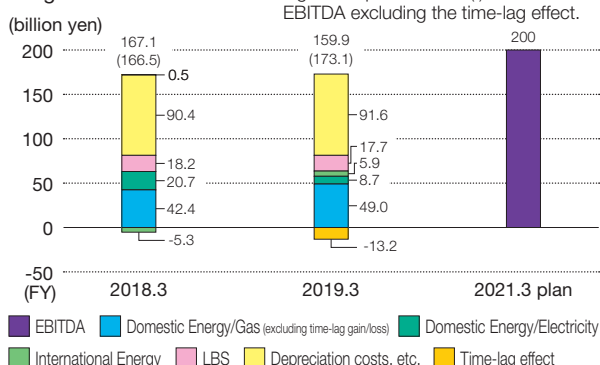
Progress of Growth Investments



Aiming for the Targets of the Fiscal Year Ending March 31, 2021

The Daigas Group set EBITDA of ¥200 billion, ROE of 7.0%, and ROA of 3.5% as profitability targets in the Medium-term Management Plan 2020. Although competition currently continues in the gas and electricity market, we seek to achieve targets by implementing measures in the Domestic Energy Business, such as continuously reducing costs of the Gas Business, expanding related services such as gas equipment sales and the Sumikata Service, steadily winning retail electricity contracts, and expanding the energy business in the Greater Tokyo area, as well as with profit contributions from investment projects in the International Energy Business, such as the Freeport LNG Project, which is scheduled to start operations in the autumn of 2019. Furthermore, in addition to profitability targets, we set financial soundness targets of having a D/E ratio of approximately 0.7 and a shareholders' equity ratio of approximately 50%. We will be making growth investments taking into account the balance with financial soundness.

Progress of EBITDA*



* EBITDA = operating profit + depreciation cost + amortization of goodwill + equity in earnings/losses of affiliates

Investment Risk Management

As competition in the Domestic Energy Business intensifies, we actively pursue growth investments without missing opportunities for sustainable growth. Meanwhile, since investments involve risks, we manage the investment risks by ensuring the following four points.

The first point is to confirm consistency with the investment project's strategy. In addition to profit contributions from the project alone, we look at whether or not the project contributes to synergies with other businesses of the Group and the improvement of business execution capabilities. For example, participating in a project and building business expertise leads to identifying projects that can be expected to contribute more to profits, reducing the risk of the next project, and increasing the value of the project that we participate in. The examples include the acquisition of a shale gas development company that owns a mining area under production and development operations in North America, and major participation in a working natural gas-fired power plant business.

The second point is the evaluation of the inherent risks of the investment project. We conduct strict project evaluations and deliberations through the Investment Evaluation Committee after establishing uniform groupwide investment standards and taking into account the evaluations of the Investment Risk Management

Department and internal organizations in charge of finance and legal affairs, and neutral evaluations of external consultants as necessary.

The third point is a balance with financial soundness. Investments involve risk of losses due to changes in the business environment. We think it is important to balance risk and return, such as not taking high risks to seek excessively high returns, but also avoiding excessive risk control. We quantitatively assess losses that can occur for a certain risk after investment and balance risk and return across the entire company to be able to sustainably make growth investments while maintaining a certain level of financial soundness even when risks materialize.

The fourth point is follow-up after investment. After setting investment monitoring standards, we individually conduct annual follow-ups on all investment projects. By applying the standards, we evaluate whether or not the project satisfies the original purpose of our investment, is slow to respond to changes in the business environment, and if there are any issues with its progress and profitability. Depending on the evaluation, we encourage reconsideration of the investment, such as making improvement in project profitability or considering divestiture or withdrawal.

Shareholder Returns and Free Cash Flow*¹

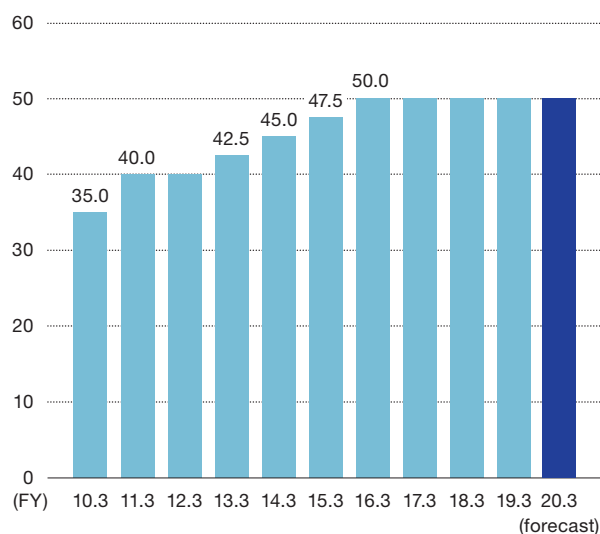
Our aim is to provide stable dividends, and our basic policy is to maintain a consolidated dividend payout ratio of 30% or higher excluding short-term fluctuation factors that affect profits and pay higher dividends from profit growth to our shareholders. We expect that free cash flows will exceed the growth investment amount in the first half of the 2020s when we start to receive significant returns as planned from the growth investments we are currently pursuing. While taking into account structural risks such as intensifying competition due to the development of fully deregulated energy market and declining population in Japan, and comprehensively evaluating future free cash flows, progress in growth investments, business performance, and the financial situation, we will consider implementing other measures for shareholder return, including share buyback.

*1 Free Cash Flow

= Cash flows from operating activities – Expenses for quality improvement investment

*2 Figures prior to the fiscal year ended March 31, 2017, are adjusted for the 1-for-5 stock consolidation

Annual Dividends per Share (yen)



Long-term Management Vision 2030 and Medium-term Management Plan 2020 “Going Forward Beyond Borders”

To be an innovative energy & service company that continues to be the first choice of customers

The Daigas Group formulated a new Long-term Management Vision 2030 for FY2031.3 and the Medium-term Management Plan 2020 that covers the period up to FY2021.3 and is aimed toward realizing the vision of the Long-term Management Vision 2030. By going beyond customer expectations, business boundaries, and corporate boundaries, we strive to contribute to the advancement of society, communities, and customers, and to be an innovative energy and service company that continues

to be the first choice of customers. Keeping in mind the three guiding principles toward FY2031.3 based on the Daigas Group Management Principle, which consists of the Corporate Motto “Service First,” our aim “Daigas Group powers continuous advancement in consumer life and business,” and the declaration to create four values, namely, value for customers, value for society, value for shareholders, and value for employees, we will carry out activities aimed at realizing the long-term management vision.

Daigas Group Management Principle and Three Guiding Principles toward FY2031.3

Daigas Group Management Principle

What the Daigas Group Aims To Be	Daigas Group powers continuous advancement in consumer and business life
Daigas Group Declaration	Daigas Group is creating four values
Corporate Motto	Service First

The Daigas Group is committed to creating value primarily for customers, as well as for society, shareholders, and employees.

- | | |
|------------------------------------|---------------------------------|
| Creation of value for customers | Creation of value for society |
| Creation of value for shareholders | Creation of value for employees |

Three Guiding Principles toward FY2031.3

- 1 Continue providing as many customers as possible with high-quality services developed in the Kansai area.

- 2 Always strive to be professionals who pursue innovative challenges.

- 3 Continue to be trusted by investors, business partners, citizens and employees.

Medium-term Management Plan FY2018.3-FY2021.3

Measures to be taken under the Medium-term Management Plan 2020

- Enhancement of solutions business for residential customers
- Enhancement of solutions business for commercial and industrial customers
- Establishment of competitive power-supply portfolio
- Development of pipeline network operator business
- Efforts to expand international energy business
- Securing of a business footing in the LBS business and exploration of new business fields

Long-Term Management Vision 2030



To be an innovative energy & service company that continues to be the first choice of customers

What We Aim To Be in FY2031.3

Plan for FY2018.3

Consolidated ordinary profit*1

¥64.0 billion

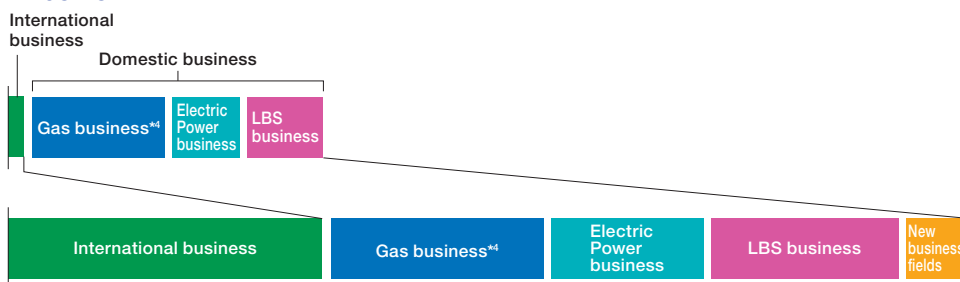
International business :
Domestic business = 1:20 *2

FY2031.3

Consolidated ordinary profit*3

to be **tripled**

International business :
Domestic business = 1:2 *2



*1 Crude oil price of \$55/barrel; exchange rate of ¥115/\$1 *2 On the basis of consolidated ordinary profit

*3 Crude oil price of \$70/barrel; exchange rate of ¥115/\$1 *4 Gas business profit includes sales of equipment and LNG, etc.

Efforts to Become What We Aim To Be in FY2031.3

Business development going beyond customer expectations, business boundaries, and corporate boundaries

Development of business as an energy marketer for a new era

Acceleration of the International Energy Business Development

Expansion of the LBS Business and New Business Fields

Growth investments and promotion of M&A

Innovations to go beyond customer expectations

Management that continues to be trusted by stakeholders (Enhance Corporate Value, ESG-conscious management)
Workstyle reform and development of human resources to improve productivity

The Daigas Group's Long-term Management Goals: Specific Target Values

Long-term target items		FY2019.3 Results	Medium-term Management Plan FY2021.3	Long-term Management Vision FY2031.3
Expand business domains	Energy source procurement capacity*1	3,920 MW	—	9,000 MW
	Renewable energy power source capacity(Of the above)	320 MW	—	1,000 MW
	Number of customer accounts	8.75 million	—	10.00 million or more
	Scale of natural gas business	10.30 million t	—	17.00 million t
Quality improvement	Customer satisfaction at each contact point	92.5%	94.0%	95.0%
Security and safety	Ensure security and safety of gas pipelines, gas manufacturing, and power generation business	Maintain the status of zero serious accidents		
Environment/CSR	Contribution to reduction in amount of CO ₂ emissions*2	1.67 million t	Approx. 7.00 million t	Approx. 70.00 million t
Investment*3	Total investment	¥325.6 billion	¥700.0 billion	¥2,000.0 billion
	Growth investment	¥239.2 billion	¥520.0 billion	¥1,450.0 billion
	Domestic energy	¥64.3 billion	¥200.0 billion	¥520.0 billion
	International energy	¥128.6 billion	¥214.0 billion	¥550.0 billion
	LBS	¥46.2 billion	¥106.0 billion	¥380.0 billion
	Quality improvement investing	¥86.3 billion	¥180.0 billion	¥550.0 billion
Profitability	EBITDA	¥159.9 billion	¥200.0 billion	—
	ROE	3.4%	7.0%	—
	ROA	1.7%	3.5%	—

*1 The ratio of procurement from markets and other companies will be considered, depending on the circumstances in systems and regulations imposed by the national government.

*2 Total contribution to reduction in amount from FY2018.3 (compared to FY2017.3)

*3 Total investment amount from FY2018.3

Shareholder Returns

Decide on other measures of shareholder return such as share buybacks with a comprehensive view on various factors including business performance and future management plans while maintaining stable dividends. Aim to maintain a consolidated dividend payout ratio of 30% or higher excluding short-time fluctuation factors that affect profits, within the amount available for distribution to Osaka Gas shareholders.

Financial Soundness

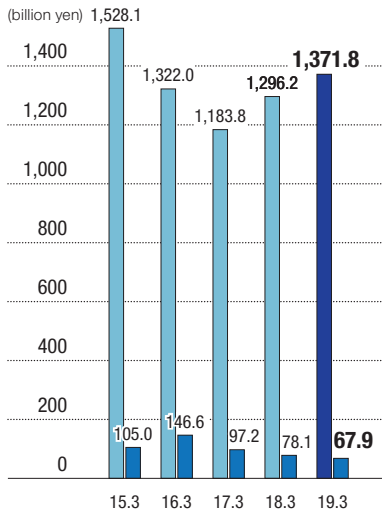
Manage risks quantitatively while maintaining a shareholders' equity ratio of approximately 50% and a D/E ratio of approximately 0.7 over the medium- to long-term.

Financial Data

Net sales/Operating profit

Fiscal year ended March 31, 2019

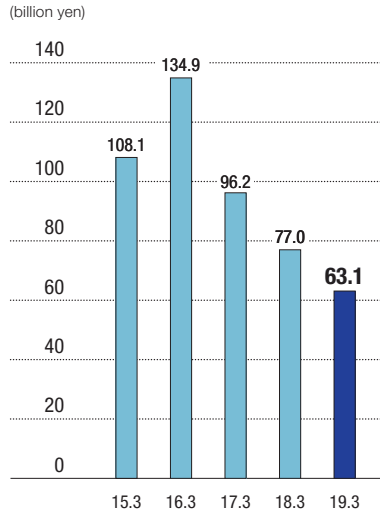
Net sales **¥1,371.8 billion**
Operating profit **¥67.9 billion**



Ordinary profit

Fiscal year ended March 31, 2019

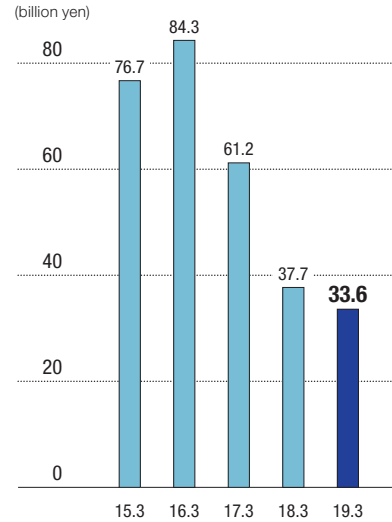
¥63.1 billion



Profit attributable to owners of parent

Fiscal year ended March 31, 2019

¥33.6 billion

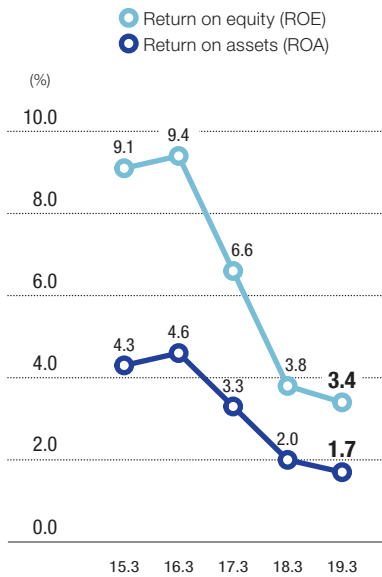


Return on equity (ROE)

Return on assets (ROA)*1

Fiscal year ended March 31, 2019

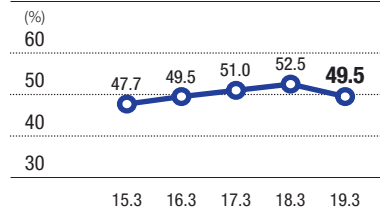
ROE **3.4%**
ROA **1.7%**



Capital adequacy ratio*1

As of March 31, 2019

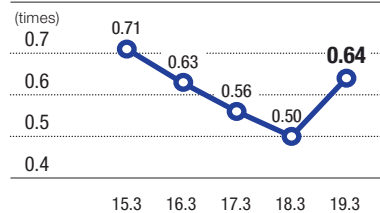
49.5%



Debt equity ratio

As of March 31, 2019

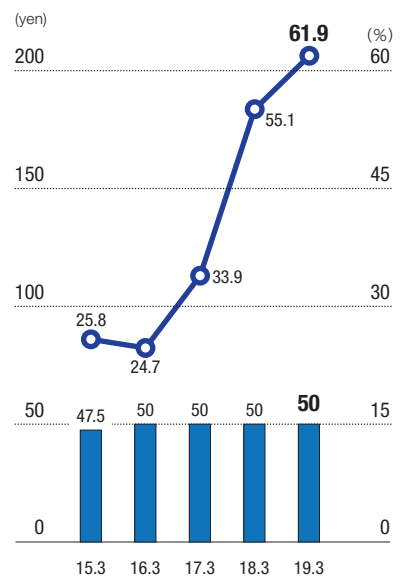
0.64 times



Payout ratio/ Dividends per share

Fiscal year ended March 31, 2019

Payout ratio **61.9%**
Dividends per share **¥50**



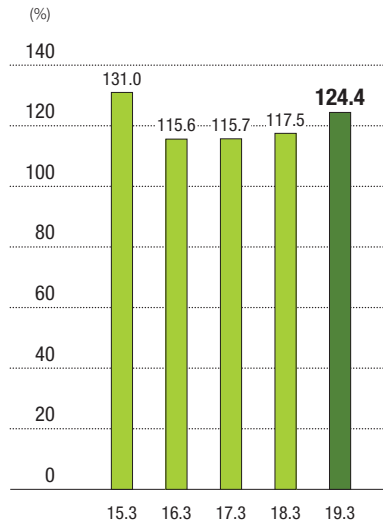
*1 Calculated taking in account of "Partial Amendments to Accounting Standard for Tax Effect Accounting"

Non-Financial Data

Total shareholder return*1

Fiscal year ended March 31, 2019

124.4%

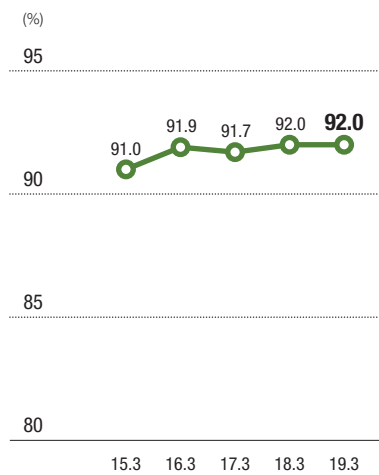


*1 Calculated based on data as of the end of March 2014

Customer satisfaction (overall satisfaction*2)

Fiscal year ended March 31, 2019

92.0%



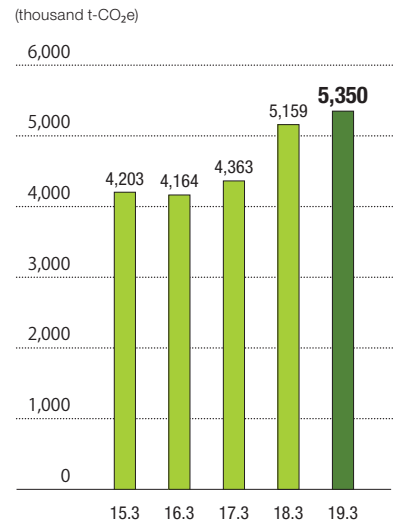
*2 Overall satisfaction:

Percentage of evaluations in the highest two ranks of a six-rank scale regarding customer satisfaction levels in seven areas of operation that have direct interaction with customers

Group greenhouse gas emissions

Fiscal year ended March 31, 2019

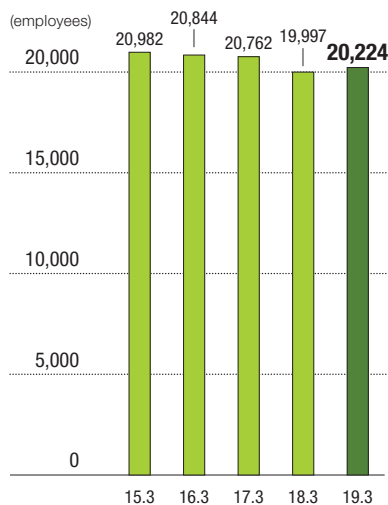
5,350 thousand t-CO₂e



Number of group employees

As of March 2019

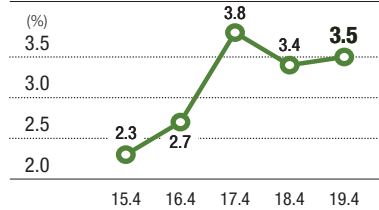
20,224



Percentage of women in managerial positions (Osaka Gas)

As of April 2019

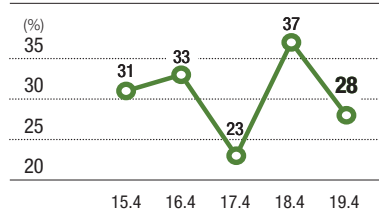
Target 5.0% or higher by FY2021.3 **3.5%**



Percentage of new women graduates in career-track positions (Osaka Gas)

As of April 2019

28%

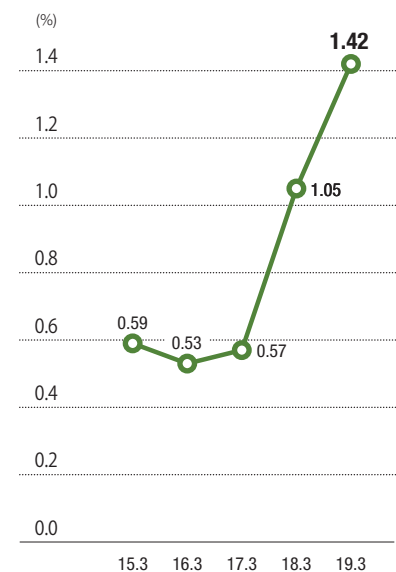


Job turnover rate

(Osaka Gas employees under age 50)

Fiscal year ended March 31, 2019

1.42%



Domestic Energy Business

What We Aim to Be in FY2031.3 and Summary of Current Situation

We are striving to develop our business as an energy marketer in a new era by strengthening each of the three areas in the Domestic Energy Business; namely, gas manufacturing and sales, gas distribution, and electric power generation and sales.

In addition to ensuring that customers in the Kansai area use city gas in a stable, safe, and secure manner, we are proceeding with comprehensive provision of energy and services by expanding the electric power and LPG businesses and enhancing life support services and one-stop services as a utility agent. Furthermore, we will expand the know-how and services developed in the Kansai area to a wide area through alliances.

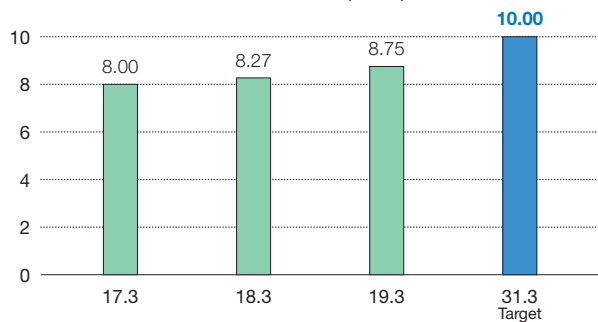
With these activities going beyond customer expectations, business boundaries, and corporate boundaries, we aim to reach more than 10 million customer accounts by FY2031.3.

FY2019.3 Results

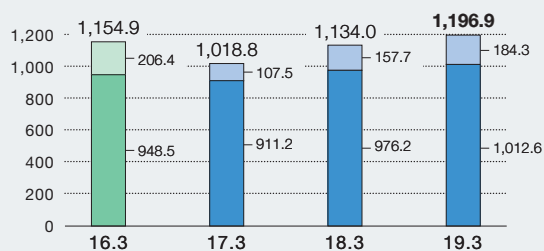
Net Sales ¥ **1,196.9** billion Segment Profit* ¥ **44.5** billion

* Operating profit (loss) + Share of profit (loss) of entities accounted for using equity method

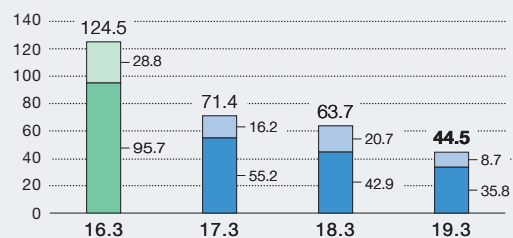
Number of Customer Accounts (million)



Net Sales* (billion yen)



Segment Profit* (billion yen)



■ Gas ■ LPG, Electricity and Other Energy ■ Domestic Energy/Gas ■ Domestic Energy/Electricity

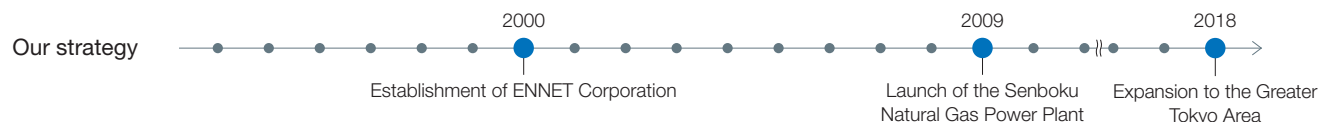
* Since 1Q of FY19.3, Osaka Gas Engineering Co., Ltd. changed its segment from "Life & Business Solutions" to "Domestic Energy/Gas." FY18.3 results are calculated based on the contents after the change.

■ Historical Development of Retail Gas and Electricity Deregulation

Retail gas deregulation began in 1995, and retail electricity deregulation in 2000 in stages. In 2000, we established an affiliate, ENNET Corporation, and launched retail electricity sales

in 2001. After full deregulation of retail electricity, we have sought to generate electricity demand and expand customers, and have also actively broadened power sources.

Development of deregulation	1995	1999	2000	2004	2005	2007	2016	2017
Scope of retail electricity deregulation (contract demand)	—	—	Over 2,000kW	Over 500kW	Over 50kW	—	Full deregulation	—
Main targets	—	—	Special high-voltage customers (large-scale factories, department stores, office buildings)	High-voltage customers (small and medium-sized buildings, small and medium-scale factories)		Low-voltage customers (residential, stores)		
Scope of retail gas deregulation (annual gas consumption)	Over 2 million m ³	Over 1 million m ³	—	Over 500,000 m ³	—	Over 100,000 m ³		Full deregulation
Main targets	Large factories, large hospitals	Large commercial facilities, large hotels	—	Medium factories, medium hotels	—	Factories, medium hospitals, commercial facilities, hotels		Residential, stores



* Source: Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry, "History of Deregulation of Electricity Retail" The Japan Gas Association, "Regarding Background of Full Deregulation of Gas Retail"

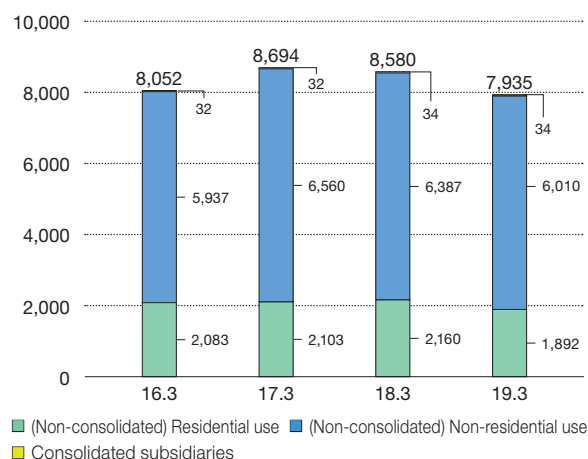
■ Daigas Group's Strategy

For residential use, we are implementing initiatives to provide more added value to customers, such as expanding electricity rate options, the Sumikata Service, and IoT service options, and launching gas equipment compatible with the IoT. For commercial and industrial use, we are making efforts to provide solutions for customer issues and enable optimized and efficient energy usage by launching new services using ICT / IoT and broadening the provision of engineering services, such as the development of technologies and products required by customers, into a wider area. In terms of measures for Wide Area Businesses and power source development, in cooperation with various business operators, we are actively expanding energy and services in a wider area including the Greater Tokyo area, and developing competitive power sources (including renewable energy power sources). As a result of these

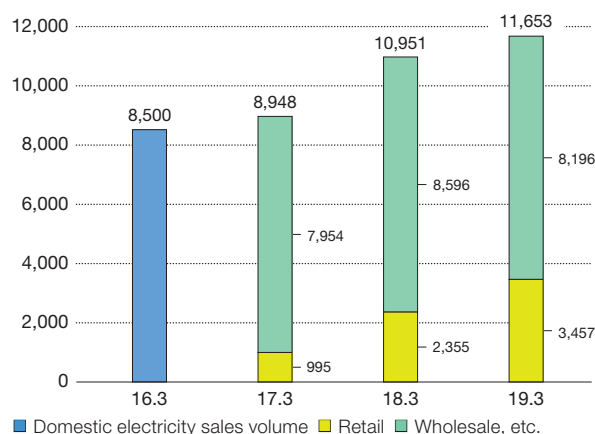
measures, the consolidated number of gas supply reached 5,579 thousand, and the number of low-voltage electricity supply reached 945 thousand as of the end of March 2019. The number of customer accounts was 8.75 million.

	2018.3	2019.3	Change
Consolidated number of gas supply (thousand)	5,996	5,579	-416
Non-consolidated number of gas supply (thousand)	5,970	5,553	-417
Number of low-voltage electricity supply (thousand)	619	945	+326
Number of customer accounts (million)	8.27	8.75	+0.47

Consolidated Gas Sales (million m³)



Consolidated (Domestic) Electricity Sales (million kWh)



Measures for Stable Gas Supply, and Safe and Secure Use

Low-cost and Stable Energy Resource Procurement

Natural gas, a raw material used for city gas, is highly valued in terms of energy security because it is found all over the world. In addition, natural gas emits less carbon dioxide and other greenhouse gases than oil and coal, being considered

a relatively clean type of energy. The Group owns its own carrier fleet and operates it efficiently while diversifying its suppliers and price indexation for low-cost and stable procurement of natural gas.

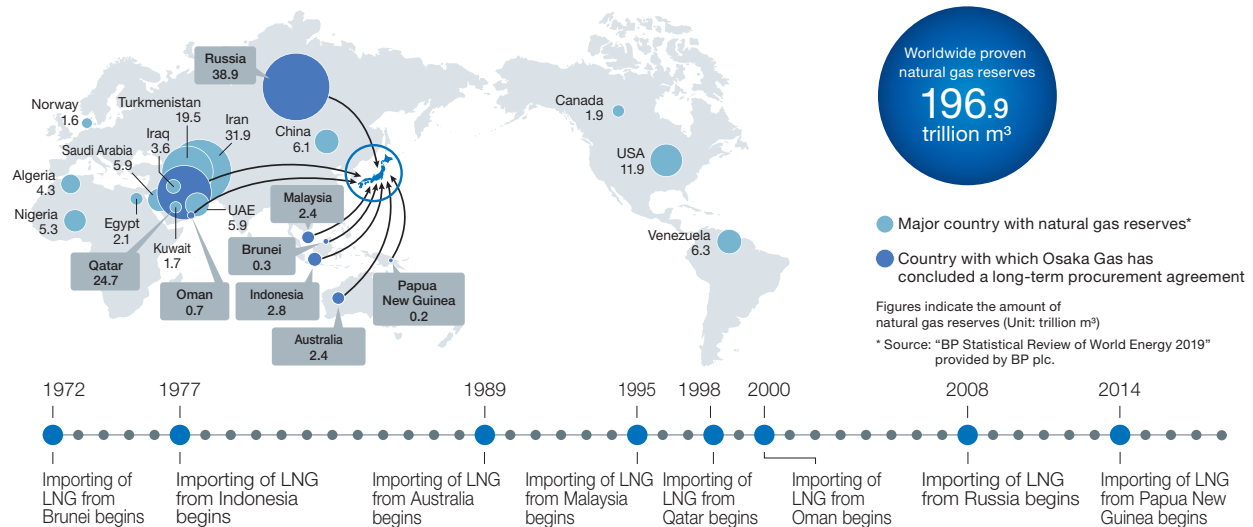
■ Environmental Advantages of Natural Gas

Liquefied natural gas (LNG), the raw material used for city gas, is a clean energy that contains almost no impurities. When LNG is produced by liquefying natural gas, impurities such as sulfur are removed. LNG is clean energy with excellent environmental benefits that generates little CO₂ (carbon dioxide), which is one of the greenhouse gases, NO_x (nitrogen oxide), which is the cause of acid rain and air pollution, and zero SO_x (sulfur oxide) during combustion.

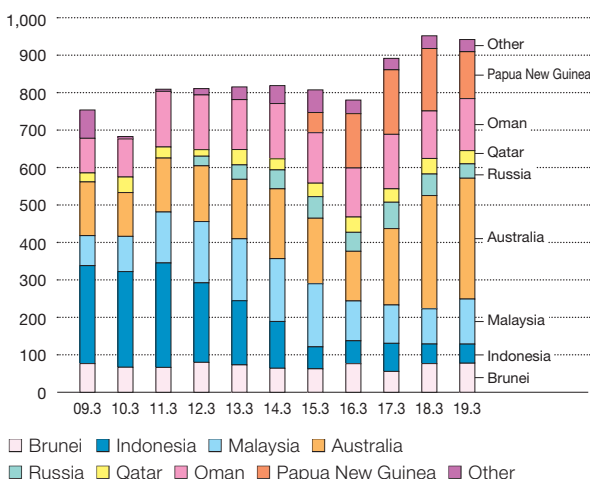
■ Diversification of Suppliers and Price Indexation

Since we started to import LNG from Brunei in 1972, we have sought to diversify our suppliers. Currently, LNG is procured from eight countries, and a natural gas liquefaction project in Texas, USA is set to start around the autumn of 2019. The launch of the liquefaction project will not only add one more country to the list of suppliers but also enable us to enter into a new type of procurement where LNG procurement prices are indexed to Henry Hub prices, in addition to traditional procurement in which LNG prices are generally linked to the price of crude oil. The diversification of price indexation will help stabilize LNG prices when crude oil prices fluctuate. In addition, by investing in liquefaction projects, we will be able to procure price-competitive LNG from among those linked to Henry Hub prices. We will continue to seek even more stable and low-cost LNG procurement.

■ Countries with Natural Gas Reserves and Countries from which Daigas Group Procures LNG



LNG Purchase Volume (10 thousand tons)



■ Use of Daigas Group LNG Carrier Fleet

By utilizing the Daigas Group carrier fleet consisting of seven ships, we are striving to further stabilize the procurement of energy resources and reduce transportation costs while diversifying our suppliers in an effort to expand our LNG trading business.



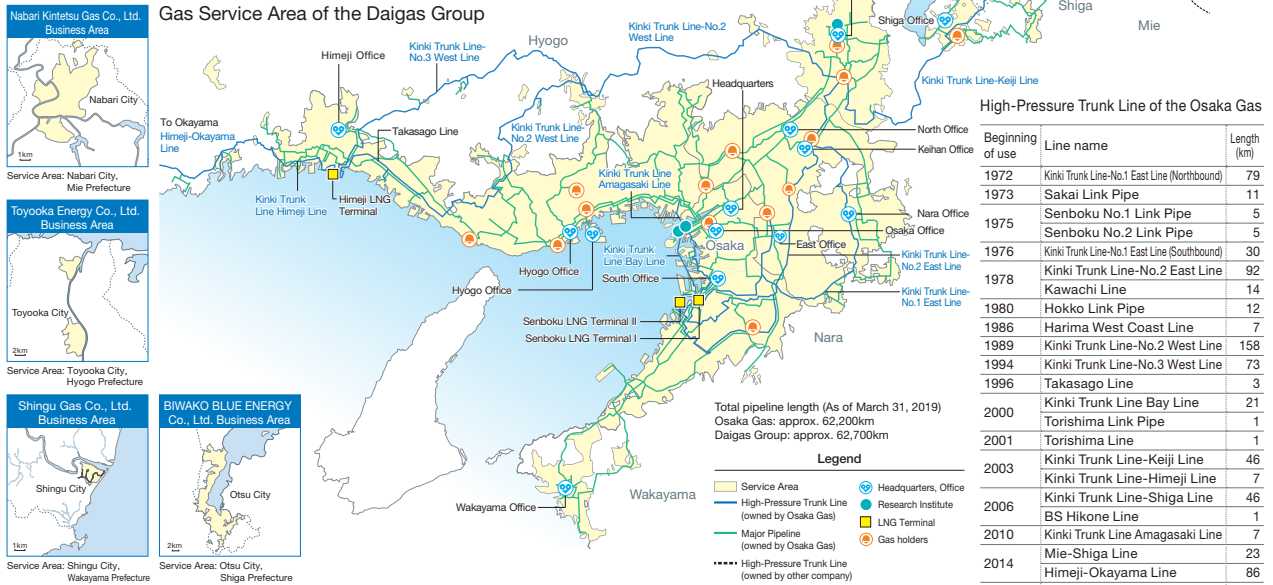
Vessel name	LNG JUNO	LNG JAMAL	LNG DREAM	LNG BARKA	LNG JUPITER	LNG VENUS	LNG MARS
Capacity	180 thousand m ³	135 thousand m ³	145 thousand m ³	153 thousand m ³	153 thousand m ³	153 thousand m ³	153 thousand m ³

As of April 1, 2019

Supply Systems for Safe and Secure Use

Supply network structure

For stronger supply capabilities and improved reliability of city gas, we regularly inspect our pipeline network, implement planned reinforcements and replacements with stronger material on a regular basis. Additionally, in response to increasing demand for city gas, we have been working to extend new pipelines as well to establish a strong network.



Safety Measures

Maintenance of Supply Network and 24-hour Emergency Dispatch System

For a pipeline network with a total extended length of approximately 62,200 km (equivalent to 1.5 times the circumference of the earth), regular inspection and maintenance are conducted as preventative measures for ensuring safety. In addition, The Central Control Office operates 24 hours a day to monitor and control the status

of gas supply in an integrated manner and is ready to promptly respond and dispatch staff from respective locations upon receiving reports from customers.

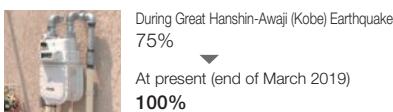


Disaster Prevention Measures (Osaka Gas' Earthquake Countermeasures)

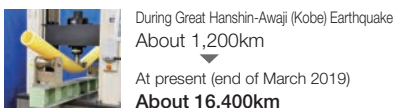
Preventive Measures

We are advancing efforts to minimize damage caused by earthquakes, such as promoting the spread of intelligent gas meters (residential use) that automatically stop gas when large shakes are detected, and actively adopting polyethylene pipes for low-pressure gas pipes.

Intelligent gas meters



Highly flexible polyethylene pipes



Emergency Measures

We are stepping up our preparedness for earthquakes, by dividing the pipeline network into blocks, which enables gas supply suspension only for severely damaged areas, and having in place a Central Control Back-up center which will take over the Central Control Office of the head office if it is affected.

Segmenting the pipeline network into blocks



Recovery Measures

We have stockpiled materials and equipment and carried out system maintenance for post-disaster quick recovery. In addition, a system to visualize the recovery situation has made it possible to provide gas recovery information in an easy-to-understand manner to customers in areas where gas supply is suspended when a large-scale earthquake occurs.

System to visualize the recovery situation

Visualization of gas recovery status by municipality (Checks with both maps and lists)



Measures to Maximize Customer Accounts

We are aiming to become a company that is consistently chosen by customers in the areas of energy supply such as city gas, LPG, electric power, and other energy-related services by continuing to provide services that go beyond customers' expectations.

Measures for Residential Use

For more than 110 years, we have provided a stable city gas supply and superior safety and reliability to earn customers' trust. On the base of this trust, we are providing electricity and gas supply as well as new products and new services to strengthen relationships with customers.

■ Service Chain

We have approximately 200 service chain partners in our supply area that work closely with customers in their areas providing Sumikata Services (home services) in addition to contract services for the Company (such as opening and shutting off gas service and maintenance of gas equipment). Osaka Gas customer centers accept service reservations for any gas equipment trouble 24 hours a day, 365 days a year. If a call is received by 3:00 p.m., one of about 1,200 technicians qualified by Osaka Gas to repair gas appliances will visit the customer on that day. Customers have given approx. 98% customer satisfaction rating to the speed with which repairs are completed after their call is made.



Calls received 365 days a year (Osaka Gas customer centers)







Same-day repair system (for calls received by 3:00 p.m.)



High customer satisfaction

■ Various electricity rate plan options

We provide rate plan options offering good value, including the "Base Plan A-G" for gas contract customers and "Residential Gas-powered Electricity Generation Plan" for customers who use ENE-FARM, a residential fuel cell cogeneration system. During the fiscal year ended March 31, 2019, we created "Style Plan" electricity service menus that meet diverse customer lifestyles and individual needs. In addition, a service to purchase surplus electricity generated by photovoltaic systems will start in November 2019 for customers whose purchase period will end under the renewable energy feed-in-tariff system. We will offer the Purchase Plan for electricity, which is available for any customer, and the Electricity Set Purchase Plan, which offers an advantage to customers who use Osaka Gas' electricity. In addition, the Style Plan E option will be available, in which the purchase unit price increases further in combination with Style Plan E, an environmentally friendly electricity rate option. We will support customers' lives with these convenient rate options that offer good value.

	Style Plan S	Service menu that comes with the Sumikata Guarantee Pack offering good value
	Style Plan P	Service menu that comes with Amazon's membership program Amazon Prime, offering good value
	Style Plan d	Service menu where "d Points" under the DOCOMO's point service accumulate according to monthly electricity bills
	Style Plan E	Service menu for customers who wish to use environmentally friendly electricity

■ Gas Equipment with Industry-first New Technology

In June 2019, we unveiled the new AVANCE*¹ gas stove that provides greater security and safety, in order to reduce anxiety about the possibility that parts of clothing such as bottoms of sleeves will catch fire when cooking. The new gas stove is equipped with area sensors*², an industry-first technology. The sensors detect when the bottom of a sleeve or other object comes close to a flame and lower the flame automatically, triggering an alert message. In addition, the capacitive touch panels for operating the burners are arranged in the front part of the top plate. The touch panels are frameless, creating a stylish design. For many years, we have developed technologies to improve the security and safety of gas stoves such as Age-look (top burner overheat protection control) and Kie-look (pilot safety shut-off device). We hope to further increase customers' sense of security by adding area sensors.



*1 Paloma Co., Ltd. has applied to register the trademark of "AVANCE."

*2 Osaka Gas Co., Ltd. has applied to register the trademark of "area sensor."

■ Initiatives Aimed at Promoting Installation of ENE-FARM

Since its launch in 2009, cumulative sales of ENE-FARM exceeded 100,000 units as of March 2019. ENE-FARM type S has achieved the world's highest power generation efficiency of 53.5%*³. Surplus electricity generated by ENE-FARM can be sold, and ENE-FARM also offers great environmental benefits, where every 100,000 units contribute to a reduction of approximately 170,000 tons of CO₂ emissions per year. It is also excellent in disaster prevention, as ENE-FARM with self-sustaining functions continue to generate electricity and provide electricity and heat to residential homes even if a power failure occurs. It was confirmed that during the disaster caused by Typhoon Jebi in September 2018, at least approximately 850 units of ENE-FARM were able to generate electricity independently, using monitoring services with IoT technology. Osaka Gas is striving to advance further technology development and cost reduction while continually contributing to the realization of comfortable living for customers, mitigation of environmental loads, and enhancement of energy security.



Image showing using a home appliance with a power outlet for independent operation

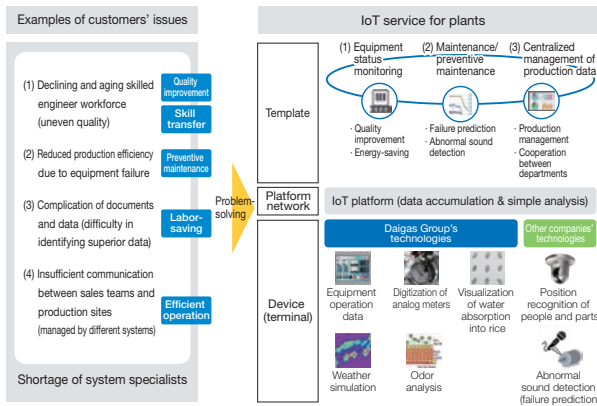
*3 The world's highest power generation efficiency for a residential fuel cell with a rated output of 1kW or less (surveyed by Osaka Gas as of January 29, 2018). The power generation efficiency observed when the rated power generation is maintained consistently for more than 10 hours, in case of purchasing surplus electricity. In cases other than the above, the rated power generation efficiency is 52% (overall efficiency 87%).

Measures for Commercial and Industrial Use

To enable optimized, efficient energy usage, we provide solutions to meet utilities-related outsourcing needs at our customers, along with services that leverage engineering, the IoT and other advanced tools in the development of technologies and products needed by our customers.

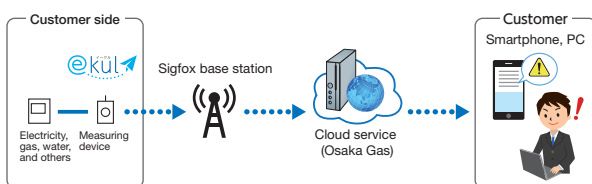
IoT Services for Plants

In June 2019, we started a new service that utilizes IoT to offer solutions that lead to higher plant productivity. The new service is a one-stop IoT service where we select optimal devices and sensors and offer data visualization and analysis tools. The service enables minimizing unexpected equipment failures by monitoring trends in equipment operation data and maintaining stable quality by checking processing conditions against product quality data. It also becomes possible to digitize the expertise of skilled engineers, supporting the transfer of skills. By combining our own expertise with AI, IoT, and other advanced technologies, we will continue to expand our services that are helpful for our customers to grow their businesses and resolve any issues that they may have.



Services Using ICT

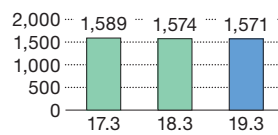
For the commercial and industrial customer, we have developed various services using Information and Communications Technology (ICT). "ekul" is a service which can measure immediately and provide gas and electricity usage information in real time, and can also measure various data, including water usage, number of customers, temperature, and humidity. In April 2019, the "ekul lite" service plan was also launched as a derivative plan of "ekul." The new service plan combines features such as simple device configuration, a measuring device that can be installed anywhere thanks to battery-powered operation, and the availability of existing "ekul" service functions. We will continue to help our customers grow their businesses by providing a wide variety of services.



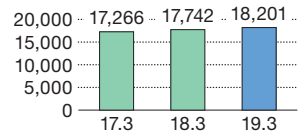
Expanded Use of Gas Cogeneration Systems and Air Conditioning Systems

We are continuing to propose cogeneration systems and gas air conditioning systems that help reduce peak electricity and promote energy conservation.

Industrial Gas Cogeneration Running Capacity (thousand kW)



Gas Air Conditioning and Gas Heat Pump Cumulative Capacity (thousand kW)



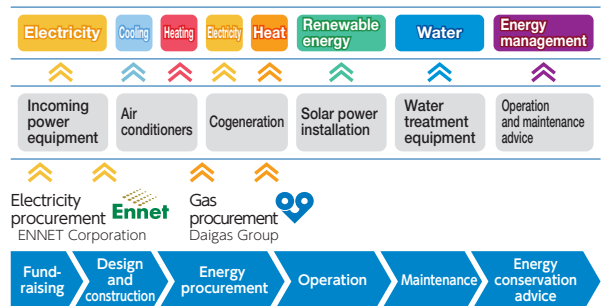
(Note) Output basis

Utility Agent* Contract

In Daigas Group's utility agent contracts, OGCTS Co., Ltd. provides a full-range of utilities-related services, combining nine categories. By proposing in a single package optimized utility facilities (for gas, electricity, water, etc.), no requirement for initial investment, optimized procurement of energy, facility operation/maintenance, and energy-saving technical advice after facility introduction, we ensure continuous energy- and cost-saving not only at the time of introduction but also during operation.



* Trademark "Utility Agent" is a registered trademark of Osaka Gas Co., Ltd. and OGCTS Co., Ltd.



Engineering Services

Leveraging technologies built up over the years, we carry out thorough investigations into energy load at all customer facilities and provide solutions to issues faced by the customer using simulations and other measures at one of Japan's largest test sites. Construction work and post-project maintenance are also carried out by the Daigas Group. We propose total solutions, including regular inspections, emergency troubleshooting, and facility upgrades.

Diagnosis results As of March 31, 2019

Industrial facilities	Power measurement
Approx. 6,200 units	Approx. 1,900 systems

Development of Energy and Services in a Wider Area, Establishment of Competitive Infrastructure

We will expand the provision of energy and services across the country while pursuing the development of competitive infrastructure as a gas and power operator.

■ Expansion of Wide-Area Businesses

As competition continues in the Kansai area's energy business, we aim to broaden our business areas across the country, particularly in the Greater Tokyo area, to grow our Domestic Energy Business. In addition to leveraging the expertise and know-how built through our businesses in the Kansai area, we will expand our operations going beyond regional and corporate boundaries through alliances with other companies.

■ Initiatives in the Greater Tokyo Area

In April 2018, we established CD Energy Direct Co., Ltd., a joint venture with Chubu Electric Power Co., Inc., which combines management resources and business expertise that both companies have fostered through electricity and gas businesses over many years. With the establishment of CD Energy Direct Co., Ltd., we began selling electricity and gas and offering energy-related services in the Greater Tokyo area. Furthermore, we formed business tie-ups in electricity and gas sales, concentrating efforts at CD Energy Direct Co., Ltd. We have acquired about 70,000 customers as of the end of March 2019.

Major business tie-up partners

Business commencement*	Major tie-up partners	Nature of tie-up
October 2018	Tokyu Power Supply	Gas sales
September 2018	ARUHI Marketing Corporation	Electricity and gas sales
October 2018	ENEARC Kanto Co., Ltd.	Gas sales
January 2019	The Yomiuri Shimbun	Electricity sales

* The months that gas supply started are presented.

■ Initiatives across the Country

March 2018: Acquisition of shares in The Reliance Energy Okinawa, Incorporated (ESP* Business)

March 2019: Acquisition of shares in Progressive Energy Corporation (LNG sales business)

We acquired shares of an ESP company and LNG sales company in Okinawa Prefecture, where new demand for energy is expected to increase due to the construction of hotels to keep up with the

rapid increase of tourists, large-scale urban development, and the construction of large-scale retail stores. The Company will contribute to the spread of natural gas, which is clean energy, in Okinawa Prefecture by utilizing its technology and expertise for the use of natural gas while building an LNG value chain ranging from LNG sales to the ESP business in Okinawa Prefecture.

* Abbreviation for energy service provider. ESPs own electrical and heating systems on behalf of their customers and supply electricity and gas in the form of cold and hot water for air conditioning, hot running water, and steam.

September 2018: Establishment of Nagaoka Tansan Co., Ltd.

We built a manufacturing facility for liquefied carbon dioxide and dry ice on land adjacent to INPEX CORPORATION's Nagaoka Mine (Nagaoka City, Niigata Prefecture). Having carbon dioxide as a raw material supplied by INPEX CORPORATION, the company will manufacture and sell liquefied carbon dioxide and dry ice to aid in building a stable supply system.

December 2018: Acquisition of shares in Biwako Blue Energy Co., Ltd.

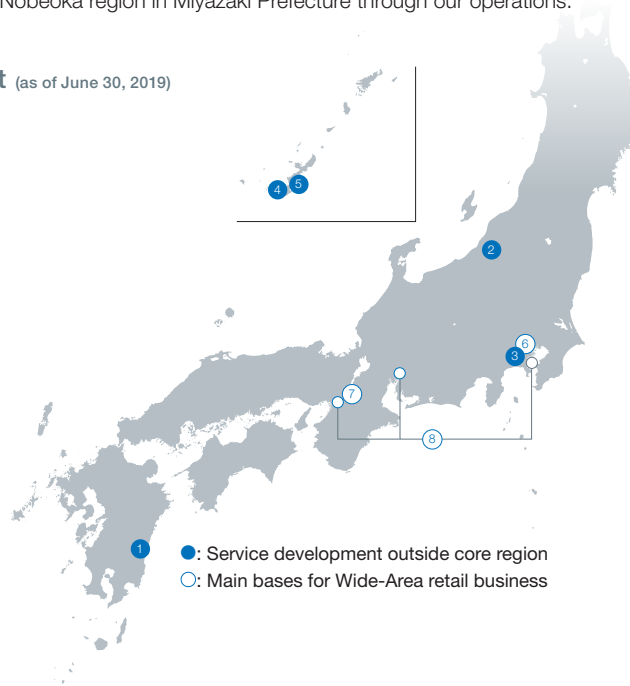
We took over the business from Otsu City, Shiga Prefecture, who was our wholesale gas customer, and Biwako Blue Energy Co., Ltd. started the retail gas business in April 2019. In addition to the retail gas business, the company provides comprehensive energy services that combine peripheral services, such as our electricity, gas equipment, and Sumikata Service, contributing to further advancement of the lives and businesses of the local community in Otsu City.

December 2018: Establishment of Himuka LNG Co., Ltd.

The company will construct, own, and operate infrastructure facilities, such as LNG terminals and pipelines, for supplying natural gas to a new natural gas-fired power plant at which Asahi Kasei Corp. decided to replace its coal-fired power plant in the Nobeoka area (Nobeoka City, Miyazaki Prefecture). By combining the management resources and business expertise of each company, we will work toward the stable supply and expansion of natural gas, which can greatly contribute to energy saving and CO₂ reduction, while helping the advancement of the Nobeoka region in Miyazaki Prefecture through our operations.

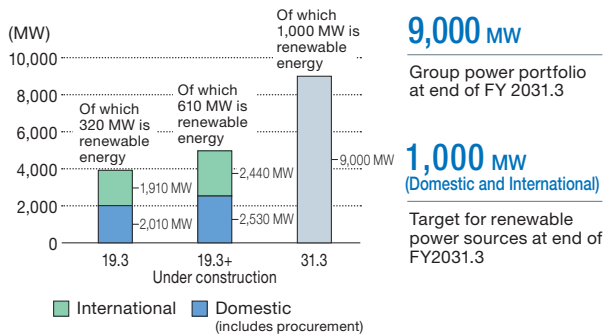
Status of wide-area energy and services development (as of June 30, 2019)

- ① Himuka LNG Co., Ltd.
Stake: 34%
Operation launch: FY2022 (Scheduled)
- ② Nagaoka Carbonic Co., Ltd.
Stake: 100%
Operation launch: April 2021 (Scheduled)
- ③ Ogishima Natural Gas Supply Co., Ltd.
Stake: 15%
Operation launch: April 2020 (Scheduled)
- ④ Reliance Energy Okinawa, Co., Ltd.
Stake: 15%
Investment period: March 2018
- ⑤ Progressive Energy Co., Ltd.
Stake: 25%
Investment period: March 2019
- ⑥ CD Energy Direct Co., Ltd.
Stake: 50%
Business launch: August 2018
- ⑦ Biwako Blue Energy Co., Ltd.
Stake: 74.8%
Business launch: April 2019
- ⑧ ENEARC Co., Ltd.
Stake: 50%
Business launch: October 2017



■ Power Source Development Initiatives

Our group owns a variety of power sources, primarily natural gas-fueled thermal power plants with low environmental impact, as well as cogeneration and renewable energy. Our generation capacity in Japan is approximately 2,010 MW as of March 31, 2019. As an overall Group power portfolio, we plan to be generating around 5,500 MW in Japan and around 3,500 MW overseas, owning a total of 9,000 MW by FY2031.3. To reach the 5,500 MW target for Japan, we aim to ensure flexible response to demand by combining procurement from the power market and peer suppliers. Moreover, by expanding power from renewable sources to a scale of 1,000 MW in both Japan and overseas markets, we will be contributing to creating an overall low-carbon society. Our goal is to create a competitive and environmentally friendly power supply portfolio toward FY2031.3.



■ Withdrawal from Construction Plan for Nishiokinoyama Power Plant (provisional name)

Osaka Gas, Electric Power Development Co., Ltd., and Ube Industries, Ltd., have been examining a plan of building a coal-fired power plant (provisional name: Nishiokinoyama Power Plant) in Nishiokinoyama, Ube City, Yamaguchi Prefecture. However, in light of the changing business environment of the electric power business and future risks, we have decided to withdraw from examining the operationalization of the business project as a result of comprehensive consideration based on the company's investment criteria. (April 24, 2019 press release)

■ Establishment of Green Power Fuel Corporation

On March 7, 2019, as a three company joint venture with Seishin Shinrin Shigen Co., Ltd., and Nippon Paper Lumber Co., Ltd., we established an operational company that procures and sells domestically grown woody biomass to biomass power plants. The Daigas Group already operates or plans to operate seven biomass power plants in Japan, including participation in the Matsusaka Woody Biomass Power Plant, which is fueled 100% with locally available biomass. Through cooperation with Seishin Shinrin Shigen Co., Ltd., which has abundant knowledge of the wood industry, and Nippon Paper Lumber Co., Ltd., which has a long track record of handling domestically grown woody biomass, Green Power Fuel Corporation will provide long-term, stable procurement of domestically grown woody biomass. In the future, the Daigas Group is also considering the possibility of sales to other power generation operators, aiming to consistently expand business by utilizing each company's strengths. Through the establishment and operation of the new company, we will continue our aim to sustainably use domestically grown forest resources as well as further expanding renewable energy power sources.

Total Power Generation Capacity* Domestic Total: 2,010 MW (As of March 31, 2019)

Thermal Power Sources, etc.*

- Senboku LNG Terminal I 20 MW
- Himeji LNG Terminal 66 MW
- Senboku Natural Gas Power Plant 1,109 MW
- Torishima Energy Center, Gas & Power 141 MW
- Uji Energy Center, Gas & Power 67 MW
- Settsu Energy Center, Gas & Power 17 MW
- Senri Energy Center, OGCTS Co., Ltd. 7 MW
- Funamachi Power Plant, Nakayama Joint Power Generation 149 MW
- Nagoya Power Plant, Nakayama Joint Power Generation (excludes biomass-mixed combustion) 142 MW
- Nagoya II Power Plant, Nakayama Joint Power Generation (excludes biomass-mixed combustion) 77 MW
- Fukushima Gas Power 1,180 MW (Under construction) Spring 2020: Launch of operations (Planned)
- Himeji Natural Gas Power Generation 1,200 MW (Under consideration) Mid-2020s: Launch of operations (Planned)

Thermal Power Sources, etc. Total:
approx. **1,795 MW** *

Renewable Energy Power Sources*

[Solar Power Generation]

- Nissan Green Energy Farm in Oita Power Generation, JGC Mirai Solar 26.5 MW
- Energy Bank Japan Power Plants (25 locations) 35.3 MW
- Other Sources, such as Solar Power Generation, etc. 14.9 MW

Total: approx. 63 MW*

[Biomass Power Generation]

- Matsusaka Woody Biomass Power Plant, Biomass Power Technologies 2 MW
- Nagoya Power Plant, Nakayama Joint Power Generation (5% biomass-mixed combustion) 7 MW
- Nagoya II Power Plant, Nakayama Joint Power Generation (30% biomass-mixed combustion) 33 MW
- Ichihara Biomass Power Generation 50 MW (Under construction) October 2020: Launch of operations (Planned)
- Sodegaura Biomass Power Generation 75 MW (Under construction) July 2022: Launch of operations (Planned)
- Hirohata Biomass Power Generation 67 MW (Under construction) August 2023: Launch of operations (Planned)
- Tokushima Tsuda Biomass Power Generation 75 MW (Under construction) March 2023: Launch of operations (Planned)

Total: approx. 40 MW*

[Wind Power Generation]

- Hayama Wind Farm Power Plant 20 MW
- Hirogawa Myojin-yama Wind Power Plant 16 MW
- Yura Wind Power Plant 10 MW
- Hizen Wind Power Plant 12 MW
- Hizen South Wind Power Plant 18 MW
- Hirao Wind Power Plant 9 MW
- Inami Wind Power Plant 26 MW
- Shiribetsu Wind Power Generation 27 MW (Under construction)

Total: approx. 111 MW*



Inami Wind Power Plant

Renewable Energy Power Source Total:
approx. **215 MW***

*Does not include projects under discussion or at the construction stage. Total figures show power generation capacity of Osaka Gas. For each project, the power plant facility capacity is shown.

International Energy Business



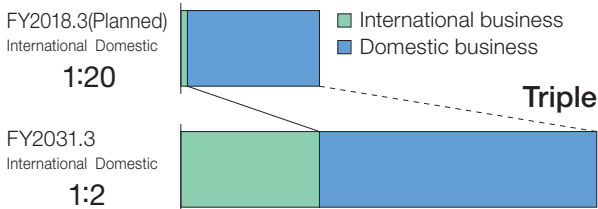
What We Aim to Be in FY2031.3 and Summary of Current Situation

As an energy business operator, the Daigas Group has focused on the natural gas value chain from early on and has made investments abroad accordingly. In the future, we will continue to invest outside of Japan and by FY2031.3 will increase our international-to-domestic business ratio to 1:2. Daigas Group will create a business model capable of generating balanced earnings streams from North America, Asia, and Oceania.

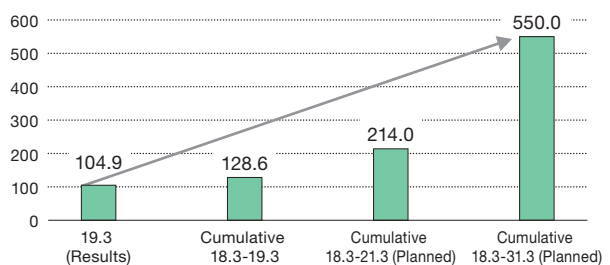
Results of Fiscal Year Ended March 31, 2019
 Net Sales ¥ **40.4** billion Segment Profit* ¥ **5.9** billion

* Operating profit (loss) + Share of profit (loss) of entities accounted for using equity method

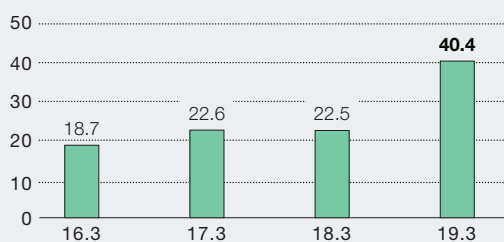
Anticipated FY2031.3 consolidated ordinary profit



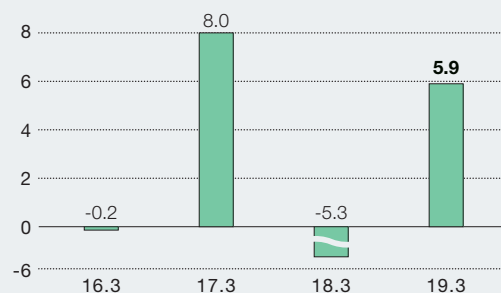
Growth investment in international business (billion yen)



Net Sales (billion yen)



Segment Profit* (billion yen)



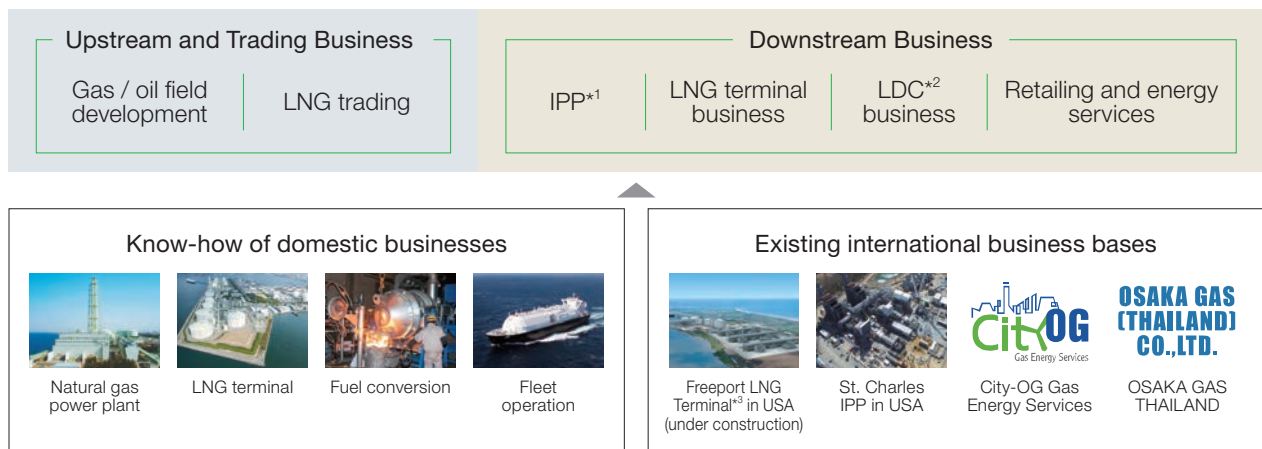
Note: Since FY18.3, Sumisho Osaka Gas Water UK Limited, an equity-method affiliate, changed its segment from "Life & Business Solutions" to "International Energy Business." FY17.3 results are calculated based on the contents after the change.

Efforts to Become What We Aim To Be in FY2031.3

In order to become what we aim to be in FY2031.3, we will promote expansion from upstream to downstream businesses, centering on our priority areas, namely North America, Asia, and Oceania. To do so, we will make full use of the expertise we have cultivated in Japan and the international business infrastructure we have built. Also, we will expand our businesses based on the following three policy points.

- 1 Concentrating management resources on priority areas and priority business in each area
- 2 Accelerating business development by collaborating with mutually complementary partner companies and utilizing M&A
- 3 Increasing business engagement and improving business implementation capabilities (human resource development, development of a quick decision-making system, etc.)

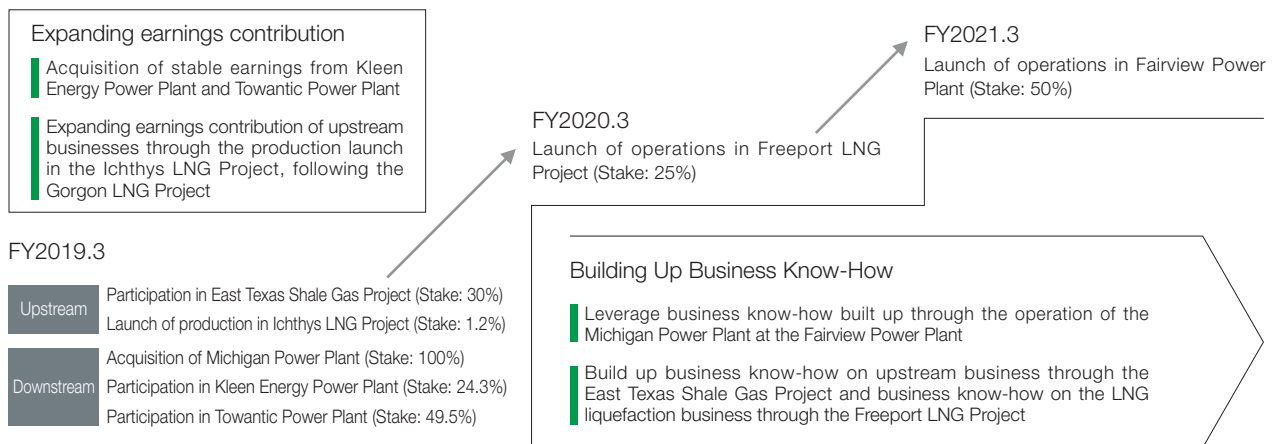
■ We will strengthen the profit structure of the international energy business by strengthening each business field.



*1 Independent Power Producer *2 Local Distribution Company *3 Freeport LNG Development, provided by L.P. (projected image completion)

■ Specific Initiatives

We aim for sustainable growth by building up business expertise for conducting business independently as well as expanding earnings contribution through growth investment projects. We will strive to strengthen the competitiveness of LNG procurement and expand earnings in the trading business.



■ Development in Southeast Asia and LNG Trading

In Southeast Asia, we are engaged in natural gas sales and energy services in four countries: Thailand, Singapore, Indonesia, and Vietnam. With regard to LNG trading, we are expanding operations while responding to customer needs, such as optimization through swaps and contract reclassification.

Upstream and Trading Business

■ Business Overview and Characteristics

In upstream businesses, we are contributing to growth and stabilization of overall our group earnings, in addition to acquiring useful expertise in LNG procurement. While steadily proceeding with projects in which our participation is already decided, we aim to create an earnings platform and improve our business potential chiefly by acquiring new projects in production or development. With regard to trading operations, we plan to expand sales while responding to customer needs, by leveraging our diversified procurement portfolio and broadening the range of project partners and methods, ensuring optimization through use of swaps and contract reclassification. In Australia, while the Gorgon LNG Project (in which we hold 1.25% of the rights) that launched production in 2016 is steadily contributing to earnings, we expect further earnings contribution from the Ichthys LNG Project (in which we hold 1.2% of the rights), which launched

production in 2018. In North America, we acquired interest in the East Texas Shale Gas Project, currently in production, in 2018. We will proceed with new developments in this project and expect further stable long-term production in the future.



Gorgon LNG Project



Ichthys LNG Project



East Texas Shale Gas Project

Downstream Business

■ Business Overview and Characteristics

In downstream businesses, we aim to secure stable income by utilizing the know-how and experience cultivated in the domestic energy business to improve the business value of each project. The Group participates in LNG terminal and IPP businesses and other business in North America, Europe, the Middle East,

and Australia. We are also engaged in natural gas sales and energy services in Southeast Asia and would like to expand into projects such as power plants and LNG terminals. We will continue to make use of business expertise amassed in the region to proactively develop our businesses.

■ Status of Investments

Natural Gas-Fired Thermal Power Plants in the USA Market

In the United States, an environment-friendly natural gas-fired power plant is expected as a measure to respond to the increasing demand for stable power supply due to the abolition of aging coal-fired power plants and the expansion of renewable energy. Since participating in North American natural gas thermal power plant projects for the first time in 2004, we have in recent years participated natural gas thermal power plant projects, mainly in the US northeast including in the PJM Market, one of the largest wholesale power markets in the US. We aim for independent power-plant operation by accumulating the know-how we have built up in the US power business including in project fuel procurement and marketing to the power-generation market. In 2018, we took a 100% stake in Michigan Power's natural gas-fired power plant business and are proceeding with initiatives to operate the business independently. In addition, we are steadily expanding our businesses, through the acquisition of interest in the Kleen Energy natural gas-fired power generation business and the Towantic natural gas-fired power plant business; we are currently building up their earnings contribution. Moreover, we are proactively exploring investment opportunities in the renewable energy business, which are expected to expand in the US.



Michigan Power natural gas-fired thermal power plant



Kleen Energy natural gas-fired thermal power plant



Towantic natural gas-fired thermal power plant

Steady Progress on Freeport LNG Project

Construction is steadily advancing at the Freeport LNG Project in Texas, USA, where the launch of commercial operation of the liquefaction business is scheduled around autumn 2019. LNG procurement from the USA is aimed at diversifying our supply sources and our LNG price indexation. It also introduces LNG without restrictions on the country of destination, which will help us to achieve stable and competitive LNG procurement.

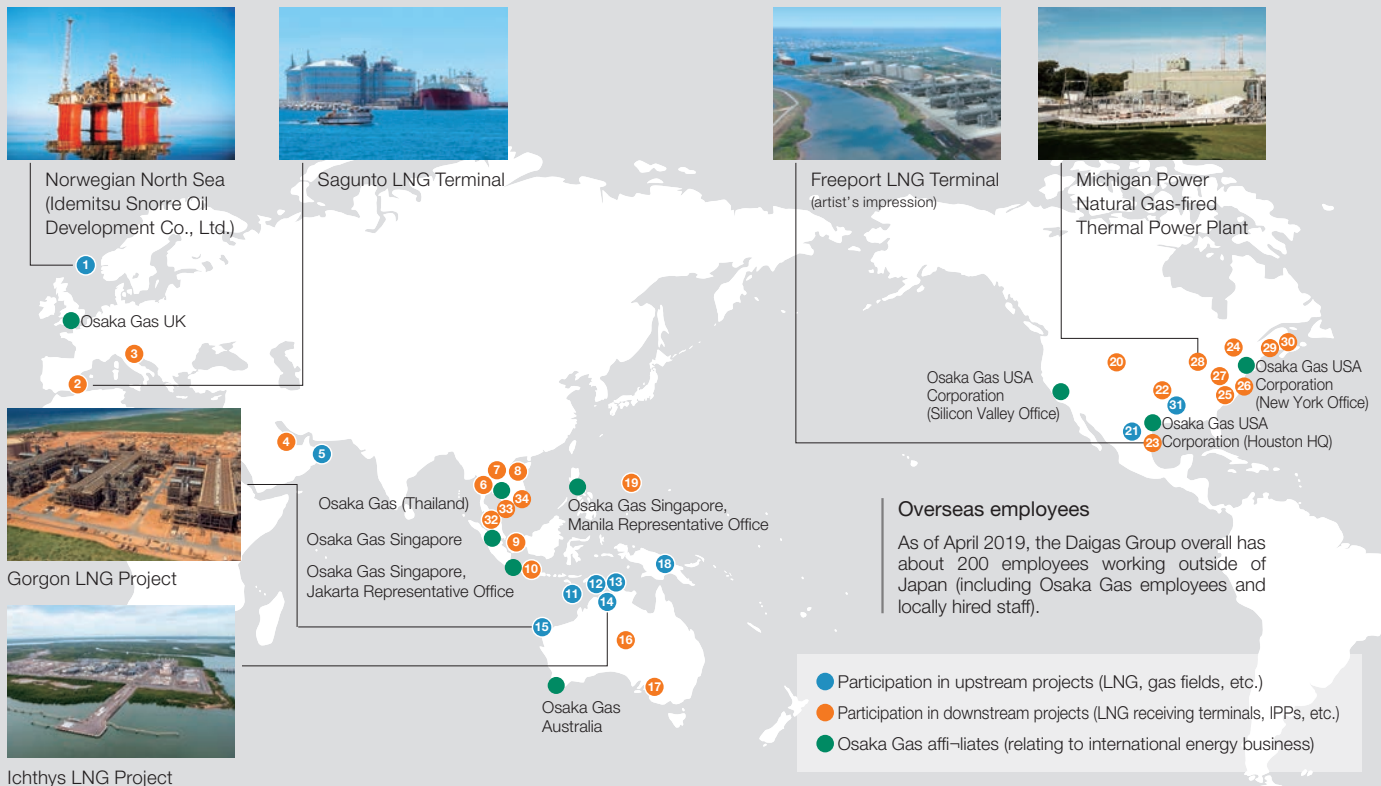
Business Development in Southeast Asia

In March 2013 we set up a local representative company in Singapore and in October 2013 we also set up a local company in Thailand to sell natural gas and provide energy services. We are developing businesses in four countries in Southeast Asia, including the establishment of a local representative company in Indonesia in August 2018 and the establishment of a joint-venture company in Vietnam in July 2019. We will be expanding our international energy business by promoting business activities while responding to local needs, particularly in Southeast Asia, where the demand for natural gas is expected to grow.



Artist's impression of completed Phu My 3 Specialized Industrial Park

Investments in the International Energy Business (As of July 31, 2019)



Participation in upstream projects (LNG, gas fields, etc.)

- 1 Norwegian North Sea (Idemitsu Snorre Oil Development Co., Ltd.)**
Stake since 2005: 1-10%
- 5 Qalhat LNG**
Stake since 2006: 3% LNG output: 3.3 million tons/year
- 11 Crux Gas and Condensate Field**
Stake since 2007: 3%
- 12 Sunrise LNG Project**
Stake since 2000: 10%
- 13 Evans Shoal Gas Field**
Stake since 2000: 10%

- 14 Ichthys LNG Project**
Stake since 2012: 1.2% Projected LNG output: 8.4 million tons/year (planned)
- 15 Gorgon LNG Project**
Stake since 2009: 1.25% Projected LNG output: 15.0 million tons/year (planned)
- 18 Western Papua New Guinea Gas and Condensate Field**
Stake since 2014: 10 - 20% (ratio depends on field)
- 21 Pearsall Shale Gas and Liquids Development Project**
Stake since 2012: 35%
- 31 East Texas Shale Gas Project**
Stake since 2018: 30%

Participation in downstream projects (LNG receiving terminals, IPPs, etc.)

- 2 Sagunto LNG Terminal**
Ownership interest since 2010: 20% Vaporization capacity: 6.4 million tons/year
- 3 Erogasmet**
Ownership interest since 2015: City gas distribution business
- 4 Shuweiht S2 IWPP**
Ownership interest since 2011: 10% (25% equity interest in the operation and maintenance company)
Power generation capacity: 151 MW Freshwater processing capacity: 10 million gallons/day
- 6 Osaka Gas (Thailand)**
Ownership interest since 2013: Energy services business
- 7 OGP Energy Solutions**
Ownership interest since 2015: Energy services business
- 8 NS-OG Energy Solutions**
Ownership interest since 2014: 30% Cogeneration business
- 9 CITY-OG Gas Energy Services**
Ownership interest since 2013: 49% Gas retail business
- 10 PT OSAKA GAS INDONESIA**
Ownership interest since 2018: Natural gas joint marketing business
- 16 EII (Energy Infrastructure Investments)**
Ownership interest since 2008: 30.2% Four pipelines, two gas-refining facilities, two power plants, two interconnected power transmission lines Power generation capacity: 18 MW
- 17 Hallett 4 Wind Farm Project**
Ownership interest since 2009: 39.9% Power generation capacity: 53 MW
- 19 Marianas Energy IPP**
Ownership interest since 2005: Power generation O&M business
- 20 Osaka Gas Power America**
Ownership interest since 2005: 6 IPP projects Power generation capacity: 301 MW

- 22 Tenaska Gateway IPP**
Ownership interest since 2004: 40% Power generation capacity: 338 MW
- 23 Freeport LNG Terminal (vaporization business)**
Ownership interest since 2008: 10.81% Vaporization capacity: 13 million tons/year
- 23 Freeport LNG Project**
Ownership interest since 2012: 25% (first train) LNG output: 4.64 million tons/year (planned)
- 24 Aurora Solar Power Generation Project**
Ownership interest since 2012: 50% Power generation capacity: 51 MW
- 25 St. Charles Energy Center Natural Gas-Fired Power Plant**
Ownership interest since 2015: 25% Power generation capacity: 181 MW
- 26 Shore Natural Gas-Fired Thermal Power Plant**
Ownership interest since 2017: 20% Power generation capacity: 145 MW
- 27 Fairview Natural Gas-Fired Thermal Power Plant**
Ownership interest since 2017: 50% Power generation capacity: 525 MW
- 28 Michigan Power Natural Gas-Fired Thermal Power Plant**
Ownership interest since 2018: 100% Power generation capacity: 125 MW
- 29 Kleen Energy Natural Gas-Fired Thermal Power Plant**
Ownership interest since 2018: 24.3% Power generation capacity: 151 MW
- 30 Towantic Natural Gas-Fired Thermal Power Plant**
Ownership interest since 2018: 49.5% Power generation capacity: 399 MW
- 32 AGP International Holdings Pte. Ltd.**
Ownership interest since 2019: LNG business
- 33 OE Solar Co., Ltd.**
Ownership interest since 2019: 49% Solar power generation business
- 34 Sojitz Osaka Gas Energy Company Ltd.**
Ownership interest since 2019 (planned): 49% Gas supply business

Life & Business Solutions (LBS)

What We Aim to Be in FY2031.3 and Summary of Current Situation

The Daigas Group actively applies the technologies and know-how it has accumulated in the energy business, developing businesses that differ from the energy field in order to diversify business risk. These non-energy businesses are playing a major role in supporting the Daigas Group's earnings base as a stable source of earnings, particularly as crude oil prices and foreign exchange trends remain unclear.

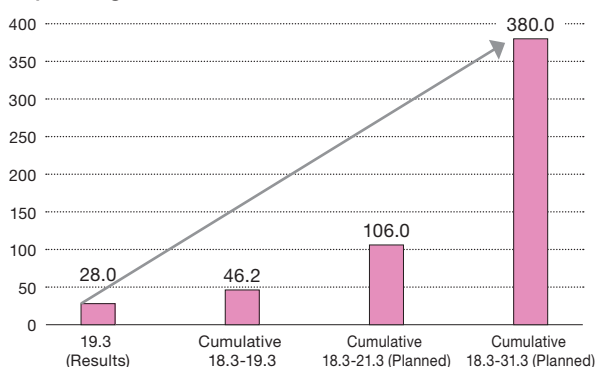
We plan to accelerate growth in three core business areas in Life & Business Solutions—Real Estate, Materials Solutions, and Information Solutions—aiming to consistently increase profits through fiscal 2031.3.

Results of Fiscal Year Ended March 31, 2019

Net Sales ¥ **210.9** billion Segment Profit* ¥ **17.7** billion

* Operating profit (loss) + Share of profit (loss) of entities accounted for using equity method

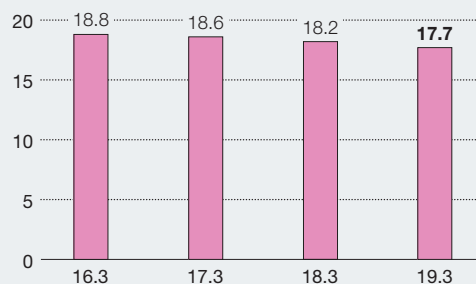
Expanding Growth Investment in LBS Business (billion yen)



Net Sales* (billion yen)



Segment Profit* (billion yen)



Note: Since FY18.3, Sumisho Osaka Gas Water UK Limited, an equity-method affiliate, changed its segment from "Life & Business Solutions" to "International Energy Business." FY17.3 results are calculated based on the contents after the change. Since 1Q of FY19.3, Osaka Gas Engineering Co., Ltd. changed its segment from "Life & Business Solutions" to "Domestic Energy/Gas." FY18.3 results are calculated based on the contents after the change.

Real Estate Business — Osaka Gas Urban Development Group

■ Business Overview and Characteristics

Our real estate business extends widely to include the development of properties such as sale and rental apartments, office buildings, management of buildings and facilities, and so on.

■ Key Strategies Through FY2021.3

We aim to strengthen the earnings base of existing businesses and establish new earnings by expanding both our range of business offerings and their geographical expansion to the Greater Tokyo area.

■ What We Aim to Be in FY2031.3

The Group aims to be a strong player in diverse areas such as leasing, sales, and maintenance by expanding business in the Kansai area as well as in the Greater Tokyo area.



UX Minami Shinagawa



UX Minato Motomachi



Urbanex Fukagawa Sumiyoshi



■ About the Osaka Gas Urban Development Group

Osaka Gas Urban Development Co., Ltd.

Osaka Gas Urban Development Co., Ltd. is developing condominiums for sale under the "SCENES" brand, along with rental condominiums and rental offices under the "Urbanex" brand.

Osaka Gas Facilities Corporation (OGFA)

Osaka Gas Facilities Corporation provides comprehensive management services such as facility operation management, security, and cleaning at facilities such as office buildings, hospitals, research facilities, and factories. In addition, we meet the wide-ranging needs of customers in relation to buildings and facilities, extending from repair work and large-scale renovations to energy conservation, CO₂ reductions, and the visualization of energy consumption.

Kyoto Research Park Corp. (KRP)

Kyoto Research Park Corp. is an industrial cluster home to nearly 400 tenant venture companies and organizations. In addition to providing offices and laboratories, KRP promotes the creation of new businesses in collaboration with Kyoto Prefecture, Kyoto City, and universities. KRP aims to be a hub for innovation that generates new ideas and business by bringing together individuals and companies working in diverse fields.

Prime Estate Co., Ltd. (PE)

Prime Estate Co., Ltd., based in the Yokohama and Shizuoka areas, is engaged in real estate development, leasing, and sales brokerage, primarily from the Greater Tokyo area to the Tokai area.

■ Acquisition of Prime Estate Co., Ltd.

In July 2018, we acquired all the shares of Prime Estate Co., Ltd., which owns offices, housing, and commercial facilities in the Greater Tokyo area. Through this acquisition, we aim to expand our business in the Greater Tokyo area.

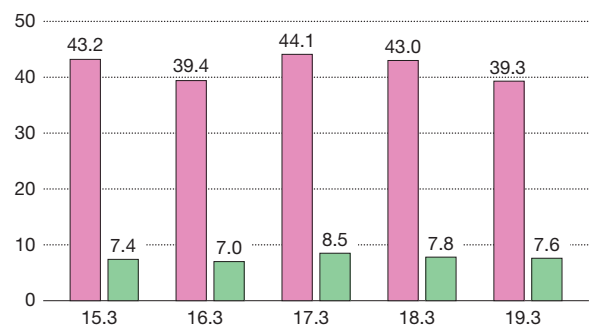


■ About the Fiscal Year Ended March 31, 2019

In the fiscal year ended March 31, 2019, profits decreased from the previous year due to a decline in the number of units sold in the built-for-sale housing business, despite a steady accumulation of profitable real estate in the leasing business.

Osaka Gas Urban Development Group

Net Sales / Segment Profit (billion yen) ■ Net Sales ■ Segment Profit



Materials Solutions Business — Osaka Gas Chemicals Group

■ Business Overview and Characteristics

We develop, manufacture and sell highly functional materials based on our own coal chemistry technologies and pharmaceutical- and agrochemical-related technologies. In 2014 we acquired Jacobi Carbons AB (Sweden) and are developing our business globally.

■ What We Aim to Be in FY2031.3

Engaged primarily outside of Japan, we aim to become a manufacturer of functional materials with a top position in niche markets that contributes positively to industry, life, and the environment.

■ Key Strategies Through FY2021.3

We aim to establish a stable earnings base and achieve sustainable growth by developing and expanding sales of products with high added value in a diverse product offering, while also pursuing synergies and developing new markets.

We will also be working on substitutions in our business portfolio on a continuous basis to adapt to changes in the times.

Fine Materials	Carbon Materials	Activated Carbon	Silica- and Alumina-based Materials	Preservatives
Development of various applications for fluorene with its excellent optical properties and heat resistance	Expanded sales of DONACARBO carbon fiber with its excellent heat insulation and abrasion resistance	Expanded global value chain through cooperation between the Jacobi Group and Osaka Gas Chemicals	Expanded sales of adsorbents and additives and efforts toward developing new applications	Development of wood preservatives, industrial preservatives, industrial coating agents
Resins for camera lenses in smartphones and other devices, semiconductor materials, liquid crystal displays	Molded insulation for silicon manufacturing furnace for photovoltaic cells	Activated carbon for purification processes in food, alcohol and pharmaceutical manufacturing, air purifiers and water filters	Activated clay for petroleum and for refining cooking oil	Xyladecor® wood preservative, Xylamon termiteicide
	 <p>Acoustic insulation material for train cars</p>			

■ About the Osaka Gas Chemicals Group

Osaka Gas Chemicals Co., Ltd.

Established in 1931, Osaka Gas Chemicals Co., Ltd. employs technologies cultivated in coal chemistry and pharmaceuticals to develop highly functional materials that add value to customers' products.

Mizusawa Industrial Chemicals Group

Mizusawa Industrial Chemicals, Ltd. was established in 1937 to domestically refine the activated clay needed for refining petroleum and fats and oils. It joined the Daigas Group in 2015.

Jacobi Carbons Group

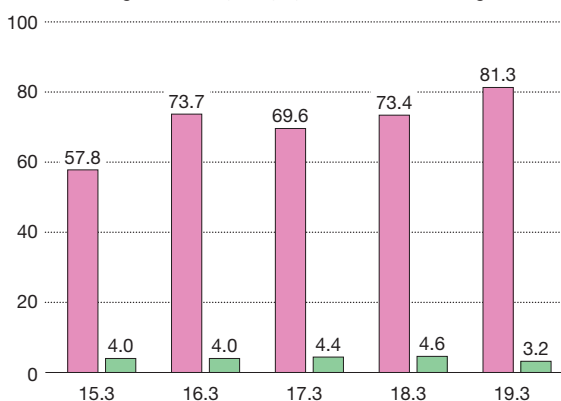
An activated carbon producer established in Sweden in 1916, Jacobi Carbons AB does business in 18 countries. It joined the Daigas Group in 2014. Osaka Gas Chemicals Co., Ltd. and the Jacobi Group together form the second largest activated carbon producer in the world. (Based on Osaka Gas Chemicals' FY2018.3 performance)

■ About the Fiscal Year Ended March 31, 2019

In the fiscal year ended March 31, 2019, profits decreased from the previous year due to the impact of soaring prices of raw material for activated carbon, despite an increase in sales of functional materials.

Osaka Gas Chemicals Group

Net Sales / Segment Profit (billion yen) ■ Net Sales ■ Segment Profit



Information Solutions Business – OGIS-RI Group

■ Business Overview and Characteristics

OGIS-RI traces its roots back to developing and managing systems for the gas business of Osaka Gas. After various acquisitions, it organized a group of system providers to offer services to the manufacturing and financial industries. By sharing the expertise of each company in the group, we provide comprehensive IT services ranging from consulting, design, development, and the operation of corporate information systems to data centers, cloud services, and security.

■ What We Aim to Be in FY2031.3

Through high-level innovation in information and communications technologies, we aim to be a corporate group that provides new value and grows sustainably with customers.

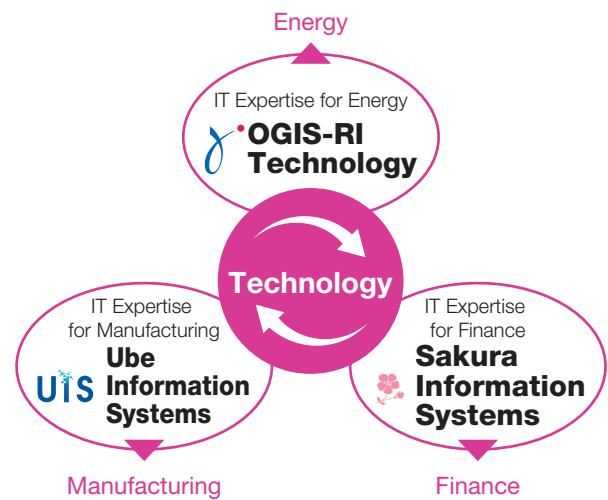


OGIS-RI Head Office

■ Key Strategies Through FY2021.3

Our strategy is to differentiate ourselves with a priority placed on the fields of finance, manufacturing, and energy as we expand our business beyond the Daigas Group.

We will apply our cumulative expertise and introduce new technologies to improve the competitiveness of the Daigas Group.



■ About the OGIS-RI Group

OGIS-RI Co., Ltd.

Established in 1983, it is the systems provider company of the Daigas Group with extensive IT expertise in the energy industry.

Sakura Information Systems Co., Ltd.

Established in 1972, it is engaged in the construction and operation of key systems for the Sumitomo Mitsui Banking Corporation Group and has extensive expertise in the financial industry.

Ube Information Systems, Inc.

Established in 1983, it provides systems construction and operation as a comprehensive information processing service company of the Ube Industries Group and has IT technology in the manufacturing industry.

■ About the Fiscal Year Ended March 31, 2019

In the fiscal year ended March 31, 2019, profits increased year on year due to strong sales in manufacturing and financial projects, in addition to those for the Daigas Group.

OGIS-RI Group

Net Sales / Segment Profit (billion yen) ■ Net Sales ■ Segment Profit



Innovation / Technological Development

To address the challenge of creating new value beyond conventional frameworks, the Daigas Group will further commit to innovation, including open innovation and digital technologies, with the aim of ensuring optimized solutions for customers and fostering next-generation innovation.

Promotion of Innovation

Set up the Innovation Headquarters

- Set up the Innovation Headquarters with the aim of creating new values through business reforms
- Set up the Innovation Promotion Department and integrally promote companywide innovation activities

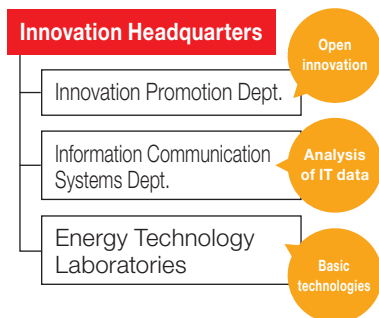
Advance Open Innovation

- Collaborate with diverse corporate partners not only in the field of technology but also in the service field
- Strengthen Silicon Valley-based activities
- Collaborate with start-up companies at home and abroad

Promote digitization Exploration of technology

- More convenient lifestyle services and business solutions utilizing IoT and AI
- New electric power business utilizing distributed energy sources and ICT
- High-level infrastructure operations with digitalization
- Innovative technology development such as fuel cells

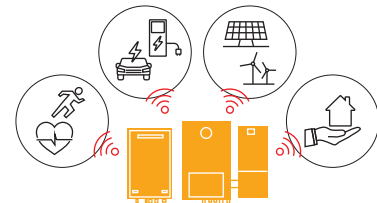
Challenge of creating new value



Co-create New Businesses



Equipment and energy bringing lifestyle reforms



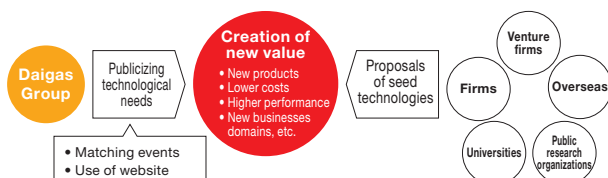
Business reforms in preparation for a paradigm change

Products and services that go beyond customer expectations

Achieving drastic business reforms

Open Innovation Developments

By fusing proprietary and outside technologies, Daigas Group is developing open innovation, aiming to speed up the pace of technological development while improving functionality and cutting costs. In the fiscal year ended March 31, 2010, we began publicizing technological needs. We have sponsored technology exhibitions, formed alliances with other companies, attended technology-matching conventions and developed alliances with universities.



Investment in US Venture Fund

In April 2018, we invested in a venture investment fund operated by WiL LLC, a venture capital company headquartered in Silicon Valley. Through this investment, we aim to invest in and form alliances with start-up companies mainly in Japan and the United States to accelerate the pace of innovation-oriented activities, including the creation of convenient daily services and business solutions using the IoT, AI and other digital technologies, as well as ensuring high infrastructure operational standards.

Examples of Major Initiatives

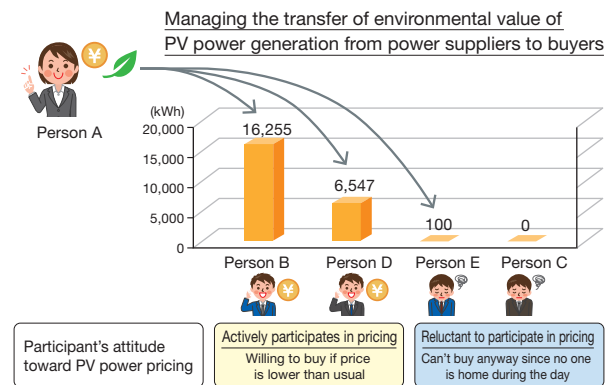
■ “TORCH”: A Program for New Business Creation for Young Employees

We are promoting a program in which young, willing employees share ideas and create new businesses. The program name, “TORCH,” stands for both the flame of gas and the passion of young employees. For the creation of ideas, our young employees use the “Foresight Creation” methodology of Osaka Gas Research Institute of Behavior Observation. Project management is entrusted to Loftwork Inc., which has a reputation for supporting the creation of new businesses within a company. In the fiscal year ended March 31, 2019, 26 employees from our Group companies participated in the program. These employees were divided into seven teams and spent about two months considering business ideas. The ideas were presented to all employees in a contest format. Business ideas that are highly evaluated in the contest are considered in more detail and will aim for commercialization while conducting actual test marketing. While aiming to create new businesses that are not confined to existing business frameworks, participants will apply the knowledge gained through the program to their current operations, building a culture of innovation throughout the company.



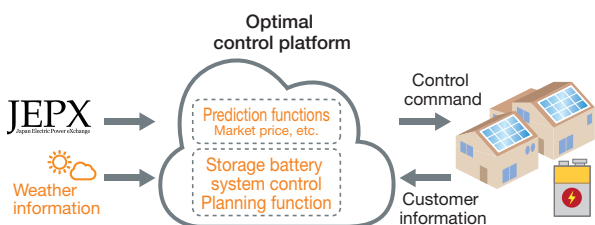
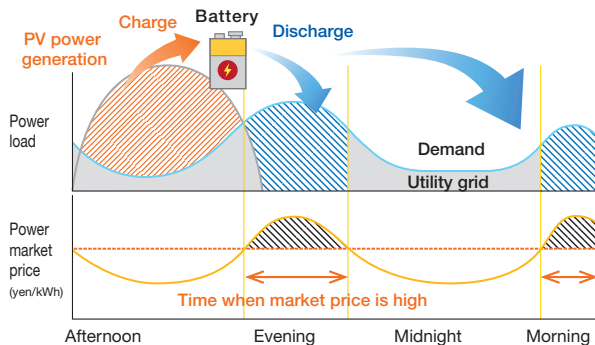
■ Demonstration of Individual Power Transaction by Residents

Using the actual living environment of NEXT21, the experimental housing site owned by Osaka Gas, we are conducting demonstration tests of power transactions between individuals using blockchain technology. Through liberal pricing by residents, we aim to create services that answer to our customer's emerging needs. This includes enabling our customers to select and trade highly environmentally friendly power such as solar power generation and ENE-FARM.



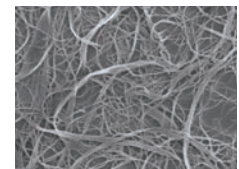
■ Joint Demonstration Project with Virtual Power Plant (VPP) Platform Startup Company in the USA

With Growing Energy Labs, Inc., we are jointly conducting a control demonstration of storage battery for the optimization of PV self-consumption and demand and supply adjustment of the power system by predicting power market prices and photovoltaic (PV) power output. We aim to provide a variety of values to our customers through the advanced use of a distributed power generation system.



■ Development of Fluorene Cellulose® as a Fiber for Strengthening Resin

Osaka Gas developed fluorene cellulose, a cellulose fiber with uniform dispersion, by reacting the cellulose fiber surface with a fluorene derivative. Fluorene cellulose does not mix easily with water but mixes easily with resin. Fluorene cellulose is a resin fiber material with low environmental impact and has strong potential for use in home appliances and as a structural material in automobiles.

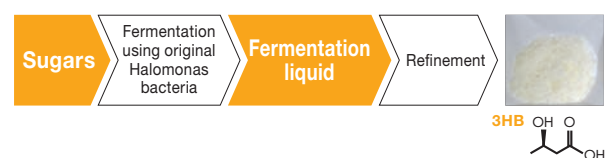


Electron microscope image of fluorene cellulose

■ Successful Production of Ketone Bodies, Known for Their Use in Diets

Osaka Gas has developed a method for manufacturing ketone bodies, (R)-3-hydroxybutyric acid (3HB), using bioprocess (fermentation) technology cultivated over many years in collaboration with the National Institute of Advanced Industrial Science and Technology. Recent years have seen rising interest in ketone bodies for their effectiveness in dieting and improving athletic performance. Osaka Gas has succeeded for the first time in effectively generating and isolating 3HB using bioprocesses. We anticipate new applications for their use in the future in health foods, supplements, and cosmetics.

Fermentative production of (R)-3-hydroxybutyric acid (3HB), ethyl (R)-3-hydroxybutyrate (3HB ethyl)



■ Weather Simulation Technology by an Energy Company

The energy business is closely related to weather conditions. The demand for electricity and gas depends on the temperature and the amount of solar power generation is affected by the amount of sunlight. Under such business circumstances, we have traditionally made effective use of weather information in our business operations. For example, weather information has been applied to predict sales of gas fan heaters, in providing

data to natural gas-fired power plants whose output changes with atmospheric temperature and pressure, and in examining construction sites for wind power plants.

In the fiscal year ended March 31, 2019, we obtained a weather forecast service permit in order to provide new services to our customers with businesses that are likely to be significantly influenced by weather conditions.

Interview with Project Leader

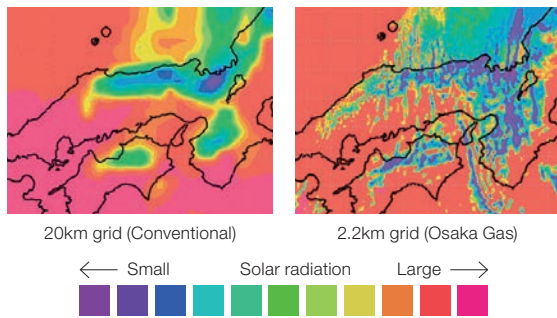
Q1. Why did you focus on weather simulation?

About ten years ago, the need was not yet apparent but since the energy business is closely related to the weather, we felt that there will come a time when it will become an important factor in business development. So, we thought that if we could forecast weather conditions such as wind, solar radiation, and rain based on fluid simulation technology that we had cultivated for 30 years, it would become a new fundamental technology.

Q2. What are the advantages of our weather simulation technology?

It carries out simulations in finely divided grids, focusing on our supply area, while also combining AI technology to enable highly accurate, pinpoint predictions.

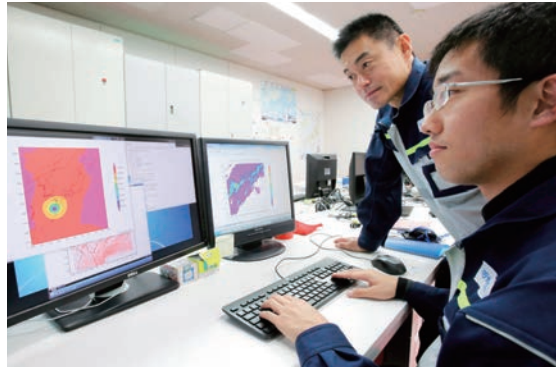
Example of solar radiation prediction [W/m²]



Note: If the simulation is performed with a fineness of approximately 1/9 (2.2km grid) of the conventional grid size, it is possible to predict more detailed weather changes (clouds, solar radiation, etc.)

Q3. What is in store for the future?

In recent years, as the movement to predict renewable energy in advance has become active primarily in Europe, there has been also an increased momentum in Japan to predict the amount of generated renewable energy, such as wind and solar power. We would like to advance our technological development in order to contribute to such fields. In the future, we will strive to provide paid services to customers who need weather forecasts. These customers include those in the retail and service industries where the number of customers and sales vary depending on temperature and weather, as well as those in the agricultural industry, where weather affects harvests.



Intellectual Property Strategy

The Daigas Gas Group positions intellectual property rights as an important management resource. At the same time, the Group takes proactive steps to secure and utilize intellectual property rights in concert with its business and technology development strategies.

■ Strategically Acquiring Intellectual Property Rights

We acquire patents on a steady basis by focusing on invention and discovery that is closely related to specific development sites, incorporating judgments on patentability from external authorities after filing. Through patent analysis and mapping, we are able to build a thorough and complete network of patents, which is an important motif. In the fiscal year ended March 31, 2019, 360 patents were filed, totaling 3,286 held by the Daigas Group,

including patents for upstream gas production, distribution and supply, and downstream gas appliances and material technologies. The intellectual property rights that we possess are used for business and are actively licensed to other companies. In addition, we are careful to acquire trademarks for services and products we offer and protect company brands. As of March 31, 2019, the Daigas Group holds 1,068 trademarks.

■ Establishing a New Method of Evaluating Rice for Sake Brewing

In the process of studying how the state of water absorption by rice affects rice cooking, we established an evaluation technology to visualize and quantify the state of water absorption. Since 2016, we began evaluating liquor rice (rice for sake brewery, or sake rice) with the Fushimi Sake Brewers Association. We have verified the consistency of the technology with conventional methods of evaluating the state of water absorption by rice visually and by weight, and correlations with

various data from the brewery site. As a result of a two-year joint verification, we were able to confirm that this evaluation technology is also effective in evaluating rice for sake breweries and corresponded with the sense of those at brewery sites. In the future, we will aim to support our customers' production and use this method in various fields, while further expanding its scope of application, including other foods.

Interview with Project Leader

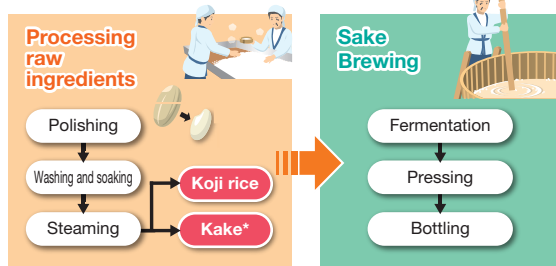
Q1. What are the advantages of this technology?

With this technology, we are able to quantify and visualize the progress of rice soaking in water, a process called "shinseki." This soaking process is extremely important in sake brewing. The optimal soaking time is not constant and changes with the quality and variety of rice each year.

Q2. What are some of the breakthroughs of this technology?

Sake rice for ginjo sake and daiginjo sake is polished to a size of less than 50% of brown rice, so it absorbs water quickly, leading to cracks during absorption. For these reasons, we developed technology that captures the expansion of rice during water absorption three-dimensionally, as well as new image recognition technology using AI, making it possible to accurately capture changes occurring each second.

Process of Sake Brewing



* Sake rice used for fermentation starter and fermentation mash, except for koji making

Q3. What is in store for the future?

We'd like to promote this rice evaluation technology throughout Japan. In addition to rice evaluation technology, we are researching and developing various food evaluation technologies (rice, vegetables, meats, etc.). We would like to offer these technologies as one of our wide range of solution proposals and create new services that help our customers with product quality improvement, manufacturing process management, and product development.



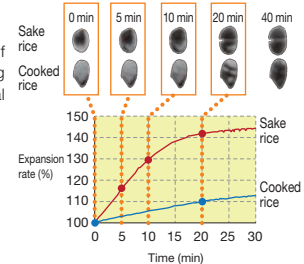
Conventional Method

Check water absorption visually and by weight



Our Method

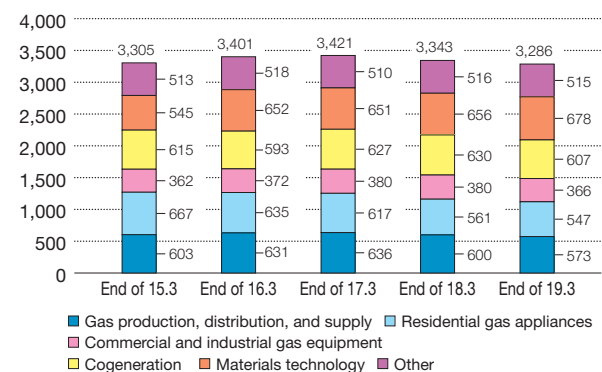
Evaluating the state of water absorption using image recognition in real time



■ Strengthening Intellectual Property throughout the Group

We employ a variety of educational and instructional tools to further improve Daigas Group employees' understanding of intellectual property rights. For example, instructors from both inside and outside the Company conduct training sessions based on both goals and employee career level. We also publish an email magazine and distribute the latest news articles on relevant topics.

The Daigas Group's Patent Portfolio by Business Type (number)





Efforts to Realize Long-Term Management Vision 2030

The Daigas Group has formulated the Long-Term Management Vision 2030 and the Medium-Term Management Plan 2020, in which we adopted “three guiding principles” under its corporate philosophy. One of these principles is setting global ESG (Environment, Social and Governance) standards in its business operations, with the aim of becoming a corporate group that continues to be trusted by investors, business partners, citizens and employees.

We have stepped up our ESG efforts in line with the Daigas Group CSR Charter. To get the campaign moving further, the Group has identified important aspects in its CSR activities, which we call “materiality.” Based on the materiality, we have undertaken specific CSR activities. We will continue to see ESG as an important element of our business operations and redouble our efforts to realize the sustainable development of society and the Daigas Group.

Management that wins confidence of stakeholders

Main issues to address



Environment

■ Environmental management

- Support customers in introducing high-efficiency energy equipment, and provide them with energy services
- Promote fuel conversion to natural gas, a clean energy source, and introduction of energy-saving technologies
- Develop and introduce leading-edge thermal power plants and renewable energy
- Promote environmental management focusing on resources recycling, biodiversity, chemical substances safety, etc.

- Understanding and management of environmental impact throughout the Daigas Group value chain ... [Page 41](#)

- Contribution to CO₂ emissions reduction ... [Page 41](#)

- Risks and opportunities of climate change ... [Page 42-43](#)



Social

■ Stakeholder engagement

- Pursue activities in accordance with international norms, such as the Global Compact
- Promote activities relevant to the entire value chain including initiatives to protect human rights
- Engage in co-creation with local communities (social contribution activities, community communication activities, community building, etc.)

- The Promise to Customers ... [Page 44](#)

- The Promise to Employees ... [Page 45](#)

- The Promise to Suppliers and Shareholders ... [Page 46](#)

- The Promise to Society ... [Page 47](#)



Governance

■ Management / compliance

- Promote dialogue with stakeholders
- Pursue fair business practices
- Enhance Diversity of employees and executives
- Disclosure of ESG information in accordance with global standards
- Take measures to ensure information security

- Corporate governance ... [Page 48-49](#)

- Directors and Audit & Supervisory Board Members ... [Page 50-53](#)

- Risk management ... [Page 53](#)

Work style reform and development of human resources to improve productivity

Attitude Reform

- Think and act independently and remain reform-minded with readiness to change our mindset if necessary
- Execute assigned duties wisely and efficiently
- Shift to flexible thinking
- Pursue growth by taking up challenges beyond the boundaries

Work Style Reform

- Develop human resources who can play important roles in the global community
- Increase business efficiency through the active use of ICT
- Share business know-how among employees to make them immediately available in business and improve service quality
- Make workplaces attractive for employees

Work Environment Improvement

- Promote collaboration among individuals and companies with diverse values
- Provide employees with equal opportunities irrespective of nationality, age, gender or location of residence
- Develop a work environment and system whereby employees can work anywhere and any time



Environment

Environment

Addressing the issues of the environment both at regional and global levels is of paramount importance for the Daigas Group, which is engaged primarily in the energy business. Climate change, which is driven by greenhouse gases, is especially a global issue that greatly affects society and ecosystems. Since the emission of greenhouse gases is a large part of the environmental impact deriving from the Daigas Group's business activities, we will actively address greenhouse gas emissions.

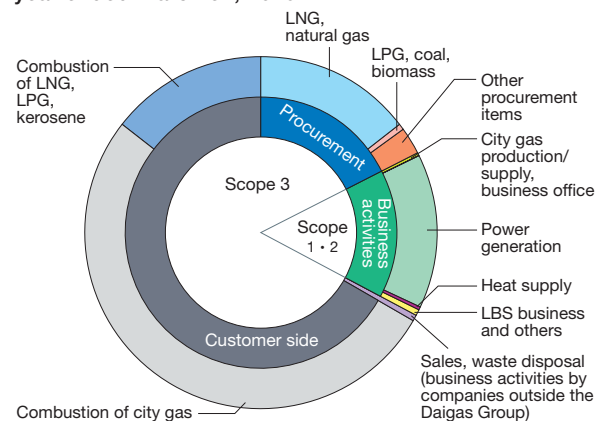
Understanding and management of environmental impact throughout the Daigas Group value chain

The Daigas Group calculated the amount of greenhouse gas (GHG) emitted by companies that constitute the Daigas Group's value chain network, based on the GHG Protocol, an international emission standard. The methodology of the calculation and its results have been certified by an independent organization to warrant their reliability and accuracy. Combined GHG emissions by the Daigas Group and value-chain companies, measured by CO₂, totaled about 34.81 million tons in the fiscal year ended March 31, 2019.

GHG emissions

GHG emissions from the Daigas Group's business activities (Scope 1 and 2), measured in terms of CO₂, amounted to about 5.35 million tons (about 15%) in the fiscal year ended March 31, 2019, of which 4.88 million tons were from the power generation business. As a way of reducing GHG emissions from power generation, the Group will continue to actively introduce highly advanced energy-efficient power generation facilities and use renewable energy sources. GHG emitted by organizations involved in our value chain (Scope 3) in terms of CO₂ came to about 29.46 million tons (about 85% of total emissions), of which GHG emissions from city gas combustion on the customer side amounted to 18.17 million tons. We will work toward reducing CO₂ emissions throughout society by widely providing high-efficiency equipment and systems, such as Ene-Farm and cogeneration systems, while promoting energy conservation using natural gas that emits less CO₂. In addition, GHG emissions from material and fuel procurement totaled 6.15 million tons, of which the procurement of energy sources accounted for nearly 90%. We will continue our efforts to improve fuel efficiency regarding the operation of LNG tankers in collaboration with material suppliers.

GHG Emissions Throughout the Value Chain in the fiscal year ended March 31, 2019



GHG emissions: 34.81 million tons-CO₂

Companies subject to the calculation of GHG emissions: Osaka Gas and 56 companies among 150 consolidated subsidiaries are subject to calculation of GHG emissions. Those housed in office buildings as tenants and whose GHG emissions are minimal are not subject to such calculation.

Environmental impacts other than GHG emissions

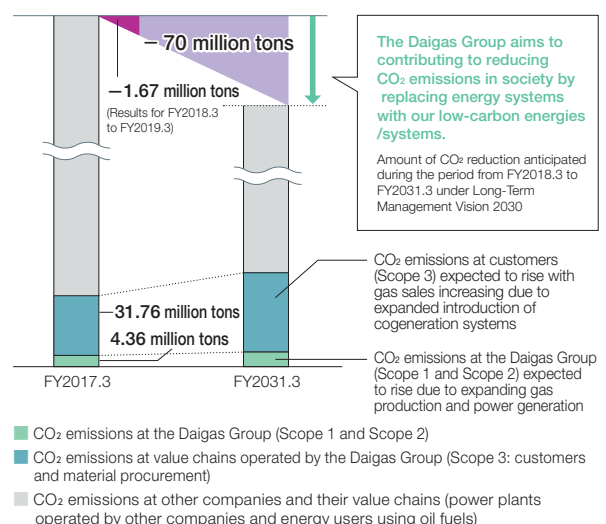
The recycling rates of waste (general waste and industrial waste) and excavated soil and polyethylene pipes associated with gas pipe works are high, a state that we will aim to maintain in the future. About 97% of water used for our industrial activities is taken from the sea. Such water is mostly used to vaporize LNG at LNG terminals and as coolant inside the steam turbine condenser at some power plants. Once used, the water is discharged into the sea under strict control.

Contribution to CO₂ Emissions Reduction

The Long-Term Management Vision 2030 aims to reduce the Group's CO₂ emissions by a cumulative total of about 70 million tons during the 14-year period from the fiscal year ended March 31, 2018 to the fiscal year ending March 31, 2031. The targeted reduction is calculated by totaling the reduction contribution of highly energy-efficient facilities and low-carbon energy sources planned to be introduced in the Group's business activities between the fiscal year ended March 31, 2018 and the fiscal year ending March 31, 2031. The reduction contribution is estimated by multiplying the introduction amount of those high-efficiency facilities and low-carbon energies by the CO₂ emission reduction effect per introduced amount compared to existing facilities and energy use.

As shown on the right, the Daigas Group expects to see its Scope 1, Scope 2 and Scope 3 GHG emissions grow in line with its expanding business size due to the nature of the business. However, the introduction of a low-carbon energy system through the Group's efforts will reduce emissions at other companies and their value chains, which in turn will contribute to society-wide emission reductions.

Contribute to Reducing CO₂ Emissions in Society



Risks and Opportunities Related to Climate Change

Background and philosophy behind actions

Tackling climate change is seen as one of the Sustainable Development Goals (SDGs) adopted by the United Nations. The Paris Agreement, a UN accord on climate change, went into force in November 2016. The accord is recognized as a framework of international efforts since 2020 for solving issues related to climate change. The Daigas Group recognizes that reducing greenhouse gas (GHG) emissions, known to be a factor for causing climate change, significantly and on a long-term basis, addressing the worldwide challenge of creating a low-carbon society in the future, and responding to heightened risks of natural disaster amid growing climate change are social issues facing the global community. The Daigas Group believes reducing CO₂ emissions is an extremely important mission for the company, whose primary business field is energy. The Group also believes that climate change may negatively affect its earnings and costs throughout its energy businesses. As such, we are implementing initiatives on such perceived risks and opportunities associated with climate change. Furthermore, in June 2017, the Task Force on Climate-Related Financial Disclosures (TCFD), established by the Financial Stability Board (FSB) at the request of G20 nations against a backdrop of demand from investors in the wake of growing ESG investment, published recommendations

to support and encourage companies to disclose climate change-related information (TCFD recommendations), which are gaining attention. In agreement with the TCFD recommendations, we disclose the Group's efforts on climate-related "governance," "strategy," "risk management," and "indicator and targets," as suggested by the TCFD recommendations (please see the Company's website for more details).

Needless to say, climate change initiatives are important. However, for the Daigas Group, which is engaged primarily in the energy business, initiatives for stable supply and improvement of economic efficiency are also important under the basic viewpoint of Japan's energy policy, 3E + S*. We believe that balancing them will contribute to the sustainable development of society.

*3E + S

The nation's Strategic Energy plan (2018) describes "3E + S" as the basic viewpoint of Japan's energy policy, and states: "The point of the energy policy is to first and foremost ensure stable supply ('Energy Security'), and realize low cost energy supply by enhancing its efficiency ('Economic Efficiency') on the premise of 'Safety.' It is also important to make maximum efforts to pursue environmental suitability ('Environment')."

Governance

Governance and management in terms of deliberation, decision-making, monitoring and supervision of business risks and opportunities associated with climate change are carried out within the Company's corporate governance and CSR management frameworks.

Strategy (Response to Risks and Opportunities Associated with Climate Change)

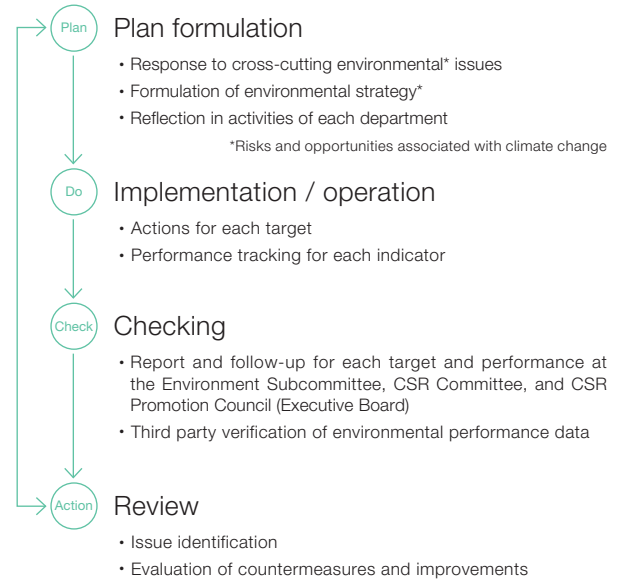
Below is a summary of major risks and opportunities associated with climate change, their impact on our business and finance, and methods of managing them.

Response to Risks and Opportunities Associated with Climate Change

(Events linked to climate change)	Extreme weather, disaster	Rising temperatures	Change in competitiveness of own products / facilities	Tighter GHG emission standards	Change in energy preference of customers	Growing ESG investing	LNG price rise
Risk impact	<ul style="list-style-type: none"> ● Damage to production and supply facilities ● Obstruction of LNG procurement 	<ul style="list-style-type: none"> ● Decrease in gas sales (water heater, heating) 	<ul style="list-style-type: none"> ● Competitive disadvantage ● Decrease in demand for and operation of own products / facilities ● Difficulty in recovering capital investment 	Concerns over fossil fuels <ul style="list-style-type: none"> ● Decrease in gas and electricity sales ● Difficulty in recovering capital investment 		<ul style="list-style-type: none"> ● Decreased capital raising ability ● Stock price drop 	<ul style="list-style-type: none"> ● Higher procurement costs ● Decrease in gas and electricity sales
Opportunity impact		<ul style="list-style-type: none"> ● Increase in gas and electricity sales (air conditioning) 	<ul style="list-style-type: none"> ● Competitive advantage ● Increase in demand for and operation of own products / facilities 	Focus on energy systems with fewer GHG emissions <ul style="list-style-type: none"> ● Increase in gas and electricity sales ● Expansion of renewable energy and energy-saving services 		<ul style="list-style-type: none"> ● Enhanced capital raising ability ● Stock price rise 	
Countermeasures	<ul style="list-style-type: none"> ● Making important facilities watertight, moving them to higher locations, subdividing the gas supply area into blocks ● Diversification of LNG suppliers 	<ul style="list-style-type: none"> ● Expansion of areas where demand is expected to increase 	<ul style="list-style-type: none"> ● High-efficiency products / facilities, development and introduction of renewable energy facilities ● Fuel conversion to natural gas ● Securing stable LNG supply through participation in upstream business 	<ul style="list-style-type: none"> ● Proposal and promotion of energy-saving services ● Surveys and research on innovative technologies such as hydrogen, natural gas as a clean energy source, and CCS etc. 	<ul style="list-style-type: none"> ● Dialogue with investors on contribution to GHG emission reduction and business vision etc. 	<ul style="list-style-type: none"> ● Diversification of suppliers ● Participation in upstream business ● Enhanced flexibility of procurement contract terms 	<ul style="list-style-type: none"> ● Advertising and proposal-based marketing of GHG emission reduction effects ● Policy proposal activities on GHG emission reduction ● Participation in and implementation of the Nippon Keidanren's Commitment to a Low Carbon Society

Risk Management

The Group's climate change risks may be affected by national policies and systems, environmental competitiveness of products and facilities to be introduced and developed, user preferences for energy sources and products on the environmental front, investor evaluations, and other factors. Departments in charge of each business line, including gas and power, analyze the factors affecting each business and the degree of their impacts, and list and identify risks. These risks, along with other business risks, are examined at the Executive Board before business plans are decided. Climate change risks in formulated business plans are reported and followed up by the Environment Subcommittee, CSR Committee, and CSR Promotion Council (Executive Board) using indicators and targets for greenhouse gas (GHG) emissions, which will be described later, and are managed using the PDCA cycle.



Indicators and Targets

The following indicators and targets have been established for greenhouse gas (GHG) emissions.

Indicators (Unit)		Targets	FY2019.3 Results
Materiality Indexes	Economic performance "financial impacts, risks and opportunities due to climate change"	Recognition of risks and opportunities* ¹	Recognition of risks and opportunities
Medium-Term Management Plan 2020	Cumulative contribution to CO ₂ reduction (t-CO ₂) during FY2018.3 – FY2021. 3 period	7 million* ²	1.67 million
Long-Term Management Vision 2030	Cumulative contribution to CO ₂ reduction (t-CO ₂) during FY2018.3 – FY2031. 3 period	70 million* ³	
CSR Indicators	Environmental Management Efficiency: Environmental impact of gas business per unit gas produced (yen / 1,000 m ³)	14.2* ²	12.5
	CO ₂ emissions per unit gas produced at LNG terminals (t-CO ₂ / 1 million m ³)	11.7* ²	11.0
	CO ₂ emissions per unit floor space at office buildings (t-CO ₂ / 1,000 m ²)	56.5* ²	53.0
	CO ₂ emissions per unit electricity generated through power business	-15%* ² from FY2009.3	-32% from FY2009.3
	CO ₂ emissions per unit sales scored through non-power business (t-CO ₂ / 10 million yen)	8.2* ²	9.3
Environmental Action Targets	Efforts to reduce CO ₂ emissions by customers and value chains	Promotion of energy efficient value-added appliances, centering on natural gas* ²	Cumulative sales of Ene-Farm, a fuel cell for residential use, reached 100,000 units.
GHG emissions	Amount of Scope 1, Scope 2 and Scope 3 emissions (t-CO ₂)	Results grasped (no targets set)	34.81 million

*1 Targets toward FY2019.3 *2 Targets toward FY2021.3 *3 Targets toward FY2031.3

S Social

The Promise to Customers

The Daigas Group will endeavor to ensure stable procurement, stable supply and security to allow customers to utilize energy safely. By doing so, the Group will provide products and services that are valuable to customers.

Customer Health and Safety

The Daigas Group puts the highest priority on securing safety of gas supply and facilities as an energy business operator which supplies city gas to approx. 5.58 million customers. Therefore, we consider it important that we make efforts to enhance the safety level and formulate a structure to respond possible accidents and disasters.

Performance

FY2019.3 Targets

100%



FY2019.3 Results

100%

In the fiscal year ended March 31, 2019, every procedure was conducted based on guidelines in accordance with laws and regulations as well as in-house rules in the processes such as quality control of gas in LNG terminals, safety inspection of gas pipelines and supply facilities, as well as gas appliances at customers consented.

Securing safety at customers' sites

Facilitate systems to respond to reports and prepare resources for dispatching in case of accidents and disasters 24 hours a day, 365 days a year.

In accordance with laws, inspection of gas appliances for gas leaks, gas water heaters for air supply and exhaust function at customers' sites were conducted. The visits to the customers were exploited as the opportunity for recommending installation of alarms for gas leaks for residential use and ventilation for commercial use.

Inspection of gas pipes

Gas supply facilities including pipelines and pressure regulators were inspected to ensure their safety at the frequency and content of such inspections set under in-house "Security Rules."

Preparation for disaster prevention

From our experience of the earthquake occurred in Kobe, we have made every effort to prevent disasters incurred by earthquakes. Those efforts include enhancement of safety function and measures in LNG terminals, replacement of old gas pipes with polyethylene pipes, installation of intelligent meter.

Customer Privacy

As an energy business operator which secures the basis of the society, the Daigas Group considers it is indispensable to recognize the importance of customers' information and those appropriate management.

Performance

FY2019.3 Results

Actions taken for loss of personal information

In the fiscal year ended March 31, 2019, one of the Daigas Group companies experienced a leak of customer information due to unauthorized access, and took measures to prevent recurrence based on the results of a third-party security audit.

Education of employees

All Daigas Group employees who have the authority to access PCs loaned to them by the Group, including those working on a contract basis and those dispatched from manpower agencies, are required to take an online training course on information security once a year. The percentage rate of employees taking this course reached 100% in the fiscal year ended March 31, 2019. These employees also received e-learning training, aimed at enabling them to respond appropriately to targeted e-mail attacks.

Unauthorized Access in Taku-File Bin Service: Actions for Leak of Customer Information

There was an attack on the vulnerabilities of some servers used for the file transfer service "Taku-File Bin," which is operated by the Daigas Group's OGIS-RI Co., Ltd., resulting in unauthorized access and an external leak of information on 4,815,399 customers. Following this incident, the Security Enhancement Department was established, and we are further strengthening information management by enhancing countermeasures and surveillance against cyberattacks and checking for risk of similar occurrences throughout the Group.

The Promise to Employees

The Daigas Group is working on to become a company that can realize the growth of its employees through work with preparing a personnel management system and environment whereby employees' individuality and initiative are respected, as well as their diverse talents are maximized.

Training and Education

System and Performance

Osaka Gas has introduced a personnel system where all employees are clearly presented with expectations and roles through interviews with supervisors who also serve as career development managers, and enable employees to choose their own development courses. In addition to training systems for each career development course, we offer a variety of training according to job position and type.

Acceptance of Diversity

Diversity promotion

As a way of enhancing its corporate value, the Daigas Group believes that it is essential for the Group to promote diversity in its corporate membership and corporate structure whereby employees can maximize their potential, irrespective of gender, age, nationality or physical disability. Recognizing that it is necessary for the Group to foster a corporate culture, the Group has adopted the "Daigas Group Diversity Promotion Policy" aiming for people with diverse personality and talent are respected, accepted, they can feel rewarded and fulfilled through their work.

Promotion of Active Roles for Female Employees

Under the action plan created based on the Act on Advancement of Measures to Support Raising Next-Generation Children and the Act on Promotion of Women's Participation and Advancement in the Workplace, the Daigas Group is carrying out actions to maintain 30% or more women in career-track positions and to achieve 5% or more women in managerial positions* by the fiscal year ending March 31,

Balancing Work and Family

Supporting Balance between Childcare / Nursing Care and Work through Systems and Workplace Environment

Osaka Gas has established various systems such as childcare / nursing care leave systems and satellite offices to support the balance between childcare / nursing care and work. Satellite offices were introduced to realize more flexible and productive work styles by reducing commuting and travel time.

No. of Employees Taking Childcare and Nursing Leave at Osaka Gas (excluding loaned employees)

	2015.3	2016.3	2017.3	2018.3	2019.3
Childcare leave	28	21	18	31	33
Male	1	1	1	4	5
Shorter working hours for childcare	35	37	31	21	35
Nursing care leave	4	2	1	1	2
Shorter working hours for nursing care	2	2	5	0	1
Nurturing leave	164	171	168	198	201
Male	140	153	149	172	178
Rate (%)	77.0	79.2	76.7	88.8	84.1

FY2019.3 Results

Hours spent by each employee per year for training and education

25.1 hours/person

Status of participation in e-learning (security, information security, environment)
*Including some agency temps and part-time employees

Number of participants:

5,029 persons/course

Course hours:

3.67 hours/person

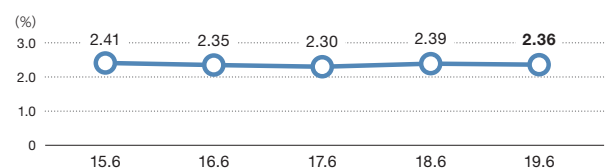
2021. As a result of various measures for work-life balance and career development, the percentage of women who joined the Company in April 2019 in career-track positions reached 28.3%, and women in managerial positions* 3.5% in April 2019.

*Percentage of women in manager or higher-level positions

Hiring the disabled

Osaka Gas does all it can to hire disabled persons and creates a work environment conducive each individual. As a result of these efforts, disabled persons accounted for 2.36% as of June 2019 exceeding the legal minimum of 2.2%. Of the 33 affiliate companies subjected to the relevant law, 15 have achieved the legal minimum.

Percentage Rate of Disabled Employees (Osaka Gas)



Employee Attitude Survey: job satisfaction and attachment to the company

Results and Actions

A grade on a five-point scale was assigned to the attitudes of Osaka Gas employees in categories including "job satisfaction" and their "degree of attachment to the Company." These survey results are treated as a source for business growth and used to develop a workplace culture where employees can tackle work with a sense of satisfaction and to evaluate better measures to implement these efforts.

	Targets	Results
Job satisfaction and attachment to the company	Maintain sufficient levels	Maintained sufficient levels (3.86 against scale of 5 for job satisfaction and 4.25 of scale of 5 for attachment to the company)

The Promise to Suppliers

Widespread value chain of our business functions with imperative cooperation of various business partners. Fulfilling our social responsibilities together with our suppliers in the value chain leads to relationships of mutual trust with our stakeholders, resulting in the development of the entire value chain.

Safety

■ Performance

FY2019.3 targets

100%



FY2019.3 results

100%

A total of 49 suppliers began new business transactions with Osaka Gas in the fiscal year ended March 31, 2019. In the year, no business deals were barred from being started due to violations of standards set in the fields of environmental and social impacts, human rights and labor practices.

■ CSR Survey Conducted on Gas Appliance Manufacturers

Osaka Gas conducted a CSR survey of 31 gas appliance manufacturers to ensure the safe use of gas appliances by end customers, as well as taking into consideration environmental friendliness and social concerns. The survey was designed to confirm each manufacturer's efforts regarding 59 items covered by the eight themes of compliance, human rights, labor, occupational health and safety, product safety and quality, environmental conservation, ethics and anti-corruption, and implementation systems in line with the "CSR Procurement Guidelines on Gas Appliances and Other Equipment." We also conducted a CSR survey of 245 companies, including service chain partners and engineering firms to which we contract our gas business related services. We will continue to fulfill our social responsibilities together with our suppliers and aim for mutual development throughout the value chain.

■ Measures in material procurement

Before starting business transactions, Osaka Gas communicates its "Purchasing Policy" and "CSR-based Purchasing Guidelines," and even confirms their efforts on CSR. In the fiscal year ended March 31, 2019, a survey was conducted on 174 major suppliers to check their CSR efforts. Furthermore, when the suppliers conduct business transactions with Osaka Gas, they are asked to observe "Green Purchase Guidelines" set by Osaka Gas, attached to the specifications for the business transactions.

■ Revision to the "Green Partner Initiative"

The "Green Partner Initiative" adopted by Osaka Gas is designed to promote environmental conservation by suppliers of gas pipeline materials. Under the system, suppliers that are recognized as being active in environmental conservation activities such as the building of an Environmental Management System (EMS) will be registered as Partners. Osaka Gas initially focused on suppliers of gas pipelines for its "Green Partner Initiative." In the fiscal year ended March 31, 2016, the Company revised the initiative to cover companies other than suppliers of gas pipeline materials as well. As of the end of the fiscal year ended March 31, 2019, 110 suppliers were registered as Partners.

The Promise to Shareholders

Daigas Group is committed to meeting shareholders' expectations for stable, long-term growth and maximized corporate value, while maintaining its sound financial foundation.

■ General Meeting of shareholders

To allow shareholders time to carefully consider proposed resolutions, Osaka Gas sends out its general meeting notifications early (about four weeks in advance of the meeting). Before sending out convocation notices, the Company discloses them on the website of the Tokyo Stock Exchange and on the Company's website. The Company has adopted an electronic voting system in which voting rights can be exercised electronically over the Internet.

■ Dialogue with shareholders and investors

The Daigas Group has been stepping up information disclosure and dialogue with shareholders and investors with the aim of strengthening our management base, regarded as necessary to generate profit in a stable manner and return part of it to shareholders continuously.

Activities in the fiscal year ended March 31, 2019

No. of briefings on financial results and business plans: 5
No. of meetings with institutional investors and analysts: 172
(85 and 87 held in Japan and overseas, respectively)

The Promise to Society

The Daigas Group will work on creating regional value by supporting community building.

Joining hands with local communities to create new social value

In a bid to create new value in regions, the Daigas Group is supporting community building under five themes—"together with local communities," "history, culture and town," "sports and health," "safety and security" and "diet." The Group is also stepping up the "Small Light Campaign," a volunteer initiative led by employees.

For better society

- Donation, volunteer activities by employees
- Support for elderly, disabled and children
- Cooperation with social designers

For healthy people and society

- Various education programs about food
- Disseminating the benefit of Japanese cuisine
- Cooking with local production

For protecting ourselves

- Energy/environment education for next generation
- Disaster prevention education using original textbooks
- Education on appropriate handling of fire



For nurturing attachment to the society

- Support for theatrical cultures
- Surveys, research, and proposals aimed at creating "comfortable lives," "vibrant communities," and "sustainable societies" by energy and cultural-related research facilities

For healthy society through sports

- Track and field class
- Nutrition seminar for athletes

- Volunteering activities by the Group employees

■ "Small Light Campaign"

The Daigas Group launched the "Small Light Campaign" in 1981. Begun with the idea that individual employees should take an interest as a member of the society and give serious thought to resolving the various problems facing their local communities, this initiative's goal is that the employees' actions contribute to development of the society.

■ Food education activities

The Daigas Group has been undertaking food education activities under the slogan "nurturing healthy youth through food." These activities include holding food education seminars and study sessions for people working at schools and nursing facilities, compiling and distributing food education books for use at elementary schools as learning materials, and sponsoring a food education class on dashi soup stock used in Japanese cuisine, in which participants can learn about "dashi culture" fostered in the Kansai region through actual cooking and tasting. The Daigas Group also holds cooking classes on a range of themes, including local production and local consumption, and food and health, in collaboration with local universities and municipalities. Also held by the Group are cooking contests participated in by parents and their children in the Kinki region. The "Japanese dashi soup stock experience class" mainly took the form of mobile courses at elementary schools, and was held 191 times and attended by 5,643 people in FY2018.3, and 343 times and by 11,687 people in FY2019.3. In recognition of these efforts, we received the Judging Committee Encouragement Award in the Awards for Companies Promoting Experience-based Activities for Youth, hosted by the Ministry of Education, Culture, Sports, Science and Technology. The award recognizes experience-based activities for youth that companies conducted as part of their CSR (social responsibility) or social contribution activities. This was the first time a gas company received the award.

■ Disaster prevention education

After the Great East Japan Earthquake, the need for disaster education has increased. Against this backdrop, Osaka Gas has created the original educational material "Disaster prevention classes to think about," and distributed it to schools, universities, administrative organizations, community associations, etc. free of charge. The content of material has come to be able to learn about natural disasters in Japan, changes in living at times of disasters and wisdom and ingenuity useful at that time in a workshop format. The total number of distribution exceeded 120,000 volumes in 5 years from the start of distribution. These activities were evaluated and received the Excellence Award in the "Corporate and Industry Organization" section of "Consumer Education Teaching Material Award 2018" sponsored by the National Institute on Consumer Education.

■ NOBY T&F CLUB activities

Osaka Gas has used its resources and assets to help build vitality-filled communities. For example, NOBY T&F CLUB, an athletic club run by Olympic medalist Nobuharu Asahara, an Osaka Gas employee, provides a variety of athletic programs to young athletes to support their sound growth and foster top-level athletes who are to play a key role in Japan's future athletic sports. A multiple number of businesses have been launched at local municipalities based on the know-how obtained through the NOBY T&F CLUB. In September 2018, NOBY T&F CLUB signed a business agreement with the CERESO OSAKA SPORTS CLUB, aiming to nurture next-generation top athletes who will be successful on the global stage and promote the health of all people from children to senior citizens using track and field facilities, and started activities as a comprehensive regional sports club.



Governance Corporate Governance



Representative Director Tadashi Miyagawa Representative Director and Chairman Hiroshi Ozaki Representative Director Masataka Fujiwara President Takehiro Honjo Representative Director Takeshi Matsui

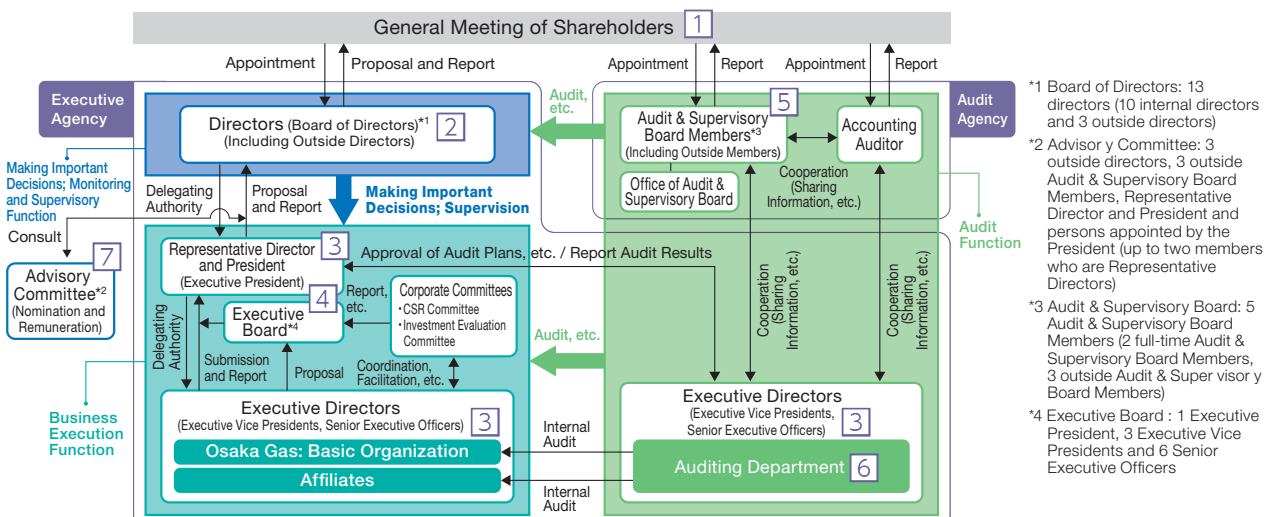
Basic stance toward corporate governance

Osaka Gas believes it is important to achieve sustainable growth and increase medium and long-term corporate value by engaging in fair and transparent business activities. To achieve this, the Company looks to respond appropriately to the exercising of shareholder rights, work toward maintaining and increasing a sense of trust by dialogue and cooperation with its stakeholders, and enhance the level of the entire

Group's corporate social responsibility (CSR). Further, the Group looks to respond swiftly to changes in the Group's business environment and continuously improve and strengthen its corporate governance so that transparent, fair and decisive decisions can be made and efficient and appropriate actions can thereby be implemented.

Corporate governance promotion organization and activities

Corporate governance organization chart (as of June 24, 2019)



1 General Meeting of Shareholders

To allow shareholders time to carefully consider proposed resolutions, Osaka Gas sends out its shareholder meeting notifications early (about four weeks in advance of the meeting). Before sending out convocation notices, the Company discloses them on the website of the Tokyo Stock Exchange and on the Company's website. The Company has adopted an electronic voting system in which voting rights can be exercised electronically over the Internet.

2 Board of Directors, Directors of the Company

The Board of Directors consists of 13 directors (including three outside directors). Its mission is to make swift and appropriate decisions about important matters that affect the whole Group including subsidiaries and to enhance supervisory capabilities. It met a total of 13 times in the fiscal year ended March 31, 2019, and had an attendance rate of 98.8%. There was adequate time for deliberations, and active discussions were conducted.

3 Executive Officers

Osaka Gas has adopted an executive officer system, which enables the Directors of the Company to focus on decision-making and monitoring and supervisory functions, and worked toward strengthening the business efficiency and the supervisory functions by dynamically mobilizing the Board of Directors. Executive officers perform duties determined by the Board of Directors, and some Representative Directors and Directors concurrently serve as executive officers to make management decision-making more accurate and efficient.

4 Executive Board

Osaka Gas examines basic management policies and important management issues through the Executive Board and fully deliberates the foregoing before decision-making. In accordance with internal regulations, the Executive Board consists of the Executive President, Executive Vice Presidents, Senior Executive Officers, Heads of Corporate Headquarters, and Heads of Business Division. In principle, CSR Promotion Meetings are held three times a year by the Executive Board, which deliberate on plans for CSR activities and make reports on CSR activities.

5 Audit & Supervisory Board, Audit & Supervisory Board Members

Osaka Gas has chosen the organizational form as a company with an Audit & Supervisory Board. The Audit & Supervisory Board consists of five Audit & Supervisory Board Members, of whom three are outside auditors and each Audit & Supervisory Board Member monitors the execution of work duties by the Directors.

The Office of Audit & Supervisory Board with a dedicated full-time staff of four which is not under the direct control of the directors has been established to support the Audit & Supervisory Board Members' auditing work and thus improve the auditing system.

6 Auditing Department

Osaka Gas has established the Auditing Department (with a staff of 18) that functions as an internal auditing division. Based on an annual auditing plan, it evaluates from an independent and objective standpoint the conformance to standards and efficiency of business activities and the appropriateness of institutions and standards. In addition to giving recommendations and conducting follow-ups that lead to business improvements in the organizations subject to audit, the department summarizes the issues and reports its results to the Executive Board.

Audit & Supervisory Board Members accounting auditors and the Auditing Department meet on a regular basis to discuss annual audit plans and audit reports, and also convene as required to exchange audit information. This facilitates audit coordination and helps improve audit effectiveness and quality.

7 Advisory Committee

To maintain objectivity and achieve transparency in the decision-making process, matters relating to appointment of Director and Audit & Supervisory Board Member candidates, appointment and dismissal of Representative Director and other Executive Officers, and matters relating to Directors' remuneration are deliberated at an advisory committee made up of a majority of external Officers before decision is made in light of such deliberations.

Directors



Representative Director and Chairman
Hiroshi Ozaki

[Biography]
1972. 5 Joined the Company
1999. 6 General Manager of Materials Dept.
2002. 6 Director
2002. 6 Tokyo Representative; seconded to the Japan Gas Association
2005. 6 Managing Director
2005. 6 Head of LNG Terminal & Power Generation Business Unit
2007. 6 Head of Commercial & Industrial Energy Business Unit
2008. 4 Representative Director and President
2009. 6 Representative Director and President, Executive President
2015. 4 Representative Director and Chairman (current)
2019. 6 Member of the Board of Shionogi & Co., Ltd. (current)



President
Takehiro Honjo

[Biography]
1978. 4 Joined the Company
2003. 4 General Manager of Corporate Strategy Dept.
2007. 6 Executive Officer
2008. 6 Senior Executive Officer
2008. 6 Head of Commercial & Industrial Energy Business Unit
2009. 6 Director, Senior Executive Officer
2010. 6 Head of Residential Energy Business Unit
2013. 4 Representative Director, Executive Vice-President
2015. 4 Representative Director and President, Executive President (current)



Vice-President
Masataka Fujiwara

[Biography]
1982. 4 Joined the Company
2009. 6 General Manager of Keiji Energy Sales Dept., Commercial & Industrial Energy Business Unit
2012. 4 Executive Officer
2012. 4 General Manager of Energy Business Development Dept., Commercial & Industrial Energy Business Unit
2013. 4 Representative Director and President of Osaka Gas Chemicals Co., Ltd.
2015. 4 Senior Executive Officer
2016. 4 Executive Vice-President
2016. 4 President of Corporate Planning Headquarters
2016. 6 Representative Director, Executive Vice-President (current)



Vice-President
Tadashi Miyagawa

[Biography]
1982. 4 Joined Ministry of International Trade and Industry
2013. 6 Director-General of Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry
2014. 7 Retired from Ministry of Economy, Trade and Industry
2015. 1 Joined the Company
2015. 4 Senior Executive Officer
2016. 6 Director, Senior Executive Officer
2018. 4 Representative Director, Executive Vice-President (current)



Vice-President
Takeshi Matsui

[Biography]
1983. 4 Joined the Company
2009. 6 General Manager of Finance Dept.
2013. 4 Executive Officer
2014. 4 General Manager of Human Resources Dept.
2016. 4 Senior Executive Officer
2016. 4 Head of Energy Resources & International Business Unit
2017. 6 Director, Senior Executive Officer
2019. 4 President of Corporate Planning Headquarters (current)
2019. 4 Representative Director, Executive Vice-President (current)



Director
Takayuki Tasaka

[Biography]
1985. 4 Joined the Company
2011. 4 General Manager of Corporate Strategy Dept.
2015. 4 Executive Officer
2015. 4 General Manager of Planning Dept., Residential Energy Business Unit
2016. 4 Senior Executive Officer
2016. 4 Head of Residential Energy Business Unit
2018. 4 Head of Commercial & Industrial Energy Business Unit (current)
2018. 6 Director, Senior Executive Officer (current)



Director
Hisaichi Yoneyama

[Biography]
1986. 4 Joined the Company
2013. 4 General Manager of Technology Planning Dept.
2014. 4 Executive Officer
2014. 8 President of Osaka Gas USA Corporation
2017. 4 Senior Executive Officer
2017. 4 Head of LNG Terminal & Power Generation Business Unit
2018. 4 Head of LNG, Power & Engineering Business Unit (current)
2018. 6 Director, Senior Executive Officer (current)



Director
Fumitoshi Takeguchi

[Biography]
1985. 4 Joined the Company
2011. 4 General Manager of Secretariat
2016. 4 Executive Officer
2016. 4 General Manager of General Affairs Dept.
2018. 4 Senior Executive Officer
2018. 6 Director, Senior Executive Officer (current)



Director
Shigeru Chikamoto

[Biography]
1985. 4 Joined the Company
2013. 4 General Manager of Resources Trading Dept., Energy Resources & International Business Unit
2016. 4 Executive Officer
2018. 4 Senior Executive Officer
2018. 4 Head of Pipeline Business Unit
2018. 6 Director, Senior Executive Officer (current)
2019. 4 Head of Pipeline Network Company (current)



Director
Kei Takeuchi

[Biography]
1987. 4 Joined the Company
2013. 4 General Manager of Energy Business Development Dept., Commercial & Industrial Energy Business Unit
2016. 4 Executive Officer
2016. 4 Representative Director and President of Osaka Gas Chemicals Co., Ltd.
2018. 4 Senior Executive Officer
2019. 4 Head of Energy Resources & International Business Unit (current)
2019. 6 Director, Senior Executive Officer (current)



Outside Director
Hideo Miyahara

[Biography]

1989.10 Professor, Faculty of Engineering, Osaka University
1998. 4 Dean of the Graduate School of Engineering, Dean of the Faculty of Engineering, Osaka University
2002. 4 Dean of the Graduate School of Information Science and Technology, Osaka University
2003. 8 President of Osaka University
2007. 9 President of the National Institute of Information and Communications Technology
2012. 6 Representative Director of Knowledge Capital Association (current)
2013. 4 Specially Appointed Professor, Graduate School of Information Science and Technology, Osaka University
2013. 6 Director of West Japan Railway Company (current)
2013. 6 Director of the Company (current)
2016. 4 Visiting Professor, Graduate School of Information Science and Technology, Osaka University (current)

Board of Directors Meetings Attendance Record (April 1, 2018-March 31, 2019)

Attended 12 of 13 meetings of the Board of Directors. He made comments as appropriate based on his considerable experience and extensive knowledge in organizational management and from his independent position as an outside director.



Outside Director
Takayuki Sasaki

[Biography]

1970. 4 Joined Japanese National Railways
2002. 6 President, West Japan Railway Daily Service Net Company Co., Ltd.
2007. 6 Vice President, West Japan Railway Company
2009. 6 Vice Chairman, West Japan Railway Company
2009. 8 President, West Japan Railway Company
2012. 5 Chairman, West Japan Railway Company
2016. 6 Senior Advisor, West Japan Railway Company
2016. 6 Director of the Company (current)
2018. 6 Advisor, West Japan Railway Company (current)

Board of Directors Meetings Attendance Record (April 1, 2018-March 31, 2019)

Attended 13 of 13 meetings of the Board of Directors. He made comments as appropriate based on his considerable experience and extensive knowledge in corporate and organizational management and from his independent position as an outside director.



Outside Director
Kazutoshi Murao

[Biography]

1976. 4 Joined Nippon Telegraph and Telephone Public Corporation
2009. 6 Representative Director and Senior Executive Vice President of NIPPON TELEGRAPH AND TELEPHONE WEST CORPORATION
2012. 6 Representative Director and President of NIPPON TELEGRAPH AND TELEPHONE WEST CORPORATION
2018. 6 Counselor to the president, NIPPON TELEGRAPH AND TELEPHONE WEST CORPORATION (current)
2019. 6 Member of the Board of Mitsubishi Tanabe Pharma Corporation (current)
2019. 6 Director of Keihan Holdings Co., Ltd. (current)
2019. 6 Director of the Company (current)

Audit & Supervisory Board Members



Audit & Supervisory Board Member
Takahiko Kawagishi

[Biography]

1978. 4 Joined the Company
2005. 6 General Manager of Finance Dept.
2006. 6 General Manager of General Affairs Dept.
2008. 6 Executive Officer
2008. 6 General Manager of Secretariat
2011. 4 Senior Executive Officer
2011. 6 Director, Senior Executive Officer
2014. 4 Tokyo Representative; seconded to The Japan Gas Association
2014. 6 Senior Executive Officer
2016. 4 Counselor
2016. 6 Audit & Supervisory Board Member (current)



Audit & Supervisory Board Member
Toshimasa Fujiwara

[Biography]

1981. 4 Joined the Company
2010. 6 General Manager of Human Resources Dept.
2012. 4 Executive Officer
2014. 4 Representative Director and President of Osaka Gas Customer Relations Co., Ltd.
2015. 4 Senior Executive Officer
2015. 4 Head of Residential Energy Business Unit
2015. 6 Director, Senior Executive Officer
2018. 4 Director, Chairman and Director of Osaka Gas Customer Relations Co., Ltd.
2018. 6 Advisor
2019. 6 Audit & Supervisory Board Member (current)



Outside Audit & Supervisory Board Member
Yoko Kimura

[Biography]

1987.12 Assistant Professor, Faculty of Home Economics, Nara Women's University
1993.10 Assistant Professor, Faculty of Human Life and Environment, Nara Women's University
2000. 4 Professor, Faculty of Human Life and Environment, Nara Women's University
2000.12 Member of Local Public Finance Council
2010. 4 Chairperson of the Board of Directors, Council of Local Authorities for International Relations
2014. 4 Advisor of Japan Center for Cities
2014. 6 Audit & Supervisory Board Member of the Company (current)
2015. 4 Director, Nara Prefectural University (current)

Board of Directors Meetings and Audit & Supervisory Board Meetings Attendance Record (April 1, 2018-March 31, 2019)
Attended 12 of 13 meetings of the Board of Directors and attended 13 of 14 meetings of the Audit & Supervisory Board. She made comments as appropriate based on her considerable experience and extensive knowledge in organizational management and from her independent position as an outside Audit & Supervisory Board Member.



Outside Audit & Supervisory Board Member
Eiji Hatta

[Biography]

1985. 4 Professor, Faculty of Economics, Doshisha University (current)
1996. 4 Dean, Faculty of Economics, Doshisha University
1998. 4 President, Doshisha University
2008. 2 Chairman, Japan Student Baseball Association (current)
2009. 4 Vice Chairman, Japan University Auditors Association (current)
2011.10 Chancellor, The Doshisha
2015. 6 Vice President, Baseball Federation of Japan
2015. 6 Audit & Supervisory Board Member of the Company (current)
2015. 9 Director, Japan High School Baseball Federation (current)
2017. 4 President, The Doshisha (current)
2017. 4 Chancellor, The Doshisha (current)

Board of Directors Meetings and Audit & Supervisory Board Meetings Attendance Record (April 1, 2018-March 31, 2019)
Attended 13 of 13 meetings of the Board of Directors and attended 14 of 14 meetings of the Audit & Supervisory Board. He made comments as appropriate based on his considerable experience and extensive knowledge in organizational management and from his independent position as an outside Audit & Supervisory Board Member.



Outside Audit & Supervisory Board Member
Shigemi Sasaki

[Biography]

1974. 4 Appointed as judge
2011. 5 Chief Judge, Takamatsu High Court
2012. 3 Chief Judge, Osaka High Court
2013. 3 Retired from judgeship
2013. 4 Professor, Graduate School of Law, Kyoto University
2016. 6 Audit & Supervisory Board Member of the Company (current)

Board of Directors Meetings and Audit & Supervisory Board Meetings Attendance Record (April 1, 2018-March 31, 2019)
Attended 13 of 13 meetings of the Board of Directors and attended 14 of 14 meetings of the Audit & Supervisory Board. He made comments as appropriate based on his considerable experience and specialized knowledge as a legal professional and from his independent position as an outside Audit & Supervisory Board Member.

Director and Audit & Supervisory Board Members Remuneration

To maintain objectivity and achieve transparency in the decision-making process, the remuneration for each Director shall be deliberated at an advisory committee made up of a majority of outside officers before decision is made by a resolution of the Board of Directors, with such amounts being within the maximum amount (¥63 million per month).

In deciding amounts of remuneration, the Company follows rules specified by a resolution of the Board of Directors, and considers each Director's roles and responsibilities and levels of remuneration at other companies. To encourage officers' efforts to realize sustainable growth and increase medium- to long-term corporate value, about 40% of overall remuneration is linked to the business results of the Company. In order to contribute to short- and medium- to long-term corporate value enhancement, the performance-based amount is linked to profit attributable to owners of parent in the past three years. The voluntary advisory committee meeting for the fiscal year ended March 31, 2019 was held in May 2018 in accordance with rules specified by the resolution of the Board of Directors with attendance of seven committee members (including five outside officers) and deliberations were held on matters such as the appropriateness of calculation methods for the portion linked to business results, payment coefficient, and remuneration levels.

The amount of remuneration for Outside Directors consists only of a fixed portion because they are in positions independent of the execution of the Company's businesses. Directors, except Outside Directors, purchase the Company's shares through an

officers' shareholding association, to which they contribute a certain amount of money from their monthly remuneration.

The advisory committee is comprised of inside and outside members, with outside committee members being all of the outside officers (the three outside Directors and the three outside Audit & Supervisory Board Members). The inside committee members are the Company President and if necessary, persons appointed by the President (the President may appoint up to two other Representative Directors). The committee members elect the committee chairperson from amongst themselves.

The above-mentioned policy on deciding remuneration is determined by President within the scope of resolutions of the Board of Directors and the results of deliberation by the voluntary advisory committee.

Remuneration for each Audit & Supervisory Board Member shall be determined through discussions among Audit & Supervisory Board Members within the amount of remuneration (up to ¥14 million per month) approved at the Annual Meeting of Shareholders, taking into consideration the position, etc. of each Audit & Supervisory Board Member. The amount of the remuneration for Audit & Supervisory Board Members (including Outside Audit & Supervisory Board Members) consists only of a fixed portion because they are in positions independent of the execution of the Company's businesses.

The system of paying retirement benefits to Directors and Audit & Supervisory Board Members has been abolished.

Profit Attributable to Owners of Parent (Consolidated Profit) for the Last Three Years

Fiscal year			198th	199th	200th
Fiscal year			FY2016.3	FY2017.3	FY2018.3
Profit attributable to owners of parent	million yen	Plan	73,500	52,000	42,500
		Results	84,324	61,271	37,724

Osaka Gas' Total Amount of Remuneration by Officer Classification and by Type of Remuneration, and Number of Eligible Officers

Classification	Total amount of remuneration (million yen)	Total amount of remuneration by type of remuneration		Number of payees
		Fixed (million yen)	Performance-linked (million yen)	
Directors (excluding outside directors)	506	303	202	14
Audit & Supervisory Board Members (excluding outside members)	67	67	—	2
Outside directors	32	32	—	3
Outside Audit & Supervisory Board Members	32	32	—	3

Note: The number of persons and amounts include four internal directors who retired as of the close of the Company's 200th Annual Shareholders' Meeting held on June 28, 2018.

■ The total amount of remuneration for each officer is not stated as there is no officer with a total amount of consolidated remuneration of 100 million yen or more.

■ There are no employees concurrently serving as officers.

Criteria for Determining the Independence of Outside Directors and Outside Audit & Supervisory Board Members

Osaka Gas appoints three outside directors and three outside Audit & Supervisory Board Members. To attain sustainable growth and improve medium- to long-term corporate value for the Group, as a basic policy, candidates for Directors and Audit & Supervisory Board Members are selected from a diverse group of people regardless of gender and nationality, taking into account their knowledge, experiences, abilities, and personalities. In addition, during selection of outside director candidates, the Company takes into consideration independence and ability to make objective decisions, wide range of insight, wealth of experience, and high level of expertise in their field of specialization. Outside directors participate in decision-making as members of the Board of Directors' meetings and monitor and supervise the execution of duties of the managing directors from an independent position based on their knowledge and experience. Outside Audit & Supervisory Board Members use their knowledge and experience to conduct strict audits on the execution of duties of the managing

directors, also from an independent standpoint. Both outside directors and outside Audit & Supervisory Board Members will hear about a variety of issues at Board of Directors' meetings, including the operation of internal control systems based on the Companies Act, the evaluation of internal controls as they relate to financial reports based on the Financial Instruments and Exchange Act, internal audits, and CSR activities. They will also confirm the content of accounting audit reports.

In addition, outside Directors Hideo Miyahara, Takayuki Sasaki, Kazutoshi Murao and outside Audit & Supervisory Board Members Yoko Kimura, Eiji Hatta, and Shigemi Sasaki have no special interest relationships with the company affecting decision-making, and as they meet the criteria for the independence of outside officers stipulated by the company, they are judged to have sufficient independence. Based on the above, they are reported as independent officers to the financial instruments exchanges on which the company is listed.

Risk management

In the Daigas Group, organizational heads of the Company and presidents of the affiliated companies promote the management of the risk of losses and periodically conduct risk management assessments. Each basic organization or affiliated company uses the Gas Group Risk Management System (G-RIMS) to ascertain risks, inspect the status of compliance with those risks, and conduct follow-up activities.

Regarding the management of risks concerning security and disaster prevention which are common to the Group, the organization in charge is clearly specified, and the organization supports each basic organization and affiliated company to ensure risk management on a Group-wide basis. To prepare for emergencies, regulations for disaster countermeasure and business continuity plans are prepared.

Business Risks

The following are examples of risks that can affect business performance and financial conditions of the Group. Matters concerning the future as stated are based on the Daigas Group's judgment and assumptions as of the end of the fiscal year ended March 31, 2019.

(1) Risks Related to All Businesses within the Group

- ① Changes in economic, financial, and social conditions as well as market contraction
A decrease in net sales, difficulties in fund-raising, insolvency of partner companies, Japan's shrinking population or the transfer of manufacturing overseas, due to worsening economic, financial, and social conditions in the economies of Japan and/or other countries
- ② Changes in foreign exchange rates and borrowing rates
- ③ Occurrence of catastrophic disasters, accidents, or infectious diseases
Occurrence of catastrophic natural disasters, terrorist events, accidents, or infectious disease epidemics such as new strains of influenza or other diseases
- ④ Changes in international rules, politics, laws and regulations, and institutional systems
Changes in international rules concerning the environment, the public, and corporate governance, as well as changes in the rules, policies, laws and regulations, and institutional systems in Japan and/or other countries
- ⑤ Intensifying competition
Intensifying competition with other operators in business areas related to the Group
- ⑥ Breakdown or malfunction of critical IT systems
Breakdown or malfunction of critical IT systems, such as systems related to gas production, power generation, and gas and electricity supply or billing
- ⑦ Quality issues with products or services
Expenditures to resolve quality problems relating to products or services handled by the Group or damage to the Group's social reputation thereof
- ⑧ Information leaks
External leaks of important information used in the course of the Group's business, including customer information or technical information possessed by the Group
- ⑨ Non-compliance with laws and regulations
Damage to social reputation and costs arising following acts carried out by the Group or by any person related to the Group in violation of any law or regulation

(2) Risks Related to Major Businesses

- ① Domestic energy business
 - a. Impact of fluctuations in temperature/water temperature on energy demand
 - b. Changes in raw fuel costs
Fluctuation in raw fuel costs due to changes in foreign exchange rates, crude oil prices, renewal of contracts and price negotiation trends with fuel suppliers, and other relevant factors
 - c. Difficulty in procuring raw fuels
Problems with the facilities of LNG (raw fuel from which gas or electricity are produced) suppliers or their operations, or other incidents
 - d. Difficulties in gas production and supply
Disruption of the production or supply of gas due to catastrophic natural disaster or accidents
 - e. Difficulties in power generation or supply
Any difficulties in power generation or supply due to a natural disaster, accident, problems with fuel purchasing or other incidents
 - f. Gas equipment and facility issues
Serious problems with gas equipment or facilities
 - g. Intensifying competition in the industry and the resulting increase in choices available to consumers
- ② International energy business
Changes in the operating environment, such as decreased profitability or project delay or cancellation, resulting from the public policies, implementation of or changes in regulations, deterioration of economic or social conditions, or technical problems in the countries in which the Group operates

The Daigas Group prepares for the above risk by entering into derivative transactions for foreign exchange and materials, etc., purchasing various insurance such as disaster insurance, enhancing the security of core IT systems, thoroughly following compliance and information management protocol, appropriately understanding and supervising the situations of business operations, and formulating and reviewing safety and disaster measures as well as business continuity plans, to mitigate impact on our business in cases where such risks emerge.

Summary of Consolidated Operating Results

		2009.3,	2010.3,	
Financial Information				
Net sales	million yen	1,326,785	1,096,628	
Operating profit	million yen	66,932	91,140	
Ordinary profit	million yen	64,510	84,806	
Profit attributable to owners of parent	million yen	36,041	48,384	
Comprehensive income	million yen	—	—	
Capital expenditures for maintaining or upgrading existing businesses				
Capital expenditures for maintaining or upgrading existing businesses	million yen	64,422	54,272	
Depreciation + amortization of goodwill	million yen	86,549	95,402	
R&D expenses	million yen	9,603	10,670	
Total assets				
Total assets	million yen	1,452,457	1,483,895	
Net assets				
Net assets	million yen	634,757	690,561	
Shareholders' equity				
Shareholders' equity	million yen	612,565	666,689	
Balance of interest-bearing debts				
Balance of interest-bearing debts	million yen	573,483	539,081	
Cash flows				
Cash flows from operating activities	million yen	120,691	229,714	
Cash flows from investing activities	million yen	(108,102)	(111,265)	
Cash flows from financing activities	million yen	(3,438)	(49,553)	
Cash and cash equivalents at end of period	million yen	46,764	113,998	
Free cash flow (Cash flows from operating activities – Quality improvement investment)	million yen	56,268	175,441	
Capital expenditures	million yen	106,087	98,246	
Per share information ※				
Earnings per share (EPS)	yen	83.59	112.48	
Shareholders' equity per share (BPS)	yen	1,421.05	1,551.95	
Dividends	yen	35.0	35.0	
Key Ratios				
EBITDA	(Operating profit + Depreciation + Amortization of goodwill + Share of profit of entities accounted for using equity method)	million yen	160,962	187,806
Shareholder Value Added (SVA)	(Net operating profit after tax (NOPAT) - Invested capital × Weighted average cost of capital (WACC))	million yen	5,149	14,041
Ratio of shareholders' equity	(Shareholders' equity / Total assets (as of the end of the fiscal year))	%	42.2	44.9
D/E ratio	(Interest-bearing debts / Shareholders' equity (as of the end of the fiscal year))		0.94	0.81
Return on equity (ROE)	(Profit attributable to owners of parent / Average shareholders' equity during the fiscal year)	%	5.7	7.6
Return on assets (ROA)	(Profit attributable to owners of parent / Average total assets during the fiscal year)	%	2.5	3.3
Payout ratio	((Interim dividend + Year-end dividend) / Profit attributable to owners of parent)	%	41.9	31.1
Gas sales volume				
Gas sales volume	million m ³	8,416	8,150	
Number of employees				
Number of employees	employees	19,009	19,268	

※ Calculated in consideration of share consolidation.

※ "Partial Amendments to Accounting Standard for Tax Effect Accounting" (Accounting Standards Board of Japan (ASBJ) Statement No.28, February 16, 2018) have been applied from the beginning of the fiscal year ended March 31, 2019. Key management indicators for the fiscal year ended March 31, 2018 are calculated by retroactively applying the above accounting standard.

2011.3,	2012.3,	2013.3,	2014.3,	2015.3,	2016.3,	2017.3,	2018.3,	2019.3,
1,187,142	1,294,781	1,380,060	1,512,581	1,528,164	1,322,012	1,183,846	1,296,238	1,371,863
88,584	77,274	84,773	99,381	105,065	146,674	97,250	78,118	67,977
82,372	75,694	90,125	106,044	108,173	134,986	96,276	77,087	63,103
45,968	45,207	52,467	41,725	76,709	84,324	61,271	37,724	33,601
35,833	39,702	83,844	80,850	106,084	38,256	78,029	60,590	27,966
53,600	43,713	44,507	41,082	44,698	56,051	48,253	42,191	44,205
97,869	93,624	82,818	83,806	87,785	86,747	86,206	88,723	99,745
10,918	10,974	10,875	11,793	11,434	11,340	10,374	9,708	10,961
1,437,297	1,475,759	1,566,899	1,668,317	1,862,201	1,829,756	1,886,577	1,897,230	2,029,722
688,695	708,904	774,317	828,565	918,869	935,786	991,870	1,028,799	1,035,044
664,959	684,584	747,802	798,964	888,496	906,623	961,905	999,569	1,004,340
532,493	541,349	540,199	573,586	633,923	567,164	540,668	503,789	647,465
126,399	122,793	129,597	154,225	156,908	281,819	148,801	168,731	65,116
(82,408)	(107,764)	(116,791)	(175,591)	(110,704)	(144,198)	(137,527)	(110,456)	(204,192)
(41,257)	(8,279)	(27,897)	4,163	22,892	(90,716)	(50,530)	(51,591)	85,262
116,230	122,448	109,456	90,359	162,793	209,367	166,912	171,061	115,769
72,798	79,079	85,089	113,142	112,210	225,767	100,547	116,343	20,910
69,600	87,171	112,987	124,146	119,398	114,418	88,657	81,716	107,259
108.08	108.55	125.99	100.21	184.31	202.64	147.29	90.71	80.80
1,596.63	1,643.85	1,795.79	1,919.49	2,134.92	2,179.23	2,312.68	2,403.68	2,415.37
40.0	40.0	42.5	45.0	47.5	50.0	50.0	50.0	50.0
188,614	176,535	173,926	191,104	199,840	228,883	188,403	167,100	159,916
13,200	11,965	18,677	3,000	42,964	52,621	33,328	11,922	4,218
46.3	46.4	47.7	47.9	47.7	49.5	51.0	52.7	49.5
0.80	0.79	0.72	0.72	0.71	0.63	0.56	0.50	0.64
6.9	6.7	7.3	5.4	9.1	9.4	6.6	3.8	3.4
3.1	3.1	3.4	2.6	4.3	4.6	3.3	2.0	1.7
37.0	36.8	33.7	44.9	25.8	24.7	33.9	55.1	61.9
8,560	8,711	8,534	8,554	8,290	8,052	8,694	8,580	7,935
19,684	19,818	19,870	21,250	20,982	20,844	20,762	19,997	20,224

[Consolidated Financial Statements and Notes]

(1) Consolidated Financial Statements

Osaka Gas Co., Ltd. and Consolidated Subsidiaries, the Fiscal Years Ended March 31, 2018 and 2019

Consolidated Balance Sheet

Assets

(million yen)

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Non-current assets		
Property, plant and equipment		
Production facilities	89,523	85,086
Distribution facilities	275,331	265,421
Service and maintenance facilities	56,924	55,176
Other facilities	393,116	409,486
Construction in progress	66,925	74,222
Total property, plant and equipment	※ 1, ※ 2, ※ 3 881,822	※ 1, ※ 2, ※ 3 889,392
Intangible assets	※ 1 79,743	※ 1 127,633
Investments and other assets		
Investment securities	※ 4 323,212	※ 4 359,737
Long-term loans receivable	18,412	22,862
Retirement benefit asset	46,405	49,074
Other	45,597	49,389
Allowance for doubtful accounts	(1,245)	(562)
Total investments and other assets	※ 1 432,382	※ 1 480,502
Total non-current assets	1,393,948	1,497,528
Current assets		
Cash and deposits	171,529	116,289
Notes and accounts receivable - trade	※ 5 190,445	※ 5 219,206
Lease receivables and investment assets	30,459	40,445
Inventories	※ 6 76,861	※ 6 112,327
Other	35,490	45,616
Allowance for doubtful accounts	(1,504)	△ 1,691
Total current assets	※ 1 503,281	※ 1 532,194
Total assets	1,897,230	2,029,722

Note: Details of ※ 1, 2, 3, 4, 5, 6 and 8 are provided in "d. Notes to the Consolidated Balance Sheet" on page 64.

This annual report is not subject to auditing by an independent auditor.

However, the accompanying consolidated financial statements, and notes are reprinted from the securities report which has been audited by an independent auditor.

Liabilities

(million yen)

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Non-current liabilities		
Bonds payable	164,984	144,989
Long-term loans payable	243,255	367,418
Deferred tax liabilities	22,847	22,811
Provision for gas holder repairs	1,326	1,247
Provision for safety measures	12,936	11,207
Provision for loss on investment	6,999	—
Provision for gas appliance warranties	13,607	12,454
Retirement benefit liability	16,958	17,228
Other	61,371	64,108
Total non-current liabilities	※ 1 544,288	※ 1 641,465
Current liabilities		
Current portion of non-current liabilities	68,548	60,134
Notes and accounts payable - trade	※ 5 58,542	※ 5 66,087
Short-term loans payable	22,179	22,751
Other	174,872	204,240
Total current liabilities	※ 1 324,142	※ 1 353,212
Total liabilities	868,430	994,678

(million yen)

Net assets

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Shareholders' equity		
Capital stock	132,166	132,166
Capital surplus	19,222	19,222
Retained earnings	769,801	782,523
Treasury shares	(1,663)	(1,744)
Total shareholders' equity	919,527	932,167
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	56,977	50,617
Deferred gains or losses on hedges	(7,650)	(4,007)
Revaluation reserve for land	※ 8 (737)	※ 8 (737)
Foreign currency translation adjustment	19,530	11,189
Remeasurements of defined benefit plans	11,922	15,110
Total accumulated other comprehensive income	80,042	72,172
Non-controlling interests	29,229	30,704
Total net assets	1,028,799	1,035,044
Total liabilities and net assets	1,897,230	2,029,722

Consolidated Statement of Income

(million yen)

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Net sales	1,296,238	1,371,863
Cost of sales	※ 1, ※ 2 874,437	※ 1, ※ 2 981,086
Gross profit	421,800	390,777
Selling, general and administrative expenses	※ 1, ※ 3 343,681	※ 1, ※ 3 322,800
Operating profit	78,118	67,977
Non-operating income		
Interest income	453	584
Dividend income	4,151	4,465
Miscellaneous income	10,886	9,551
Total non-operating income	15,491	14,600
Non-operating expenses		
Interest expenses	9,505	10,126
Loss on sales of shares of subsidiaries	2,227	—
Miscellaneous expenses	4,789	9,348
Total non-operating expenses	16,522	19,474
Ordinary profit	77,087	63,103
Extraordinary losses		
Loss on disaster	—	2,136
Amortization of goodwill	—	※ 4 8,901
Impairment loss	※ 5 11,249	—
Total extraordinary losses	11,249	11,038
Profit before income taxes	65,837	52,064
Income taxes - current	31,277	19,683
Income taxes - deferred	(4,957)	(4,160)
Total income taxes	26,319	15,522
Profit	39,517	36,542
Profit attributable to non-controlling interests	1,793	2,941
Profit attributable to owners of parent	37,724	33,601

Note: Details of ※ 1, 2, 3, 4 and 5 are provided in "e. Notes to the Consolidated Statement of Income" on page 65.

Consolidated Statement of Comprehensive Income

(million yen)

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Profit	39,517	36,542
Other comprehensive income		
Valuation difference on available-for-sale securities	5,306	(6,319)
Deferred gains or losses on hedges	387	(142)
Foreign currency translation adjustment	78	(5,943)
Remeasurements of defined benefit plans	12,607	3,457
Share of other comprehensive income of entities accounted for using equity method	2,692	372
Total other comprehensive income	※ 1 21,072	※ 1 (8,575)
Comprehensive income	60,590	27,966
(Breakdown)		
Comprehensive income attributable to owners of parent	58,725	25,731
Comprehensive income attributable to non-controlling interests	1,864	2,235

Note: Details of ※ 1 are provided in "f. Notes to the Consolidated Statement of Comprehensive Income" on page 66.

Consolidated Statement of Changes in Net Assets

(million yen)

	Shareholders' equity				Accumulated other comprehensive income							Non-controlling interests	Total net assets
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income		
Fiscal year ended March 31, 2018 (April 1, 2017 - March 31, 2018)													
Balance at beginning of current period	132,166	19,319	752,872	(1,492)	902,865	51,678	(9,500)	(737)	17,993	(393)	59,040	29,965	991,870
Changes of items during period													
Dividends of surplus			(20,794)		(20,794)								(20,794)
Profit attributable to owners of parent			37,724		37,724								37,724
Purchase of treasury shares				(175)	(175)								(175)
Disposal of treasury shares		0		5	5								5
Change in ownership interest of parent due to transactions with non-controlling interests		(97)			(97)								(97)
Net changes of items other than shareholders' equity						5,298	1,849		1,536	12,316	21,001	(735)	20,265
Total changes of items during period	—	(96)	16,929	(170)	16,662	5,298	1,849	—	1,536	12,316	21,001	(735)	36,928
Balance at end of current period	132,166	19,222	769,801	(1,663)	919,527	56,977	(7,650)	(737)	19,530	11,922	80,042	29,229	1,028,799
Fiscal year ended March 31, 2019 (April 1, 2018 - March 31, 2019)													
Balance at beginning of current period	132,166	19,222	769,801	(1,663)	919,527	56,977	(7,650)	(737)	19,530	11,922	80,042	29,229	1,028,799
Cumulative effects of changes in accounting policies			(87)		(87)								(87)
Restated balance	132,166	19,222	769,713	(1,663)	919,439	56,977	(7,650)	(737)	19,530	11,922	80,042	29,229	1,028,711
Changes of items during period													
Dividends of surplus			(20,791)		(20,791)								(20,791)
Profit attributable to owners of parent			33,601		33,601								33,601
Purchase of treasury shares				(85)	(85)								(85)
Disposal of treasury shares		0		3	3								3
Change in ownership interest of parent due to transactions with non-controlling interests					—								—
Net changes of items other than shareholders' equity						(6,359)	3,643		(8,340)	3,187	(7,869)	1,474	(6,394)
Total changes of items during period	—	0	12,809	(81)	12,728	(6,359)	3,643	—	(8,340)	3,187	(7,869)	1,474	6,333
Balance at end of current period	132,166	19,222	782,523	(1,744)	932,167	50,617	(4,007)	(737)	11,189	15,110	72,172	30,704	1,035,044

Consolidated Statement of Cash Flows

(million yen)

	Fiscal year ended March 31, 2018 (April 1, 2017 - March 31, 2018)	Fiscal year ended March 31, 2019 (April 1, 2018 - March 31, 2019)
Cash flows from operating activities		
Profit before income taxes	65,837	52,064
Depreciation	86,378	88,363
Amortization of goodwill	2,344	11,381
Amortization of long-term prepaid expenses	5,207	5,000
Loss on sales of shares of subsidiaries	2,227	—
Decrease (increase) in retirement benefit asset	8,828	3,057
Interest and dividend income	(4,605)	(5,049)
Interest expenses	9,505	10,126
Decrease (increase) in notes and accounts receivable - trade	(15,519)	(27,714)
Decrease (increase) in inventories	(8,136)	(35,078)
Increase (decrease) in notes and accounts payable - trade	10,380	6,895
Increase (decrease) in accrued expenses	2,276	6,068
Increase (decrease) in accrued consumption taxes	4,854	(4,085)
Other, net	24,148	(20,253)
Subtotal	193,729	90,776
Interest and dividend income received	10,815	13,523
Interest expenses paid	(9,315)	(10,186)
Income taxes paid	(26,498)	(28,997)
Net cash provided by (used in) operating activities	168,731	65,116
Cash flows from investing activities		
Purchase of property, plant and equipment	(73,082)	(80,099)
Purchase of intangible assets	(5,977)	(21,943)
Purchase of long-term prepaid expenses	(5,799)	(6,150)
Purchase of investment securities	(2,770)	(4,680)
Purchase of shares of subsidiaries and associates	(15,385)	(68,760)
Purchase of shares of subsidiaries resulting in change in scope of consolidation	(6,602)	(22,811)
Proceeds from purchase of shares of subsidiaries resulting in change in scope of consolidation	—	2
Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation	2,485	—
Payments of long-term loans receivable	(3,000)	(5,133)
Other, net	(323)	5,382
Net cash provided by (used in) investing activities	(110,456)	(204,192)
Cash flows from financing activities		
Net increase (decrease) in commercial papers	—	46,000
Proceeds from long-term loans payable	18,719	129,306
Repayments of long-term loans payable	(48,399)	(37,759)
Redemption of bonds	—	(30,000)
Proceeds from share issuance to non-controlling shareholders	400	195
Cash dividends paid	(20,800)	(20,801)
Dividends paid to non-controlling interests	(1,218)	(980)
Other, net	(292)	(698)
Net cash provided by (used in) financing activities	(51,591)	85,262
Effect of exchange rate change on cash and cash equivalents	666	(1,478)
Net increase (decrease) in cash and cash equivalents	7,349	(55,292)
Cash and cash equivalents at beginning of period	166,912	171,061
Decrease in cash and cash equivalents resulting from exclusion of subsidiaries from consolidation	(3,200)	—
Cash and cash equivalents at end of period	※ 1 171,061	※ 1 115,769

Note: Details of ※ 1 are provided in "h. Notes to the Consolidated Statement of Cash Flows" on page 68.

[Notes]

a Significant Matters Forming the Basis of Preparation of the Consolidated Financial Statements

1. Scope of consolidation

Number of consolidated subsidiaries:

138 (Previous fiscal year), 150 (Current fiscal year)

The names of consolidated subsidiaries are omitted as they are stated in page 86 "Group Companies."

The Company has acquired shares in Osaka Gas Michigan Power, LLC, Osaka Gas Kleen Energy, LLC, OG East Texas, LLC, Michigan Power LP, LLC, Michigan Power GP, LLC, Michigan Power Limited Partnership, Alpha Estate Co., Ltd., Prime Estate Co., Ltd., Sodegaura Biomass Power Co., Ltd., Jacobi Adsorbent Materials (Tianjin) Co., Ltd., Nagaoka Tansan Acid Co., Ltd., PT. Osaka Gas Indonesia, Biwako Blue Energy Co., Ltd., Osaka Gas

Towantic, LLC, Hirohata Biomass Power Co., Ltd. and Green Power Fuel Co., Ltd., making them newly subsidiaries of the Company. As a result, those subsidiaries are included as consolidated subsidiaries of the Company from the current fiscal year.

i Support Co., Ltd. (merged into Osaka Gas Business Create Co., LTD.), G&M Energy Service Co., LTD. and OJV Cayman 2 Limited (liquidated), and Alpha Estate Co., Ltd. (merged into Prime Estate Co., Ltd.) are no longer consolidated subsidiaries of the Company from the current fiscal year.

2. Application of the equity method

Number of equity method affiliates:

19 (Previous fiscal year), 23 (Current fiscal year)

The names of equity method affiliates are omitted as they are stated in page 86 "Group Companies."

The Company has acquired shares in AEIF Kleen Investor, LLC, CPV Towantic, LLC, Towantic Energy Holdings, LLC and CD Energy Direct Co., Ltd. As a result, they are included as equity method affiliates from the current fiscal year.

A major affiliate for which the equity method is not applied is

ENNET Corporation.

With regard to affiliates for which the equity method is not applied, their impact on profit or loss and retained earnings, etc. for the current fiscal year is not significant and immaterial on the whole. Therefore, investments in those affiliates are measured at cost.

When the fiscal year-end of equity method affiliates is different from the consolidated fiscal year-end, the financial statements for the fiscal year of such affiliates are used.

3. Fiscal year, etc. of consolidated subsidiaries

Consolidated subsidiaries whose fiscal year-end is different from the consolidated fiscal year-end are Osaka Gas Australia Pty. Ltd., Osaka Gas Gorgon Pty. Ltd., Osaka Gas Ichthys Pty. Ltd., Osaka Gas Ichthys Development Pty. Ltd., Osaka Gas Niugini Pty. Ltd., Osaka Gas UK, Ltd. and other companies, totaling 84 companies. Although the above consolidated subsidiaries have a fiscal year-

end of December 31, the difference between that date and the consolidated fiscal year-end (March 31) does not exceed 3 months. Therefore, the consolidated financial statements are prepared using their financial statements as of their fiscal year-end.

4. Accounting policies

(1) Basis and methodology for the valuation of significant assets

① Inventories

Primarily stated at cost based on the moving-average method
Inventories held for trading recorded on the balance sheet are depreciated to write down the carrying amount based on depreciation of profitability

② Investment securities

Bonds held to maturity
Stated at amortized cost

Other investment securities

Securities for which it is practical to determine fair value

[Stated at fair value based on the market price, etc. at the fiscal year-end]

(Unrealized valuation gains and losses are accounted for as a component of net assets; cost of sales is determined primarily using the moving-average method.)

Securities for which it is not practical to determine fair value

[Primarily stated at cost based on the moving-average method]

③ Derivatives

Stated at fair value

(2) Depreciation and amortization method of significant depreciable assets

① Property, plant and equipment (excluding leased assets)

Primarily the declining-balance method

However, the straight-line method has been used for buildings (excluding facilities attached to buildings) acquired on or after April 1, 1998 and for facilities attached to buildings and structures acquired on or after April 1, 2016.

② Intangible assets (excluding leased assets)

Primarily the straight-line method

For internal-use software, the straight-line method based on the term available for use within the Company and each subsidiary has been applied.

③ Leased assets

Leased assets resulting from non-ownership-transfer finance leases

The straight-line method over the useful life equal to the lease terms assuming no residual value.

(3) Basis for recording significant allowances

① Allowance for doubtful accounts

To provide for the bad debts loss of accounts receivable, loans receivable, etc., an estimated uncollectible amount is provided by considering the default ratio in the past for general receivables and the individual collectability for certain receivables including receivables with default possibility.

② Provision for gas holder repairs

To provide for the necessary expenditure for periodical repairs of spherical gas holders, an estimated amount for the next scheduled repair is provided based on the actual expenditure for the previous repair, which is proportionally allotted for the period up to such next scheduled repair.

③ Provision for safety measures

To provide for the necessary expenditure to ensure the safety of gas business, an estimated amount of the expenditure necessary for promoting the widespread use of safety-enhanced models, for strengthening inspections and ensuring wide awareness as well as for countermeasure works on aged gas pipelines is provided.

④ Provision for loss on investment

To provide for any losses on the operations of subsidiaries and associates, an amount of expected future losses is provided as reserve.

⑤ Provision for gas appliance warranties

To provide for the payment of any service costs under warranty after the sale of appliances, an estimated amount of such costs is provided.

(4) Accounting for retirement benefits

① Method for attributing projected retirement benefits to periods of service

In calculating retirement benefit obligations, the benefit formula basis is mainly applied to attribute projected retirement benefits to periods of service until the end of this consolidated fiscal year.

② Method for recognizing actuarial gains and losses and past service costs

Past service costs are expensed mainly in the fiscal year when such costs are incurred. Actuarial gains and losses are amortized on a straight-line basis mainly over a period of 10 years beginning from the next fiscal year after each occurrence.

(5) Criteria for translating significant assets or liabilities denominated in foreign currencies into Japanese currency

Assets and liabilities of overseas subsidiaries are translated into Japanese yen at the spot exchange rate as of the fiscal year-end. Revenues and expenses of overseas subsidiaries are translated into Japanese yen at the average exchange rate during the fiscal year. The resulting translation differences are included in foreign currency translation adjustment and non-controlling interests in net assets.

(6) Significant hedge accounting method

① Hedge accounting method

Deferred hedge accounting is adopted. When applicable requirements are met, exceptional accounting for interest rate swaps and allocation accounting for forward exchange contracts, etc. are adopted.

② Hedging instruments and hedged items

Hedging instruments

- Interest rate swaps
- Forward exchange contracts or currency options
- Loans payable denominated in foreign currencies
- Swaps and options on crude oil price, etc.

Hedged items

- Bonds, loans payable
- Forecast transactions denominated in foreign currencies (purchase prices of raw materials, etc.)
- Interests in overseas subsidiaries and associates
- Purchase prices of raw materials, etc.

③ Hedging policy

The Group hedges foreign exchange rate and interest rate risk based on its internal rules. Derivative transactions are not entered into unless they are backed by actual demand.

④ Method for assessing the hedge effectiveness

Hedge effectiveness is assessed by identifying the corresponding relationship between hedging instruments and hedged items.

(7) Method and period for amortization of goodwill

Goodwill is amortized on a straight-line basis over its estimated useful life within 20 years after initial recognition; provided, however, that immaterial goodwill is recognized as income or expense in full upon acquisition.

(8) Scope of funds in the consolidated statement of cash flows

Funds stated in the consolidated statement of cash flows (cash and cash equivalents) comprise cash on hand, demand deposits and short-term investments that are readily convertible and subject to an insignificant risk of changes in value with original maturities of three months or less.

(9) Other significant matters on the preparation of the consolidated financial statements

Accounting for consumption taxes

Transactions subject to consumption taxes are recorded at amounts exclusive of consumption taxes.

b Changes in Accounting Policies

(Accounting standards, etc. not yet applied)

“Accounting Standard for Revenue Recognition” (ASBJ Statement No. 29; March 30, 2018) and “Implementation Guidance on Accounting Standard for Revenue Recognition” (ASBJ Guidance No. 30; March 30, 2018)

(1) Summary

These are comprehensive accounting standards on revenue recognition. Revenue is recognized by applying the following five-step approach:

Step 1: Identify the contracts with customers

Step 2: Identify the performance obligations in the contract

Step 3: Determine the transaction price

Step 4: Allocate the transaction price to the performance obligations in the contract

Step 5: Recognize revenue when (or as) the entity satisfies a performance obligation

(2) Scheduled date of application

Effective from the beginning of the fiscal year ending March 31, 2022.

(3) Effects of application

In the process of measuring the effects at the time of preparing the accompanying consolidated financial statements.

“Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries, etc. for Consolidated Financial Statements” (Practical Issues Task Force (PITF) No.18, September 14, 2018) and “Practical Solution on Unification of Accounting Policies Applied to Associates Accounted for Using the Equity Method” (PITF No.24, September 14, 2018)

(1) Summary

These PITFs added that when a foreign subsidiary or other such entity applies IFRS 9 “Financial Instruments” and elects to present subsequent changes in the fair value of an equity instrument in other comprehensive income, a gain or loss equivalent on the sale of the equity instrument and an impairment loss equivalent to the equity instrument are to be adjusted and recognized as a profit (loss) for the relevant fiscal year in preparing the consolidated financial statements of the parent company.

(2) Scheduled date of application

Effective from the beginning of the fiscal year ending March 31, 2020.

(3) Effects of application

In the process of measuring the effects at the time of preparing the accompanying consolidated financial statements.

“Revised Accounting Standards for Business Combinations” (ASBJ Statement No. 21, January 16, 2019) and “Revised Implementation Guidance on Accounting Standard for Business Combinations and Accounting Standard for Business Divestitures” (ASBJ Guidance No. 10, January 16, 2019)

(1) Summary

These accounting standards clarified the accounting treatment of conditional acquisition prices for which consideration is refunded.

(2) Scheduled date of application

Effective for business combinations, etc. made at or after the beginning of the fiscal year ending March 31, 2022.

(3) Effects of application

In the process of measuring the effects at the time of preparing the accompanying consolidated financial statements.

c Changes in Presentation

(Changes due to the application of “Partial Amendments to Accounting Standard for Tax Effect Accounting”)

The Company has adopted “Partial Amendments to Accounting Standard for Tax Effect Accounting” (ASBJ Statement No.28, February 16, 2018, hereinafter “Partial Amendments to Accounting Standard for Tax Effect Accounting”) since the beginning of the current fiscal year. Changes due to this application involve including deferred tax assets in investments and other assets, and deferred tax liabilities in non-current liabilities. Notes to Tax Effect Accounting are also amended.

As a result, “deferred tax assets” of ¥11,314 million that were included in “other” under “current assets” in the consolidated balance sheet of the previous fiscal year are stated as part of “other” of ¥45,597 million under “investments and other assets.” Similarly, “deferred tax liabilities” of ¥2 million that were included in “other” under “current liabilities” are stated as part of “deferred tax liabilities” of ¥22,847 million under “non-current assets.”

In addition, the contents of explanatory note 8 (excluding the total amount of valuation allowances) and explanatory note 9 on “Accounting Standard for Tax Effect Accounting,” which are prescribed in Paragraph 3 to Paragraph 5 of the Partial Amendments to Accounting Standard for Tax Effect Accounting, have been added to Notes to Tax Effect Accounting. However, sections concerning the previous fiscal year are omitted in accordance with the transitional treatment prescribed in Paragraph 7 of the Partial Amendments to Accounting Standard for Tax Effect Accounting.

(Notes to the Consolidated Balance Sheet)

“Long-term loans receivable” included in “other” under “investments and other assets” for the previous fiscal year are stated as a separate item from the current fiscal year due to increased materiality in amount. The previous fiscal year’s consolidated financial statements are reclassified to reflect this change in presentation.

As a result, “other” under “investments and other assets” in the consolidated balance sheet of the previous fiscal year is reclassified into “long-term loans receivable” of ¥18,412 million and “other” of ¥45,597 million.

“Income taxes payable,” stated as a separate item under “current liabilities” for the previous fiscal year, are included in “other” under “current liabilities” from the current fiscal year due to decreased materiality in amount. The previous fiscal year’s consolidated financial statements are reclassified to reflect this change in presentation.

As a result, “income taxes payable” of ¥27,786 million presented under “current liabilities” in the consolidated balance sheet of the previous fiscal year are reclassified as “other.”

(Notes to the Consolidated Statement of Cash Flows)

“Amortization of goodwill” included in “depreciation” under cash flows from operating activities for the previous fiscal year is stated as a separate item due to increased materiality in amount. The previous fiscal year’s consolidated financial statements are reclassified to reflect this change in presentation.

As a result, ¥2,344 million presented in “depreciation” under cash flows from operating activities in the previous fiscal year’s consolidated statement of cash flows is reclassified into “amortization of goodwill.”

“Purchase of investment securities” included in “other” under cash flows from investing activities for the previous fiscal year is stated as a separate item due to increased materiality in amount. The previous fiscal year’s consolidated financial statements are reclassified to reflect this change in presentation.

As a result, ¥2,770 million presented in “other” under cash flows from investing activities in the previous fiscal year’s consolidated statement of cash flows is reclassified into purchase of investment securities.

“Impairment loss” stated as a separate item under cash flows from operating activities for the previous fiscal year is included in “other” under cash flows from operating activities from the current fiscal year due to decreased materiality in amount. The previous fiscal year’s consolidated financial statements are reclassified to reflect this change in presentation.

As a result, ¥11,249 million presented in “impairment loss” in the previous fiscal year’s consolidated statement of cash flows is reclassified into “other” under cash flows from operating activities.

※ 1 Assets pledged as collateral and liabilities with collateral

Assets pledged as collateral are as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Investment securities	63,333 million yen	100,949 million yen
Other facilities	93,328	98,092
Intangible assets	3,799	43,173
Construction in progress	32,115	36,011
"Other" under investments and other assets	12,476	17,078
Other	8,814	16,610
Total	213,867	311,914

In addition to the above, loans receivable, etc. which were offset as a result of consolidation were pledged as collateral in the amounts of ¥10,004 million for the previous fiscal year and ¥7,463 million for the current fiscal year.

Liabilities with collateral are as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Long-term loans payable	34,398 million yen	61,260 million yen
(current portion thereof	100	925)
Short-term loans payable and other	698	1,177
Total	35,097	62,437

※ 2 (1) Accumulated advanced depreciation deducted from the acquisition cost of assets related to contribution for construction, etc. is as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Production facilities	781 million yen	781 million yen
Distribution facilities	259,468	260,330
Service and maintenance facilities	824	746
Other facilities	5,205	5,228
Total	266,280	267,086

(2) Advanced depreciation deducted from the acquisition cost of assets related to expropriation, etc. is as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Distribution facilities	1 million yen	9 million yen
Other facilities	—	65
Total	1	74

※ 3 Accumulated depreciation of property, plant and equipment is as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Accumulated depreciation of property, plant and equipment	2,600,246 million yen	2,652,657 million yen

※ 4 Items for affiliates are as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Investment securities (stock)	209,098 million yen	249,346 million yen
(including investments in joint ventures	98,208	138,443)

※ 5 The settlement of trade notes maturing at the fiscal year-end is accounted for on the date of bank clearance.

As the end of the previous and current fiscal years were bank holidays, the following notes maturing on the fiscal year-end are included in the balance of the item outstanding at the end of the previous and current fiscal years:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Notes receivable - trade	335 million yen	591 million yen
Notes payable - trade	34	74

※ 6 The breakdown of inventories is as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Merchandise and finished goods	19,248 million yen	20,906 million yen
Work in process	5,086	8,220
Raw materials and supplies	52,526	83,200

※ 7 Contingent liabilities

(1) Guarantees and quasi-guarantees for bank loans, etc. to companies other than consolidated companies are as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Ichthys LNG Pty. Ltd.	20,398 million yen	19,072 million yen
Fukushima Gas Power Co., Ltd.	4,600	4,600
Aurora Solar Corporation	1,266	1,238
Ruwais Power Company PJSC	1,104	1,135
Other	1,116	611
Total	28,485	26,657

(2) Contingent liabilities related to debt assumption agreements for bonds are as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
The 23rd domestic unsecured bond	20,000 million yen	20,000 million yen

※ 8 Revaluation difference for land

Commercial land of certain consolidated subsidiaries has been revalued in accordance with the Act on Revaluation of Land (Law No. 34 of March 31, 1998) and the Amendment to Act on Revaluation of Land (Law No. 19 of March 31, 2001). Any difference (excluding any amount associated with tax effect accounting) resulting from the revaluation is included in net assets as revaluation reserve for land.

(1) Method for revaluation

The revaluation is made by making reasonable adjustments to the valuation by road rating which is provided for in Article 2, Item 4 of the Enforcement Order of the Law Concerning the Revaluation of Land (Cabinet Order No. 119 of March 31, 1998).

(2) Date of revaluation March 31, 2002

e Notes to the Consolidated Statement of Income

※ 1

Previous Year (April 1, 2017 - March 31, 2018)
The R&D expenses included in "Selling, general and administrative expenses" and in the manufacturing expenses for the fiscal year are ¥9,708 million.

Current Year (April 1, 2018 - March 31, 2019)
The R&D expenses included in "Selling, general and administrative expenses" and in the manufacturing expenses for the fiscal year are ¥10,961 million.

※ 2 The balance of inventories at the end of the fiscal year is an amount after write-down of the carrying amount due to decreased profitability, and the following loss on valuation of inventories is included in cost of sales.

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
	11 million yen	7 million yen

※ 3 The major expense items and amounts thereof are as follows:

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Salaries	48,252 million yen	46,197 million yen
Retirement benefit expenses	11,667	5,199
Provision for gas holder repairs	145	145
Provision for safety measures	2,975	0
Provision for gas appliance warranties	337	658
Provision of allowance for doubtful accounts	276	46
Depreciation	49,846	48,292
Consigned work expenses	58,238	57,320

※ 4 Amortization of goodwill

Goodwill is amortized in accordance with Paragraph 32 of “Practical Guidelines on Accounting Standards for Capital Consolidation Procedures in Preparing Consolidated Financial

Statements” (the Japanese Institute of Certified Public Accountants, final amendment issued on November 28, 2014, Accounting Practice Committee Statement No. 7)

※ 5 Impairment loss

Previous Year (April 1, 2017 - March 31, 2018)

(1) Concept of grouping

- ① All non-current assets used in operating the gas business from production to sales of gas are categorized into one asset group as these assets generate cash flows from the gas business in an integrated manner.
- ② Non-current assets used for businesses other than those described above are generally categorized into groups based on business divisions controlling such non-current assets.
- ③ Generally, other non-current assets are treated individually.

(2) Details of impairment loss

In accordance with the grouping described in (1) above, an impairment loss of ¥11,249 million was recognized. Significant losses included in this are as follows:

Asset	Location	Type	Impairment loss (million yen)
Property for business use	Western Province of Papua New Guinea	Property, plant and equipment (construction in progress)	6,743
		Intangible assets	2,872
		Total	9,616

The properties for enterprises in the Western Province of Papua New Guinea were acquired for the purpose of participating in a condensate and gas development business. The Company reassessed the business value, taking into account the effect of reviewing the development plan and other matters, and

accordingly the carrying amount of the assets was reduced to their recoverable amount, and the reduction was recorded as an impairment loss in extraordinary losses. The recoverable amount of these assets was measured at net sale value determined mainly by the income approach.

f Notes to the Consolidated Statement of Comprehensive Income

※ 1 Reclassification adjustments and tax effects related to other comprehensive income

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Valuation difference on available-for-sale securities		
Incurring in the fiscal year	7,919 million yen	(8,830) million yen
Reclassification adjustments	7	17
Before tax effect adjustments	7,927	(8,813)
Tax effect	(2,620)	2,494
Valuation difference on available-for-sale securities	5,306	(6,319)

Deferred gains or losses on hedges		
Incurring in the fiscal year	1,736 million yen	(283) million yen
Reclassification adjustments	(1,106)	(125)
Before tax effect adjustments	630	(409)
Tax effect	(242)	266
Deferred gains or losses on hedges	387	(142)
Foreign currency translation adjustment		
Incurring in the fiscal year	(816) million yen	(5,943) million yen
Reclassification adjustments	895	—
Before tax effect adjustments	78	(5,943)
Tax effect	—	—
Foreign currency translation adjustment	78	(5,943)
Remeasurements of defined benefit plans		
Incurring in the fiscal year	8,274 million yen	2,192 million yen
Reclassification adjustments	9,241	2,573
Before tax effect adjustments	17,516	4,765
Tax effect	(4,909)	(1,308)
Remeasurements of defined benefit plans	12,607	3,457
Share of other comprehensive income of entities accounted for using equity method		
Incurring in the fiscal year	661 million yen	(1,268) million yen
Reclassification adjustments	2,030	1,641
Share of other comprehensive income of entities accounted for using equity method	2,692	372
Total other comprehensive income	21,072	(8,575)

g Notes to the Consolidated Statement of Changes in Net Assets

Previous Year (April 1, 2017 - March 31, 2018)

1 Matters on shares issued and outstanding

Type of shares	As of April 1, 2017	Increase	Decrease	As of March 31, 2018
Common shares (thousand shares)	2,083,400	—	1,666,720	416,680

(Overview of reasons for change)

The major reason for decrease is as follows: Decrease by share consolidation 1,666,720 thousand shares

2 Matters on treasury shares

Type of shares	As of April 1, 2017	Increase	Decrease	As of March 31, 2018
Common shares (thousand shares)	3,764	310	3,244	830

(Overview of reasons for change)

The major reason for increase is as follows: Increase by repurchase of fractional shares 300 thousand shares (including 11 thousand shares after share consolidation)
Increase by repurchase of fractional shares upon share consolidation 10 thousand shares

The major reason for decrease is as follows: Decrease by share consolidation 3,235 thousand shares
Decrease by disposal of fractional shares 9 thousand shares (including 1 thousand shares after share consolidation)

3 Matters on subscription rights to shares, etc.

Not applicable.

4 Matters on dividends

(1) Dividends paid

Resolution	Type of shares	Total dividends paid (million yen)	Dividends per share (yen)	Record date	Effective date
Annual General Meeting of Shareholders held on June 29, 2017	Common shares	10,398	5.00	March 31, 2017	June 30, 2017
Board of Directors' Meeting held on October 26, 2017 (Note)	Common shares	10,396	5.00	September 30, 2017	November 30, 2017

Note: As the record date of September 30, 2017 is before the share consolidation date of October 1, 2017, the dividend per share represents the amount before the share consolidation.

(2) Of the dividends whose record date belongs to the fiscal year, the dividends whose effective date falls in the following fiscal year

Resolution	Type of shares	Total dividends paid (million yen)	Dividends per share (yen)	Record date	Effective date	Source of dividends
Annual General Meeting of Shareholders held on June 28, 2018	Common shares	10,396	25.00	March 31, 2018	June 29, 2018	Retained earnings

Current Year (April 1, 2018 - March 31, 2019)

1 Matters on shares issued and outstanding

Type of shares	As of April 1, 2018	Increase	Decrease	As of March 31, 2019
Common shares (thousand shares)	416,680	—	—	416,680

2 Matters on treasury shares

Type of shares	As of April 1, 2018	Increase	Decrease	As of March 31, 2019
Common shares (thousand shares)	830	38	1	867

(Overview of reasons for change)

The major reason for increase is as follows: Increase by repurchase of fractional shares 38 thousand shares

The major reason for decrease is as follows: Decrease by disposal of fractional shares 1 thousand shares

3 Matters on subscription rights to shares, etc.

Not applicable.

4 Matters on dividends

(1) Dividends paid

Resolution	Type of shares	Total dividends paid (million yen)	Dividends per share (yen)	Record date	Effective date
Annual General Meeting of Shareholders held on June 28, 2018	Common shares	10,396	25.00	March 31, 2018	June 29, 2018
Board of Directors' Meeting held on October 30, 2018	Common shares	10,395	25.00	September 30, 2018	November 30, 2018

(2) Of the dividends whose record date belongs to the fiscal year, the dividends whose effective date falls in the following fiscal year

Resolution	Type of shares	Total dividends paid (million yen)	Dividends per share (yen)	Record date	Effective date	Source of dividends
Annual General Meeting of Shareholders held on June 20, 2019	Common shares	10,395	25.00	March 31, 2019	June 21, 2019	Retained earnings

h Notes to the Consolidated Statement of Cash Flows

※1 The relationship between the balance of cash and cash equivalents at end of period and the amount of cash and deposits in the consolidated balance sheet is as follows:

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Cash and deposits	171,529 million yen	116,289 million yen
Time deposits with more than 3 months to maturity	(467)	(520)
Cash and cash equivalents	171,061	115,769

i Notes to Leases

1 Finance lease transactions

(As lessor)

(1) Breakdown of lease investment assets

(Current assets)

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Lease payments receivable component	27,770 million yen	39,507 million yen
Estimated residual value component	558	505
Amount equivalent to interest income	(6,273)	(8,246)
Lease investment assets	22,055	31,767

(2) Amounts of lease receivables and lease payments receivable components of lease investment assets expected to be collected after the fiscal year end (Current assets)

	Previous Year (As of March 31, 2018)					
	One year or less (million yen)	More than one year, up to two years (million yen)	More than two years, up to three years (million yen)	More than three years, up to four years (million yen)	More than four years, up to five years (million yen)	More than five years (million yen)
Lease receivables	1,211	1,105	983	861	766	3,935
Lease investment assets	5,478	4,788	4,124	3,556	2,896	6,927

	Current Year (As of March 31, 2019)					
	One year or less (million yen)	More than one year, up to two years (million yen)	More than two years, up to three years (million yen)	More than three years, up to four years (million yen)	More than four years, up to five years (million yen)	More than five years (million yen)
Lease receivables	1,312	1,193	1,054	937	795	3,904
Lease investment assets	6,913	6,313	5,747	5,037	4,259	11,236

2 Operating lease transactions

(As lessee)

Future lease payments payable for non-cancellable operating leases

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Due within one year	1,200 million yen	1,084 million yen
Due over one year	4,098	4,232
Total	5,298	5,316

(Lessor)

Future lease payments receivable for non-cancellable operating leases

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Due within one year	1,657 million yen	1,954 million yen
Due over one year	3,824	4,242
Total	5,482	6,197

3 Amounts recorded on the consolidated balance sheet before deducting amounts equivalent to interest for sublease transactions

(1) Lease receivables and lease investment assets

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Current assets	6,272 million yen	9,032 million yen

(2) Lease obligations

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Current liabilities	441 million yen	628 million yen
Non-current liabilities	4,750	6,627

1 Matters on the status of financial instruments

(1) Policies for dealing with financial instruments

It is the Group's policy to raise its operating funds through loans from financial institutions and the issuance of bonds and to conduct fund management through a conservative financial portfolio which limits exposure to losses. The Group uses derivative transactions to hedge the risks described later and does not engage in speculative transactions.

(2) Details of financial instruments, risks thereof and risk management structure

Notes and accounts receivable - trade, which are operating receivables, are exposed to customer credit risks. To deal with this risk, the Company and the Group companies manage due dates and balances for each counterparty in accordance with their accounting rules and manuals regarding receivable management, etc. and seek to mitigate collectability concern.

Securities and investment securities, which comprise mainly shares of companies with which the Group has business relationships, are exposed to risks including market price fluctuation risk. The Group continuously reviews its shareholding position by periodically monitoring their market price and the financial condition of the issuers (customer companies), as well as considering the relationship with such customer companies.

Notes and accounts payable - trade, which are operating payables, are mostly settled within one year. Of bonds and loans payable, short-term loans payable are mainly to procure funds for operational transactions, while bonds and long-term loans payable are mainly to procure funds for capital expenditures. Bonds and long-term loans payable procure funds with fixed interest rates.

In derivative transactions, the Group uses interest rate swaps for

adjusting the ratio between fixed and floating interest rates and fixing the interest level for bonds and loans payable, forward exchange contracts and currency option contracts for reducing the fluctuation of cash flows due to change in foreign exchange rates, swap contracts and option contracts on crude oil price, etc. for reducing the fluctuation of cash flows due to change in crude oil price, etc., and weather derivative contracts, etc. for reducing the fluctuation of cash flows due to change in temperature. Matters on hedge accounting including hedging instruments, hedged items, hedging policy and method for assessing the hedge effectiveness are as described in 4 (6) of "Significant Matters Forming the Basis of Preparation of the Consolidated Financial Statements."

The credit risks for derivative transactions are immaterial as the Group enters into contracts only with major financial institutions, etc. with high ratings. Execution and management of derivative transactions are performed by the finance department of each Group company, and the finance department of the Company controls their activities. Transactions by Group companies are conducted in accordance with the internal rules.

Although operating payables, loans and bonds payable are exposed to liquidity risk, the Company maintains high credit ratings and secures stable fund procurement measures. In addition, the Group has implemented a cash management system (CMS) to facilitate funding for Group companies.

(3) Supplementary explanation to fair value of financial instruments

Please note that contract amounts of derivative transactions in "2 Matters on fair value, etc. of financial instruments" do not, in themselves, indicate the market risk pertaining to the derivative transactions.

2 Matters on fair value, etc. of financial instruments

The carrying amount in the consolidated balance sheet, fair value and difference between them are as follows. Financial instruments whose fair value is deemed to be extremely difficult to determine are not included in the table below (see Note 2).

Previous Year (As of March 31, 2018)

	Carrying amount in the consolidated balance sheet (million yen)	Fair value (million yen)	Difference (million yen)
(1) Cash and deposits	171,529	171,529	—
(2) Notes and accounts receivable - trade	190,445	190,445	—
(3) Securities and investment securities	103,915	103,915	—
Total assets	465,890	465,890	—
(1) Notes and accounts payable - trade	58,542	58,542	—
(2) Short-term loans payable	22,179	22,179	—
(3) Bonds payable (※1)	194,984	207,641	12,656
(4) Long-term loans payable (※1)	279,560	290,749	11,188
Total liabilities	555,266	579,112	23,845
Derivative transactions (※2)	(2,948)	(2,948)	—

(※1) Includes those due within one year.

(※2) Assets and liabilities arising from derivative transactions were offset and indicated by parentheses () when the amount offset was a liability.

Current Year (As of March 31, 2019)

	Carrying amount in the consolidated balance sheet (million yen)	Fair value (million yen)	Difference (million yen)
(1) Cash and deposits	116,289	116,289	—
(2) Notes and accounts receivable - trade	219,206	219,206	—
(3) Securities and investment securities	95,429	95,429	—
Total assets	430,925	430,925	—
(1) Notes and accounts payable - trade	66,087	66,087	—
(2) Short-term loans payable	22,751	22,751	—
(3) Bonds payable (※1)	164,988	177,943	12,954
(4) Long-term loans payable (※1)	404,188	417,956	13,768
Total liabilities	658,014	684,738	26,723
Derivative transactions (※2)	(1,446)	(1,446)	—

(※1) Includes those due within one year.

(※2) Assets and liabilities arising from derivative transactions were offset and indicated by parentheses () when the amount offset was a liability.

Note 1: Method for measuring fair value of financial instruments and matters on securities and derivative transactions

Assets

(1) Cash and deposits, and (2) Notes and accounts receivable - trade

As these items are settled within a short term, the fair value is approximately equal to the carrying amount. Therefore, the fair value is determined by the carrying amount.

(3) Securities and investment securities

The fair value of shares is based on the market prices at the exchange. The fair value of bonds is based on the market prices at the exchange or the prices provided by counterparty financial institutions. For information on securities classified by holding purpose, please refer to "Notes to Securities."

Liabilities

(1) Notes and accounts payable - trade, and (2) Short-term loans payable

As these items are settled within a short term, the fair value is approximately equal to the carrying amount. Therefore, the fair value is determined by the carrying amount.

(4) Long-term loans payable

The fair value of long-term loans payable with fixed interest is measured by discounting the sum of the principal and interest at the rate assumed for new similar loans.

The fair value of long-term loans payable with floating interest is determined by the carrying amount, as the fair value is deemed approximately equal to the carrying amount. Interest rate swap contracts which determine the interest rate level of long-term loans payable with floating interest qualify for exceptional accounting. Long-term loans payable with floating interest accompanied by such interest swaps are accounted for as a whole, and the fair value is determined by discounting the sum of their principals and interests at a reasonably estimated rate applied for similar loans.

(3) Bonds payable

The fair value of bonds payable issued by the Company is based on their market prices.

Derivative transactions

Please refer to "Notes to Derivative Transactions."

Note 2: Carrying amount in the consolidated balance sheet of financial instruments whose fair value is extremely difficult to determine

(million yen)

Category	March 31, 2018	March 31, 2019
Shares of affiliates	209,098	249,346
Unlisted stocks, etc.	10,198	14,962

As the above financial instruments do not have market prices and their future cash flows cannot be estimated, their fair value is extremely difficult to determine. Therefore, they are not included in "(3) Securities and investment securities."

Note 3: Expected redemption amounts of monetary receivables and securities with maturities after the consolidated fiscal year-end

Previous Year (As of March 31, 2018)

	One year or less (million yen)	More than one year, up to five years (million yen)	More than five years, up to ten years (million yen)	More than ten years (million yen)
Cash and deposits	171,529	—	—	—
Notes and accounts receivable - trade	190,445	—	—	—
Securities and investment securities				
Held-to-maturity bonds (Corporate bonds)	—	—	—	180
Available-for-sale securities with maturities (Government bonds and municipal bonds)	—	—	—	98
Available-for-sale securities with maturities (Other)	—	210	117	—
Total	361,974	210	117	278

Current Year (As of March 31, 2019)

	One year or less (million yen)	More than one year, up to five years (million yen)	More than five years, up to ten years (million yen)	More than ten years (million yen)
Cash and deposits	116,289	—	—	—
Notes and accounts receivable - trade	219,206	—	—	—
Securities and investment securities				
Held-to-maturity bonds (Corporate bonds)	—	—	—	180
Available-for-sale securities with maturities (Government bonds and municipal bonds)	—	—	—	98
Available-for-sale securities with maturities (Other)	210	1,578	1,277	0
Total	335,706	1,578	1,277	279

Note 4: Expected repayment amounts of bonds payable, long-term loans payable and other interest-bearing debts

Previous Year (As of March 31, 2018)

	One year or less (million yen)	More than one year, up to two years (million yen)	More than two years, up to three years (million yen)	More than three years, up to four years (million yen)	More than four years, up to five years (million yen)	More than five years (million yen)
Short-term loans payable	22,179	—	—	—	—	—
Bonds payable	30,000	20,000	30,000	10,000	30,000	75,000
Long-term loans payable	36,305	20,478	15,008	38,237	11,332	158,197
Total	88,485	40,478	45,008	48,237	41,332	233,197

Current Year (As of March 31, 2019)

	One year or less (million yen)	More than one year, up to two years (million yen)	More than two years, up to three years (million yen)	More than three years, up to four years (million yen)	More than four years, up to five years (million yen)	More than five years (million yen)
Short-term loans payable	22,751	—	—	—	—	—
Bonds payable	20,000	30,000	10,000	30,000	10,000	65,000
Long-term loans payable	36,769	37,099	60,513	37,372	49,289	183,144
Total	79,520	67,099	70,513	67,372	59,289	248,144

k Notes to Securities

1 Available-for-sale securities

Previous Year (As of March 31, 2018)

	Carrying amount in the consolidated balance sheet (million yen)	Acquisition cost (million yen)	Difference (million yen)
1 Available-for-sale securities whose carrying amount in the consolidated balance sheet exceeds the acquisition cost			
(1) Stocks	102,545	22,103	80,441
(2) Bonds			
Government bonds and municipal bonds, etc.	—	—	—
Subtotal	102,545	22,103	80,441
2 Available-for-sale securities whose carrying amount in the consolidated balance sheet does not exceed the acquisition cost			
(1) Stocks	1,271	2,500	(1,228)
(2) Bonds			
Government bonds and municipal bonds, etc.	98	98	—
Subtotal	1,370	2,598	(1,228)
Total	103,915	24,702	79,213

Note: As unlisted stocks (carrying amount in the consolidated balance sheet: ¥9,679 million), etc. do not have market prices and their future cash flows cannot be estimated, their fair value is extremely difficult to determine. Therefore, they are not included.

Current Year (As of March 31, 2019)

	Carrying amount in the consolidated balance sheet (million yen)	Acquisition cost (million yen)	Difference (million yen)
1 Available-for-sale securities whose carrying amount in the consolidated balance sheet exceeds the acquisition cost			
(1) Stocks	93,207	21,724	71,482
(2) Bonds			
Government bonds and municipal bonds, etc.	—	—	—
Subtotal	93,207	21,724	71,482
2 Available-for-sale securities whose carrying amount in the consolidated balance sheet does not exceed the acquisition cost			
(1) Stocks	2,123	3,224	(1,101)
(2) Bonds			
Government bonds and municipal bonds, etc.	98	98	—
Subtotal	2,222	3,323	(1,101)
Total	95,429	25,048	70,381

Note: As unlisted stocks (carrying amount in the consolidated balance sheet: ¥11,704 million), etc. do not have market prices and their future cash flows cannot be estimated, their fair value is extremely difficult to determine. Therefore, they are not included.

2 Available-for-sale securities sold during the fiscal year

Previous Year (April 1, 2017 - March 31, 2018)

Stocks	Total sales	437 million yen
	Total gain on sales	0
	Total loss on sales	0

Current Year (April 1, 2018 - March 31, 2019)

Stocks	Total sales	125 million yen
	Total gain on sales	51
	Total loss on sales	26

3 Securities for which impairment loss is recognized

For the previous fiscal year, an impairment loss of ¥1,640 million for shares of subsidiaries and associates and an impairment loss of ¥7 million for available-for-sale securities were recognized.

For the current fiscal year, an impairment loss of ¥2,125 million for shares of subsidiaries and associates and an impairment loss of ¥42 million for available-for-sale securities were recognized.

1 Derivative transactions to which hedge accounting is not applied

Previous Year (As of March 31, 2018)

Underlying asset	Derivative instrument	Type of transaction	Contract amount (million yen)		Fair value (million yen)	Valuation gain (loss) (million yen)
				More than one year		
(a) Commodities	Swap contracts and option contracts on oil price, etc.	Other than market transactions	153	—	(12)	(12)
(b) Currencies	Forward exchange contracts	Other than market transactions	273	—	(11)	(11)
Total			427	—	(23)	(23)

Note 1: The fair value is measured mainly based on the prices provided by counterparty financial institutions.

Note 2: As certain derivative transactions no longer satisfy the requirements for hedge accounting, hedge accounting is discontinued for such transactions.

Current Year (As of March 31, 2019)

Underlying asset	Derivative instrument	Type of transaction	Contract amount (million yen)		Fair value (million yen)	Valuation gain (loss) (million yen)
				More than one year		
(a) Commodities	Swap contracts and option contracts on oil price, etc.	Other than market transactions	7,978	7,726	(368)	(368)
(b) Currencies	Forward exchange contracts	Other than market transactions	271	—	(1)	(1)
Total			8,249	7,726	(369)	(369)

Note 1: The fair value is measured mainly based on the prices provided by counterparty financial institutions.

Note 2: As certain derivative transactions no longer satisfy the requirements for hedge accounting, hedge accounting is discontinued for such transactions.

2 Derivative transactions to which hedge accounting is applied

Previous Year (As of March 31, 2018)

Underlying asset	Derivative instrument	Hedge accounting	Major hedged item	Contract amount (million yen)		Fair value (million yen)
					More than one year	
(a) Interest rates	Interest rate swap contracts	Exceptional accounting of interest rate swaps	Long-term loans payable	81,255	75,255	(Note 2)
		Principal method of accounting	Long-term loans payable and bonds payable	90,567	86,635	(2,365)
(b) Currencies	Forward exchange contracts and currency option contracts	Allocation accounting of forward exchange contracts, etc.	Forecast transactions denominated in foreign currencies	18,429	7,283	(334)
		Principal method of accounting	Forecast transactions denominated in foreign currencies	26,762	21,282	(689)
(c) Commodities	Swap contracts and option contracts on oil price, etc.	Principal method of accounting	Purchase prices of raw materials, etc.	6,784	2,777	465
Total				223,799	193,234	(2,924)

Note 1: The fair value is measured mainly based on the prices provided by counterparty financial institutions.

Note 2: As interest rate swaps subject to exceptional accounting are accounted for together with the hedged long-term loans payable, their fair value is included in that of the long-term loans payable.

Current Year (As of March 31, 2019)

Underlying asset	Derivative instrument	Hedge accounting	Major hedged item	Contract amount (million yen)		Fair value (million yen)
					More than one year	
(a) Interest rates	Interest rate swap contracts	Exceptional accounting of interest rate swaps	Long-term loans payable	70,466	67,463	(Note 2)
		Principal method of accounting	Long-term loans payable and bonds payable	105,706	97,174	(1,379)
(b) Currencies	Forward exchange contracts and currency option contracts	Allocation accounting of forward exchange contracts, etc.	Forecast transactions denominated in foreign currencies	9,377	2,659	276
		Principal method of accounting	Forecast transactions denominated in foreign currencies	100,092	18,584	399
(c) Commodities	Swap contracts and option contracts on oil price, etc.	Principal method of accounting	Purchase prices of raw materials, etc.	51,056	35,407	(373)
Total				336,698	221,288	(1,077)

Note 1: The fair value is measured mainly based on the prices provided by counterparty financial institutions.

Note 2: As interest rate swaps subject to exceptional accounting are accounted for together with the hedged long-term loans payable, their fair value is included in that of the long-term loans payable.

m Notes to Retirement Benefits

1 Summary of the adopted retirement benefit plans

The Company and its consolidated subsidiaries have adopted funded and unfunded defined benefit plans and defined contribution plans. As for defined benefit plans, the Company and most consolidated subsidiaries provide lump sum retirement payment plans, and the Company and certain consolidated subsidiaries provide defined benefit corporate pension plans or corporate pension fund plans.

The Company has adopted a defined benefit corporate pension plan since August 1, 2006 and a defined contribution pension plan to which part of the defined benefit plan transitioned since January 1, 2005.

As certain consolidated subsidiaries participate in the corporate

pension fund of the multi-employer pension plans, they cannot determine the amount of pension assets corresponding to their contribution. Therefore, such plans are accounted for in the same manner as defined contribution plans.

The employees' pension fund of the multi-employer pension plans which the consolidated subsidiaries participated in received an approval for return of substitutional part by Minister of Health, Labour and Welfare as of April 1, 2015, and transitioned to the corporate pension fund which received an approval for establishment by Minister of Health, Labour and Welfare as of July 1, 2017. There was no additional contribution due to this transition.

2 Defined benefit plans

(1) Reconciliations of the opening and closing balances of retirement benefit obligations

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Balance at beginning of year	300,078 million yen	290,953 million yen
Service cost	8,912	8,277
Interest cost	1,749	1,428
Actuarial loss (gain)	(2,576)	5,842
Benefits paid	(15,250)	(15,753)
Other	(1,959)	71
Balance at end of year	290,953	290,819

Note: Consolidated subsidiaries which have adopted the simplified method are included.

(2) Reconciliations of the opening and closing balances of plan assets

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Balance at beginning of year	319,984 million yen	320,399 million yen
Expected return on plan assets	6,957	6,740
Actuarial loss (gain)	5,697	8,125
Contributions paid by the employer	2,747	1,849
Benefits paid	(14,056)	(14,444)
Other	(929)	(5)
Balance at end of year	320,399	322,665

Note: Consolidated subsidiaries which have adopted the simplified method are included.

(3) Reconciliations of the closing balances of retirement benefit obligations and plan assets, and retirement benefit liability and asset recorded in the consolidated balance sheet

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Funded retirement benefit obligations	273,953 million yen	273,522 million yen
Plan assets	(320,399)	(322,665)
	(46,445)	(49,143)
Unfunded retirement benefit obligations	16,999	17,297
Total net defined benefit liability (asset) recorded in the consolidated balance sheet	(29,446)	(31,846)
Retirement benefit liability	16,958	17,228
Retirement benefit asset	(46,405)	(49,074)
Total net defined benefit liability (asset) recorded in the consolidated balance sheet	(29,446)	(31,846)

Note: Consolidated subsidiaries which have adopted the simplified method are included.

(4) Retirement benefit costs and components thereof

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Service cost	8,912 million yen	8,277 million yen
Interest cost	1,749	1,428
Expected return on plan assets	(6,957)	(6,740)
Net actuarial loss amortization	9,272	2,591
Past service cost amortization	(30)	(30)
Other	9	—
Total retirement benefit costs	12,955	5,525

Note: The retirement benefit cost for consolidated subsidiaries which have adopted the simplified method is included in "Service cost."

(5) Remeasurements of defined benefit plans

Items (before tax effect) recorded in remeasurements of defined benefit plans are as follows:

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Past service cost	30 million yen	30 million yen
Actuarial gain (loss)	(17,547)	(4,796)
Total	(17,516)	(4,765)

(6) Remeasurements of defined benefit plans

Items (before tax effect) recorded in remeasurements of defined benefit plans are as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Unrecognized past service cost	(77) million yen	(46) million yen
Unrecognized actuarial gain (loss)	(16,170)	(20,967)
Total	(16,248)	(21,013)

(7) Plan assets

① Major components of plan assets

The proportion of major categories to total plan assets is as follows:

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Bonds	27.1 %	27.0 %
Stocks	30.8	31.6
Cash and deposits	25.1	24.5
Other	17.0	16.9
Total	100.0	100.0

Note: The main assets of "Other" are beneficiary securities in the real estate investment trust fund.

② Method for setting long-term expected rate of return

In determining the long-term expected rate of return, the current and projected allocations of plan assets and the current and expected long-term investment returns on various assets constituting plan assets are taken into account.

(8) Actuarial assumptions

Major assumptions for actuarial calculations are as follows:

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Discount rate	Mainly 0.5 %	Mainly 0.3 %
Long-term expected rate of return	Mainly 2.2 %	Mainly 2.1 %

3 Defined contribution plans

The contribution required to the defined contribution plan of the Company and its consolidated subsidiaries was ¥1,138 million for the previous fiscal year and ¥1,103 million for the current fiscal year.

4 Multi-employer pension plans

The multi-employer pension plans were accounted for in the same manner as the defined contribution plan. The contribution required to the corporate pension fund of the multi-employer pension plans was ¥77 million for the previous fiscal year and ¥76 million for the current fiscal year. As described in 1 above, the employees' pension fund was replaced by the corporate pension fund on July 1, 2017.

(1) Recent funded status of multi-employer pension plans

	Previous Year (As of March 31, 2017)	Current Year (As of March 31, 2018)
Amount of plan assets	748,654 million yen	248,188 million yen
Total amount of actuarial obligation and minimum actuarial reserve in pension financing	732,391	203,695
Balance	16,263	44,493

(2) Share of the Group's contribution to overall multi-employer pension plans

Previous fiscal year 0.97% (weighted average) (March 1, 2017 - March 31, 2017)

Current fiscal year 1.17% (weighted average) (March 1, 2018 - March 31, 2018)

(3) Supplementary explanation

The major factor contributing to the balance in (1) above was retained earnings (¥16,292 million for the previous fiscal year and ¥44,561 million for the current fiscal year).

n Notes to Stock Options

Not applicable.

o Tax Effect Accounting

1 Breakdown of major causes for deferred tax assets and deferred tax liabilities

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Deferred tax assets		
Tax loss carryforwards (Note)	26,013 million yen	38,913 million yen
Petroleum resource use tax for international business	11,563	19,710
Impairment loss	10,675	12,196
Other	33,133	32,238
Subtotal deferred tax assets	81,386	103,059
Valuation allowance on tax loss carryforwards (Note)	—	(12,959)
Valuation allowance on the total of deductible temporary differences	—	(37,981)
Subtotal valuation allowance	(47,737)	(50,940)
Total deferred tax assets	33,649	52,118
Deferred tax liabilities		
Valuation difference on available-for-sale securities	(21,994)	(19,500)
Temporary differences related to investments in affiliates	—	(14,909)
Retirement benefit asset	(12,995)	(13,756)
Other	(9,484)	(8,783)
Total deferred tax liabilities	(44,474)	(56,950)
Net deferred tax assets (liabilities)	(10,825)	(4,832)

(Note) Tax loss carryforwards and associated deferred tax assets by carryforward period

Current Year (As of March 31, 2019)

	One year or less (million yen)	More than one year, up to two years (million yen)	More than two years, up to three years (million yen)	More than three years, up to four years (million yen)	More than four years, up to five years (million yen)	More than five years (million yen)	Total (million yen)
Tax loss carryforwards (a)	51	106	39	39	101	38,575	38,913
Valuation allowance	26	81	38	39	101	12,671	12,959
Deferred tax assets	25	24	0	—	—	25,903	25,954(b)

(a) A tax loss carryforward is the amount obtained by multiplying by the effective statutory tax rate.

(b) Deferred tax assets of ¥25,954 million is recorded for tax loss carryforwards of ¥38,913 million (amount obtained by multiplying by the effective statutory tax rate). The Company does not recognize valuation allowances for the portion of the tax loss carryforwards deemed to be recoverable due to the prospect of future taxable income from the Australian upstream business and the North American IPP business.

2 Breakdown of major items causing the difference between the statutory effective tax rate and the burden rate of income taxes after applying tax effect accounting

	Previous Year (As of March 31, 2018)	Current Year (As of March 31, 2019)
Statutory effective tax rate	28.2 %	28.0 %
(Reconciliation)		
Valuation allowance	12.6	6.2
Amortization of goodwill	1.0	6.1
Temporary differences related to investment in affiliates	1.3	2.2
Difference between the parent's and subsidiaries' effective statutory tax rates	0.2	1.7
Petroleum resource use Tax for international business	(5.2)	(15.6)
Other	1.9	1.3
Burden rate of income taxes after applying tax effect accounting	40.0 %	29.8 %

p Notes to Business Combinations, etc.

Not applicable.

q Notes to Asset Retirement Obligations

Not applicable.

r Notes to Leased Properties, etc.

The Company and certain consolidated subsidiaries own office buildings and other properties for lease (including land) in Osaka Prefecture and other areas. Gains from the lease of such leased properties (recorded mainly as operating profit) are ¥6,295 million for the fiscal year ended March 31, 2018 and ¥7,190 million for

the fiscal year ended March 31, 2019.

The carrying amount in the consolidated balance sheet, changes during the fiscal year, and the fair value of the leased properties are as follows:

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Carrying amount in the consolidated balance sheet		
Balance at beginning of year	113,789 million yen	115,788 million yen
Increase (decrease)	1,998	12,527
Balance at end of year	115,788	128,315
Fair value at end of year	184,086	209,421

Note 1: The carrying amount in the consolidated balance sheet is stated at acquisition cost less accumulated depreciation and accumulated impairment losses.

Note 2: The main factor contributing to an increase was the acquisition of properties (previous fiscal year: ¥3,484 million, current fiscal year: ¥10,147 million).

Note 3: The fair value at the end of the fiscal year is the amount (including the amount adjusted using the index, etc.) determined based mainly on the method prescribed by the "Real Estate Appraisal Standard" and other similar methods.

s Segment Information, etc.

[Segment Information]

1 Summary of reportable segments

The Osaka Gas Group's reportable segments are organizational units for which separate financial information is available, and they are regularly reviewed by the Board of Directors to determine the allocation of management resources and evaluate business results.

The Osaka Gas Group classifies its products and services into business segments on the basis of two business domains: the Domestic and International Energy Business and the Life & Business Solutions Business. It then divides those business segments into the following four reportable segments by considering product and service similarities, namely, the Domestic Energy/Gas Business, the Domestic Energy/Electricity Business, the International Energy Business, and the Life & Business Solutions Business.

The Domestic Energy/Gas Business manufactures, supplies, and sells city gas, sells gas appliances, conducts gas pipeline installation, and sells LNG, LPG and industrial gas. The Domestic

Energy/Electricity Business produces and sells electricity. The International Energy Business conducts development and investment related to petroleum and natural gas, supplies energy, and leases tankers to transport LNG. The Life & Business Solutions Business conducts development and leasing of real estate, information processing services, and sales of fine materials and carbon material products.

Due to a restructuring of the organization, the Engineering Department was integrated into the LNG Terminal & Power Generation Business Unit, and LNG Terminal & Power Generation & Engineering Business Unit was established as of April 1, 2018. Therefore, from the fiscal year ended March 31, 2019, a subsidiary included in the "Life & Business Solutions" segment has been transferred to the "Domestic Energy/Gas" segment. Segment information for the fiscal year ended March 31, 2018 has been reclassified based on the new reportable segments.

2 Explanation of measurement of sales, profit/loss, assets, liabilities, and other items for each reportable segment

The accounting methods for reportable segments comply with "Significant Matters Forming the Basis of Preparation of the Consolidated Financial Statements." Internal sales and transfer

prices between operating segments are determined according to the arm's length principle.

3 Information of sales, profit/loss, asset, liabilities, and other items for each reportable segment

Previous Year (April 1, 2017 - March 31, 2018)

(million yen)

	Reportable Segment				Total	Adjustments (Note 1)	Consolidated (Note 2)
	Domestic Energy/Gas	Domestic Energy/ Electricity	International Energy	Life & Business Solutions			
Net sales							
Sales to external customers	964,273	156,497	14,313	161,153	1,296,238	—	1,296,238
Transactions with other segments	11,995	1,255	8,257	40,319	61,827	(61,827)	—
Total	976,269	157,752	22,570	201,472	1,358,065	(61,827)	1,296,238
Segment profit (loss)							
Operating profit (loss)	42,043	20,568	(4,506)	18,284	76,389	1,728	78,118
Share of profit (loss) of entities accounted for using equity method	943	146	(831)	—	258	—	258
Total	42,987	20,714	(5,338)	18,284	76,648	1,728	78,376
Segment assets	865,154	157,519	462,351	350,138	1,835,164	62,066	1,897,230
Other items							
Depreciation	57,789	6,773	11,692	11,136	87,391	(1,013)	86,378
Amortization of goodwill	—	94	473	1,777	2,344	—	2,344
Investment in entities accounted for using equity method	13,554	1,421	177,258	—	192,234	—	192,234
Increase in property, plant and equipment and intangible assets	46,426	13,477	6,187	17,175	83,267	(1,551)	81,716

Note 1: Adjustments are as follows:

(1) A major adjustment in segment profit (loss) is the elimination of intersegment transactions.

(2) A major adjustment in segment assets is for investment securities held by the Company.

Note 2: Segment profit (loss) is adjusted by adding share of profit (loss) of entities accounted for using equity method to operating profit (loss).

Note 3: "Partial Amendments to Accounting Standard for Tax Effect Accounting" (ASBJ Statement No. 28, February 16, 2018) have been applied from the beginning of the fiscal year ended March 31, 2019. Segment assets for the previous fiscal year are calculated by retroactively applying these accounting standards.

Current Year (April 1, 2018 - March 31, 2019)

(million yen)

	Reportable Segment				Total	Adjustments (Note 1)	Consolidated (Note 2)
	Domestic Energy/Gas	Domestic Energy/ Electricity	International Energy	Life & Business Solutions			
Net sales							
Sales to external customers	999,476	183,067	22,113	167,206	1,371,863	—	1,371,863
Transactions with other segments	13,166	1,245	18,376	43,707	76,497	(76,497)	—
Total	1,012,642	184,313	40,489	210,914	1,448,361	(76,497)	1,371,863
Segment profit							
Operating profit	34,778	9,350	5,283	17,714	67,126	850	67,977
Share of profit (loss) of entities accounted for using equity method	1,031	(625)	691	—	1,096	—	1,096
Total	35,809	8,724	5,974	17,714	68,222	850	69,073
Segment assets	866,906	165,322	572,881	374,311	1,979,422	50,300	2,029,722
Other items							
Depreciation	55,639	7,998	14,762	11,352	89,752	(1,389)	88,363
Amortization of goodwill (Note 3)	8,901	192	465	1,820	11,381	—	11,381
Investment in entities accounted for using equity method	14,405	2,477	213,821	—	230,703	—	230,703
Increase in property, plant and equipment and intangible assets	48,139	16,188	24,760	19,888	108,977	(1,717)	107,259

Note 1: Adjustments are as follows:

(1) A major adjustment in segment profit (loss) is the elimination of intersegment transactions.

(2) A major adjustment in segment assets is for investment securities held by the Company.

Note 2: Segment profit (loss) is adjusted by adding share of profit (loss) of entities accounted for using equity method to operating profit (loss).

Note 3: Amortization of goodwill includes amortization of goodwill recognized in extraordinary losses.

【Related Information】

Previous Year (April 1, 2017 - March 31, 2018)

1 Information by product and service

The information is omitted as similar information is disclosed in “Segment Information.”

2 Information by geographical area

(1) Net sales

The information is omitted as net sales in Japan account for more than 90% of net sales in the consolidated statement of income.

(2) Property, plant and equipment

				(million yen)
Japan	Australia	Other areas	Total	
740,577	132,202	9,042	881,822	

3 Information by major customer

The information is omitted as there is no external customer who accounts for 10% or more of net sales in the consolidated statement of income.

Current Year (April 1, 2018 - March 31, 2019)

1 Information by product and service

The information is omitted as similar information is disclosed in “Segment Information.”

2 Information by geographical area

(1) Net sales

The information is omitted as net sales in Japan account for more than 90% of net sales in the consolidated statement of income.

(2) Property, plant and equipment

				(million yen)
Japan	Australia	Other areas	Total	
745,316	129,417	14,658	889,392	

3 Information by major customer

The information is omitted as there is no external customer who accounts for 10% or more of net sales in the consolidated statement of income.

【Information about impairment loss for non-current assets by reportable segment】

Previous Year (April 1, 2017 - March 31, 2018)

	Reportable Segment				Total	Elimination/ Corporate	Total
	Domestic Energy/Gas	Domestic Energy/ Electricity	International Energy	Life & Business Solutions			
Impairment loss	993	—	9,616	639	11,249	—	11,249

Current Year (April 1, 2018 - March 31, 2019)

Omitted due to immateriality in amount.

Information about the amortized amount and unamortized balance of goodwill by reportable segment

Previous Year (April 1, 2017 - March 31, 2018)

(million yen)

	Reportable Segment				Total	Elimination/ Corporate	Total
	Domestic Energy/Gas	Domestic Energy/ Electricity	International Energy	Life & Business Solutions			
Amortized amount during year	—	94	473	1,777	2,344	—	2,344
Unamortized balance at end of year	—	2,696	480	11,473	14,650	—	14,650

Current Year (April 1, 2018 - March 31, 2019)

(million yen)

	Reportable Segment				Total	Elimination/ Corporate	Total
	Domestic Energy/Gas	Domestic Energy/ Electricity	International Energy	Life & Business Solutions			
Amortized amount during year	8,901	192	465	1,820	11,381	—	11,381
Unamortized balance at end of year	—	2,504	3	9,025	11,533	—	11,533

(Note) Amortized amounts during the fiscal year include amortization of goodwill recognized in extraordinary losses.

Information about gain on bargain purchase by reportable segment

Previous Year (April 1, 2017 - March 31, 2018)

Current Year (April 1, 2018 - March 31, 2019)

Not applicable.

Not applicable.

Related Party Information

Not applicable.

t Per Share Information

	Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Shareholders' equity per share	2,403.68 yen	2,415.37 yen
Earnings per share	90.71 yen	80.80 yen

Note 1: Since there were no potential shares with a dilutive effect, data on diluted earnings per share is not presented in this document.

Note 2: The Company conducted a share consolidation at a ratio of 5 shares of common shares to 1 share, effective on October 1, 2017. Accordingly, shareholders' equity per share and earnings per share are calculated based on the assumption that the share consolidation was conducted at the beginning of the previous fiscal year.

Note 3: The following data was used for calculating earnings per share:

		Previous Year (April 1, 2017 - March 31, 2018)	Current Year (April 1, 2018 - March 31, 2019)
Profit attributable to owners of parent	(million yen)	37,724	33,601
Amount not attributable to common shareholders	(million yen)	—	—
Profit attributable to owners of parent attributable to common share	(million yen)	37,724	33,601
Average number of common shares during the fiscal year	(thousand shares)	415,880	415,831

u Subsequent Events

The Company decided to issue the 36th and 37th domestic unsecured bonds on May 31, 2019 in accordance with a resolution made at the Board of Directors' Meeting held on March 7, 2019, and issued the bonds under the following conditions. The summaries of these issuances are as follows.

36th domestic unsecured bond

- (1) Type: Straight bond redemption at maturity
- (2) Issuance amount: ¥20,000 million (6) Maturity date: June 4, 2049
- (3) Paid amount: ¥20,000 million (7) Issue date: June 6, 2019
- (4) Interest rate: 0.642% per annum (8) Collateral: Unsecured
- (5) Redemption method: Bullet (9) Use of proceeds: To finance the redemption of bonds and repayment of loans

37th domestic unsecured bond

- (1) Type: Straight bond redemption at maturity
- (2) Issuance amount: ¥20,000 million (6) Maturity date: June 6, 2059
- (3) Paid amount: ¥20,000 million (7) Issue date: June 6, 2019
- (4) Interest rate: 0.818% per annum (8) Collateral: Unsecured
- (5) Redemption method: Bullet (9) Use of proceeds: To finance the redemption of bonds and repayment of loans

Annexed Consolidated Detailed Schedules

[Annexed consolidated detailed schedule of corporate bonds]

Company	Name of issue	Date of issuance	Balance at the beginning of current fiscal year (million yen)	Balance at the end of current fiscal year (included portion due within 1 year) (million yen)	Interest rate (%)	Collateral	Maturity
Osaka Gas	The 18th domestic unsecured bond	February 12, 2003	19,993	19,994	1.47	None	December 20, 2022
Osaka Gas	The 19th domestic unsecured bond	March 10, 2005	19,998	19,999 (19,999)	1.83	None	March 19, 2020
Osaka Gas	The 20th domestic unsecured bond	August 17, 2005	19,996	19,997	1.79	None	September 18, 2020
Osaka Gas	The 21st domestic unsecured bond	June 23, 2006	9,996	9,997	2.33	None	June 23, 2026
Osaka Gas (Note 2)	The 23rd domestic unsecured bond	July 25, 2007	—	—	2.14	None	July 25, 2019
Osaka Gas	The 26th domestic unsecured bond	July 17, 2008	30,000	—	1.782	None	July 17, 2018
Osaka Gas	The 28th domestic unsecured bond	March 9, 2011	10,000	10,000	1.345	None	March 9, 2021
Osaka Gas	The 29th domestic unsecured bond	December 9, 2011	10,000	10,000	1.16	None	December 9, 2021
Osaka Gas	The 30th domestic unsecured bond	December 14, 2012	10,000	10,000	0.759	None	December 14, 2022
Osaka Gas	The 31st domestic unsecured bond	October 18, 2013	10,000	10,000	0.748	None	October 18, 2023
Osaka Gas	The 32nd domestic unsecured bond	March 24, 2014	15,000	15,000	1.606	None	March 24, 2034
Osaka Gas	The 33rd domestic unsecured bond	October 24, 2014	20,000	20,000	1.402	None	October 24, 2034
Osaka Gas	The 34th domestic unsecured bond	March 5, 2015	10,000	10,000	1.685	None	March 3, 2045
Osaka Gas	The 35th domestic unsecured bond	December 9, 2016	10,000	10,000	0.986	None	December 8, 2056
Total	—	—	194,984	164,988 (19,999)	—	—	—

Note 1: The redemption schedule within 5 years after the consolidated fiscal year-end is as follows:

One year or less (million yen)	More than one year, up to two years (million yen)	More than two years, up to three years (million yen)	More than three years, up to four years (million yen)	More than four years, up to five years (million yen)
20,000	30,000	10,000	30,000	10,000

Note 2: The 23rd domestic unsecured bond (¥20,000 million) of Osaka Gas Co., Ltd. is accounted for as redeemed, since this debt was assigned to banks under debt assumption agreements concluded with said banks.

The obligation to redeem the 23rd domestic unsecured bond is reported as contingent liabilities in bonds to the consolidated balance sheet.

[Annexed consolidated detailed schedule of borrowings]

Category	Balance at beginning of year (million yen)	Balance at end of year (million yen)	Average interest rate (%)	Payment due
Short-term loans payable	22,179	22,751	0.3	—
Current portion of long-term loans payable	36,305	36,769	1.4	—
Current portion of lease obligations	833	1,151	—	—
Long-term loans payable (excluding current portion)	243,255	367,418	1.6	From April 2020 to December 2047
Lease obligations (excluding current portion)	6,230	8,386	—	From April 2020 to March 2036
Other interest-bearing debt Commercial paper (one year or less)	—	46,000	0.0	—
Total	308,804	482,477	—	—

Note 1: "Average interest rate" shows weighted average interest rates with respect to the year-end balances of loans payable. "Average interest rate" for lease obligations is not stated because lease obligations are recorded in the consolidated balance sheet at the amount before deducting the interest-equivalent component included in the total lease payment.

Note 2: The repayment schedule within 5 years after the consolidated fiscal year-end for long-term loans payable and lease obligations (excluding current portion) is as follows:

	More than one year, up to two years (million yen)	More than two years, up to three years (million yen)	More than three years, up to four years (million yen)	More than four years, up to five years (million yen)
Long-term loans payable	37,099	60,513	37,372	49,289
Lease obligations	—	—	—	—

【Annexed consolidated detailed schedule of asset retirement obligations】

The amount of asset retirement obligations was 1% or less of total liabilities and net assets at the beginning the current fiscal year as

well as at the end of the current fiscal year. Therefore, the schedule of asset retirement obligations is not disclosed.

(2) 【Other】

Quarter results for the current fiscal year

(Cumulative period)		First quarter	Second quarter	Third quarter	Full year
Net sales	(million yen)	297,136	607,453	943,610	1,371,863
Profit before income taxes	(million yen)	21,866	20,890	14,559	52,064
Profit attributable to owners of parent	(million yen)	15,638	13,504	5,200	33,601
Earnings per share	(yen)	37.61	32.47	12.51	80.80

(Accounting period)		First quarter	Second quarter	Third quarter	Full year
Earnings (loss) per share	(yen)	37.61	(5.13)	(19.97)	68.30

This annual report is not subject to auditing by an independent auditor.
However, the accompanying consolidated financial statements, and notes are reprinted
from the securities report which has been audited by an independent auditor.
Presented below is the Independent Auditor's Report in the securities report.

Independent Auditor's Report and Internal Control Audit Report

June 21, 2019

To the Board of Directors
Osaka Gas Co., Ltd.

KPMG AZSA LLC

Designated Limited Liability Partner
Engagement Partner

Certified Public Accountant
Kenryo Goto (Seal)

Designated Limited Liability Partner
Engagement Partner

Certified Public Accountant
Kenta Tsujii (Seal)

Designated Limited Liability Partner
Engagement Partner

Certified Public Accountant
Shoichiro Shigeta (Seal)

< Financial Statements Audit >

Pursuant to Article 193-2, Paragraph 1 of the Financial Instruments and Exchange Act, we have audited the accompanying consolidated financial statements of Osaka Gas Co., Ltd. included in "Financial Information" for the fiscal year from April 1, 2018 to March 31, 2019, which comprise the consolidated balance sheet, the consolidated statements of income, comprehensive income, changes in net assets and cash flows, as well as significant matters forming the basis of preparation of the consolidated financial statements and other notes, and annexed consolidated detailed schedules.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for designing and operating such internal control as management determines is necessary to enable the preparation and fair presentation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to independently express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. The purpose of an audit of the consolidated financial statements is not to express an opinion on the effectiveness of the entity's internal control, but in making these risk assessments, the auditor considers internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Osaka Gas co., Ltd. and its consolidated subsidiaries as of March 31, 2019, and their consolidated financial performance and cash flows for the year then ended in conformity with accounting principles generally accepted in Japan.

<Internal Control Audit>

Pursuant to Article 193-2, Paragraph 2 of the Financial Instruments and Exchange Act, we have audited the internal control report dated March 31, 2019 of Osaka Gas Co., Ltd.

Management's Responsibility for the Internal Control Report

Management is responsible for the design and operation of internal control over financial reporting and the preparation and fair presentation of the internal control report in accordance with assessment standards for internal control over financial reporting generally accepted in Japan. Internal control over financial reporting may not completely prevent or detect financial reporting misstatements.

Auditor's Responsibility

Our responsibility is to independently express an opinion on the internal control report based on our internal control audit. We conducted our internal control audit in accordance with auditing standards for internal control over financial reporting generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the internal control report is free from material misstatement.

An internal control audit involves performing procedures to obtain audit evidence about the assessment of internal control over financial reporting in the internal control report. The procedures selected depend on our judgment, including the assessment of significance of effect on the reliability of financial reporting. Also, an internal control audit includes evaluating the appropriateness of the scope, procedures, and results of the assessment determined and presented by management, and the overall internal control report presentation.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the internal control report, in which Osaka Gas Co., Ltd states that internal control over financial reporting was effective as at March 31, 2019, presents fairly, in all material respects, the assessment of internal control over financial reporting in accordance with assessment standards for internal control over financial reporting generally accepted in Japan.

Conflicts of interest

Our firm and engagement partners have no interest in the Company which should be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

End of report

*1 The above is an electronic version of the original audit report, which is kept separately by the Annual Securities Report (Yuka Shoken Houkokusho) filing Company.

*2 XBRL data is outside the scope of the audit.

Group Companies

As of March 31, 2019

Consolidated subsidiaries

	Name of subsidiary	Main business	Capital (million yen)	Osaka Gas shareholding (indirect shareholding thereof) (%)
Domestic Energy/Gas	Osaka Gas Housing & Equipment Co., Ltd.	Sales of gas appliances, housing equipment and appliances	450	100.0
	Osaka Gas Customer Relations Co., Ltd.	Maintenance checks on gas equipment and appliances, Checking gas meters, Collection of gas bills, and others	50	100.0
	Osaka Gas Finance Co., Ltd.	Leasing, Assistance with installment payments, insurance agency business, and others	600	100.0
	Osaka Gas Liquid Co., Ltd.	Sales of liquefied nitrogen, liquefied oxygen, liquefied argon	1,110	100.0
	OGCTS Co., Ltd.	Sales and construction of energy facilities and equipments, heating system supplies, and others	1,150	100.0
	Kinpai Co., Ltd.	Gas piping works, Sales of gas appliances, and housing equipment and appliances	300	100.0
	Kansai Business Information Inc.	Call center operation and temporary staffing, Various research services and consulting	100	100.0
Domestic Energy/Electricity	Inami Wind Power Plant	Electric power supply	495	95.0 (95.0)
	Gas and Power Co., Ltd.	Electric power supply	1,368	100.0
	Hayama Wind Power Generation Co.	Electric power supply	490	100.0 (100.0)
	Hirogawa Myojin-yama Wind Power Co.	Electric power supply	490	100.0 (100.0)
	Senboku Natural Gas Power Generation Co., Ltd.	Electric power supply	2,000	90.0
	Nakayama Joint Power Generation Co., Ltd.	Electric power supply	300	95.0 (95.0)
	Nakayama Nagoya Joint Power Generation Co., Ltd.	Electric power supply	450	95.0 (95.0)
International Energy	Osaka Gas International Transport Inc.	LNG vessel leasing	3,190	100.0
	Osaka Gas Australia Pty. Ltd. (Note 1)	Development of and investment in petroleum and natural gas, and others	US\$1,327 million	100.0
	Osaka Gas Gorgon Pty. Ltd. (Note 1)	Development of and investment in petroleum and natural gas, and others	US\$322 million	100.0 (100.0)
	Osaka Gas Ichthys Pty. Ltd. (Note 1)	Development of and investment in petroleum and natural gas, and others	US\$152 million	100.0 (100.0)
	Osaka Gas Ichthys Development Pty. Ltd. (Note 1)	Development of and investment in petroleum and natural gas, and others	US\$149 million	100.0 (100.0)
	Osaka Gas Niugini Pty. Ltd. (Note 1)	Development of and investment in petroleum and natural gas, and others	US\$150 million	100.0 (100.0)
	Osaka Gas UK, Ltd. (Note 1)	Investment relating to energy supply business	€134 million	100.0
Osaka Gas USA Corporation	Investment in petroleum and natural gas project, energy supply business	US\$1	100.0	
Life & Business Solutions	Osaka Gas Chemicals Co., Ltd. (Note 1)	Manufacture and sales of fine materials, carbon material products, activated carbon and wood protective coating	14,231	100.0
	Osaka Gas Urban Development Co., Ltd.	Development, leasing, management, and sales of real estate	1,570	100.0
	OG Sports Co., Ltd.	Management and contracted operation of sports facilities, and others	100	100.0
	OGIS-RI Co., Ltd.	Software development / Computer-based data processing services	440	100.0
	Sakura Information Systems Co., Ltd.	Development of computer software / Computer-based data processing services	600	51.0 (51.0)
	Jacobi Carbons AB	Manufacture and sales of activated carbon	549,000 Swedish Kronor	100.0 (100.0)
Mizusawa Industrial Chemicals, Ltd.	Manufacture and sales of absorbent functional materials and resin additives	1,519	100.0 (100.0)	

and others, totaling 150 companies

Note 1: Specified subsidiary

Note 2: The Company has introduced a cash management system to make financial arrangements with group companies, and lending and borrowing of funds takes place between these companies and the Company.

Equity method affiliates

Name of affiliate	Main business	Capital (million yen)	Osaka Gas shareholding (indirect shareholding thereof) (%)
ENEARC Co., Ltd.	Domestic Energy/Gas	1,040	50.0
Japan Gas Energy Corporation	Domestic Energy/Gas	3,500	29.0(29.0)
Nikki Mirai Solar, Co., Ltd.	Domestic Energy/Electricity	8	49.0(49.0)
Idemitsu Snorre Oil Development Co., Ltd.	International Energy	100	49.5(49.5)
Sumisho Osaka Gas Water UK Limited.	International Energy	164 million British Pounds	50.0(50.0)

and others, totaling 23 companies

Note: The column "Main business" shows segment names in "Segment Information."

Company Data

As of June 30, 2019

Directory

Head Office

4-1-2, Hiranomachi, Chuo-ku, Osaka 541-0046, Japan
Tel: (+81) 6-6205-4715 (IR Team, Corporate Strategy Dept.)

Tokyo Office

Shin-Otemachi Building 6F, 2-2-1, Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan

Osaka Gas UK, Ltd.

1st Floor, Carrington House, 126-130 Regent Street, London W1B 5SE, U.K.

Osaka Gas USA Corporation (Houston)

1330 Post Oak Blvd, Suite 1900 Houston, TX 77056, U.S.A.

Osaka Gas USA Corporation (New York)

1 North Lexington Avenue, Suite 1400, White Plains, NY 10601, U.S.A.

Osaka Gas USA Corporation (Silicon Valley)

440 North Wolfe Rd, Sunnyvale, CA 94085

Osaka Gas Australia Pty. Ltd.

Level 22, 108 St Georges Terrace, Perth, WA 6000, AUSTRALIA

Osaka Gas Singapore Pte. Ltd.

182 Cecil Street #31-02 Frasers Tower Singapore 069547

Osaka Gas (Thailand) Co., Ltd.

55 Wave Place Building 10th Floor, Unit 10.04, Wireless Road Lumpini Pathumwan, Bangkok 10330, Thailand

Osaka Gas Singapore Pte. Ltd. (Indonesia) PT OSAKA GAS INDONESIA

Summitmas I, lantai 9 Jl. Jend. Sudirman Kav 61-62 Jakarta-12190, Indonesia

Osaka Gas Singapore Pte. Ltd. (Philippines)

Manila Representative Office 26th Floor, Twenty-Four Seven McKinley Building, 24th Street Corner 7th Avenue, Bonifacio Global City, Taguig, Metro Manila, Philippines

Investor Information

Date of Establishment	April 10, 1897
Regular General Meeting	Held in June each year (The 2019 regular general meeting was held on June 20)
Common Stock	Authorized: 700,000,000 shares Issued: 416,680,000 shares
Listing of Shares	Tokyo Stock Exchange and Nagoya Stock Exchange
Number of Shareholders (As of March 31, 2019)	104,094
Stock Transaction Units	100 shares
Independent Certified Public Accountants	KPMG AZSA LLC
Transfer Agent	Mitsui Sumitomo Trust Bank, Limited

Contact Mitsui Sumitomo Trust Bank, Limited
Stock Transfer Agency Business Planning Department
Tel: (+81) 120-782-031 (Toll-free in Japan)

The Osaka Gas Co., Ltd. website contains information provided for all investors and is constantly updated.

 <http://www.osakagas.co.jp/en/ir/>

For inquiries about this report or requests for other materials, please contact:

✉ E-mail: keiri@osakagas.co.jp

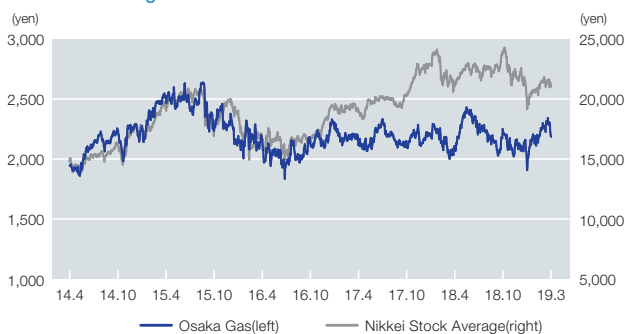
Please note that we do not accept files attached to e-mails, such as image files.

Major Shareholders (As of March 31, 2019)

Shareholder	Number of shares (Thousands)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust a/c)	27,591	6.64
Nippon Life Insurance Company	19,242	4.63
Japan Trustee Services Bank, Ltd. (Trust a/c)	18,758	4.51
MUFG Bank, Ltd.	13,985	3.36
Resona Bank, Ltd.	10,555	2.54
Japan Trustee Services Bank, Ltd. (Trust a/c 7)	9,381	2.26
Japan Trustee Services Bank, Ltd. (Trust a/c 5)	7,609	1.83
Japan Trustee Services Bank, Ltd. (Trust a/c 9)	6,296	1.51
JP MORGAN CHASE BANK 385151	6,167	1.48
STATE STREET BANK WEST CLIENT-TREATY 505234	6,062	1.46

Note: The share ratio is the percentage in respect to the number of shares issued and outstanding.

Stock Price Range



Unit Conversion List

Weight

kg	Metric ton	Imperial (short) ton	U.S. (long) ton
1	1×10 ⁻³	0.984×10 ⁻³	1.102×10 ⁻³
1,000	1	0.9842	1.1023
1,016.0	1.0160	1	1.1200
907.19	0.9072	0.8927	1

Length

m	ft	yard	mile
1	3.2808	1.0936	0.622×10 ⁻³
0.3048	1	0.333	0.189×10 ⁻³
0.9144	3	1	0.568×10 ⁻³
1,609	5,280	1,760	1

Volume (Liquid)

m ³ (kl)	ft ³	Imperial gallon	U.S. gallon
1	35.315	219.97	264.17
28.32×10 ⁻³	1	6.288	7.481
4.55×10 ⁻³	0.1606	1	1.2011
3.78×10 ⁻³	0.1337	0.8327	1

1 kl = 6.29 barrels, 1 barrel (42 U.S. gallons) = 0.159 kl

Volume (Gas)

m ³ (N)	m ³ (S)	SCF
1	1.055	37.33
0.9476	1	35.37
0.0268	0.0283	1

N: 0°C, S: 15°C, SCF: 101.33kPa, 15.5°C (60°F)

Energy

kcal	Btu	MJ	kWh
1	3.969	4.186×10 ⁻³	1.162×10 ⁻³
0.2520	1	1.055×10 ⁻³	0.2929×10 ⁻³
238.9	948.2	1	0.2778
860.1	3,414	3.600	1

Heating Value (Gas)

kcal/m ³ (N)	Btu/SCF	MJ/m ³ (S)
1	0.1063	3.97×10 ⁻³
9.406	1	3.73×10 ⁻²
252.1	26.81	1

1 ton of LNG = 13×10⁶kcal = 52×10⁶Btu



Osaka Gas Co., Ltd.

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<https://www.osakagas.co.jp/en/>

Other reporting media

Website

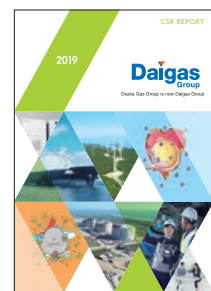


Outline of corporate group



Investor relations

Leaflet



CSR Report

