

# Daigas Group Business Plan for FY2024.3

March 9, 2023 Osaka Gas Co., Ltd.

# Introduction

The Daigas Group is working to "Co-create value for a sustainable future" and "Evolve our corporate group" to resolve social issues under the Medium-Term Management Plan 2023: Creating Value for a Sustainable Future. Through these actions, we aim to contribute to achieving a sustainable society while meeting our responsibility as an energy company in the rapidly changing business environment.

## Key Strategy

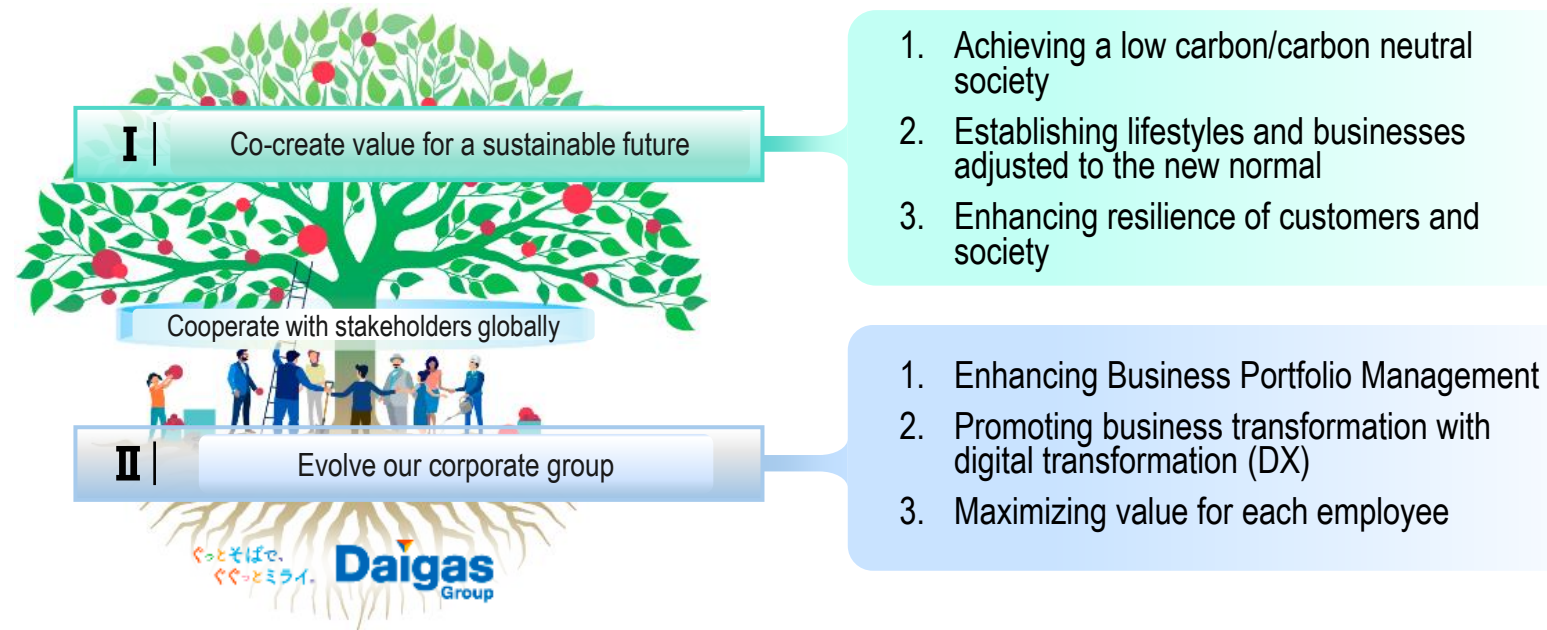
### I .Co-create value for a sustainable future

Pursuing the creation of value for solving social issues alongside stakeholders.

### II .Evolve our corporate group

Building a robust business portfolio and strengthening the management foundation to support the enhancement of our business portfolio management.

## Key Initiatives



# Highlights of FY2023.3 business operations: 1. Key management indicators

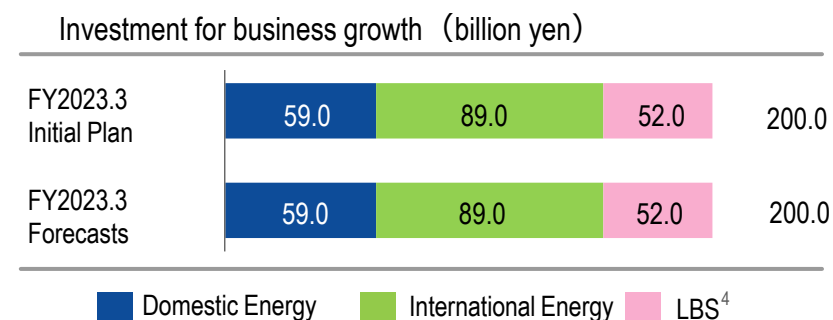
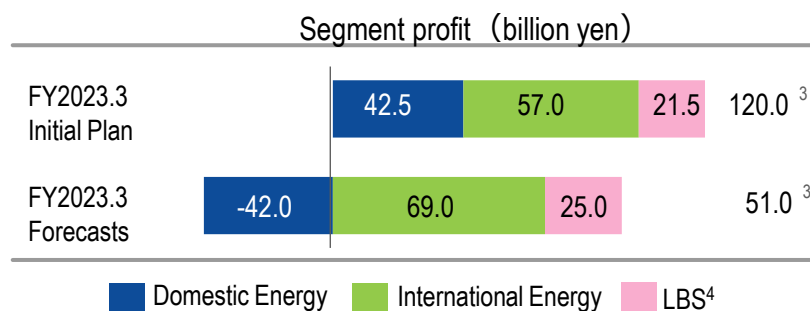
Despite growth in each business segment, we expect lower figures for FY2023.3 profitability indicators compared to our initial plan, mainly due to the negative impact of Freeport LNG's plant shutdown, which started in June 2022.

## Progress in executing the Daigas Group Business Plan for FY2023.3

		FY2023.3 Forecast	FY2023.3 Initial Plan
Profitability indicator	Ordinary profit	46.0 billion yen	115.0 billion yen
	EBITDA	161.0 billion yen	230.0 billion yen
	ROIC <sup>1</sup>	1.8%	4.5%
	ROE	2.7%	6.8%
Financial soundness indicator	Shareholders' equity ratio <sup>2</sup>	50.8%	50.7%
	D/E ratio <sup>2</sup>	0.66	0.63

<sup>1</sup> ROIC= (Ordinary profit + Interest expenses - Interest income - Income taxes) ÷ (Interest-bearing debts + Shareholders' equity)  
Interest-bearing debts excludes risk-free leased Liabilities to us

<sup>2</sup> Calculated with 50% of issued hybrid bonds as equity



<sup>3</sup> Including -1.0 billion yen as an adjustment    <sup>4</sup> Life & Business Solutions

## Highlights of FY2023.3 business operations: 2. Major initiatives

In FY2023.3, we made progress in creating value for a sustainable future across the Group while responding to changes in business environment, such as accelerating decarbonization trend and diversifying customer needs. We have been also evolving our corporate group through the enhancement of our business portfolio-based management and acceleration of DX initiatives.



### Co-create value for a sustainable future

#### Achieving a low carbon/carbon neutral society

- Conducted studies on establishing e-methane supply chains, progressed in development and demonstration of methane technologies
- Expanded renewable energy business
- Promoted wide and advanced use of natural gas
- Launched a new radiative cooling material

#### Establishing lifestyles and businesses adjusted to the new normal

- Reached 10 million customer accounts\* due to business expansion in electricity retailing and outside our network area in Japan (\* FY2023.3 forecast)
- Launched a digital platform to offer various services and other new services, such as fixed-line communications and home renovation
- Expanded LBS business domains

#### Enhancing resilience of customers and society

- Established Group's security and disaster prevention system in light of the legal spinoff of the gas pipeline operation business
- Secured LNG volume with flexible response
- Introduced weather forecast and data science as resilience measures
  - Collaboration with West Japan Railway Company to enhance the safety of train operations



### Evolve our corporate group

#### Enhancing Business Portfolio Management

- Promoted ROIC-focused management across the Group, resulting in autonomous growth in each Group business
- Executed ROIC-focused business portfolio management for asset replacement and investment
- Strengthened governance
  - e.g., establishment of the Management Advisory Committee

#### Promoting business transformation with digital transformation (DX)

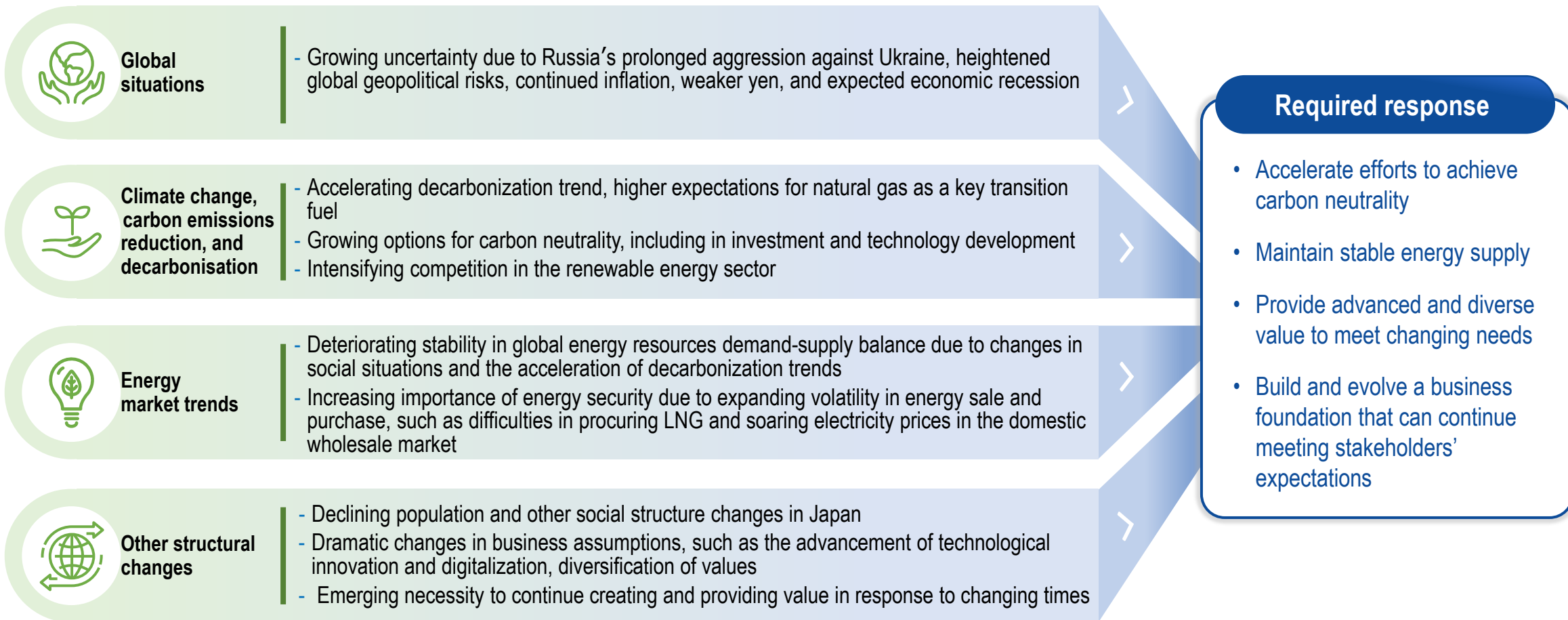
- Enhanced DX promotion system by concentrating resources.
- Provided training for digital human resources development
- Achieved process reform through advanced use of data
  - e.g., forecast for renewable power generation and demand

#### Maximizing value for each employee

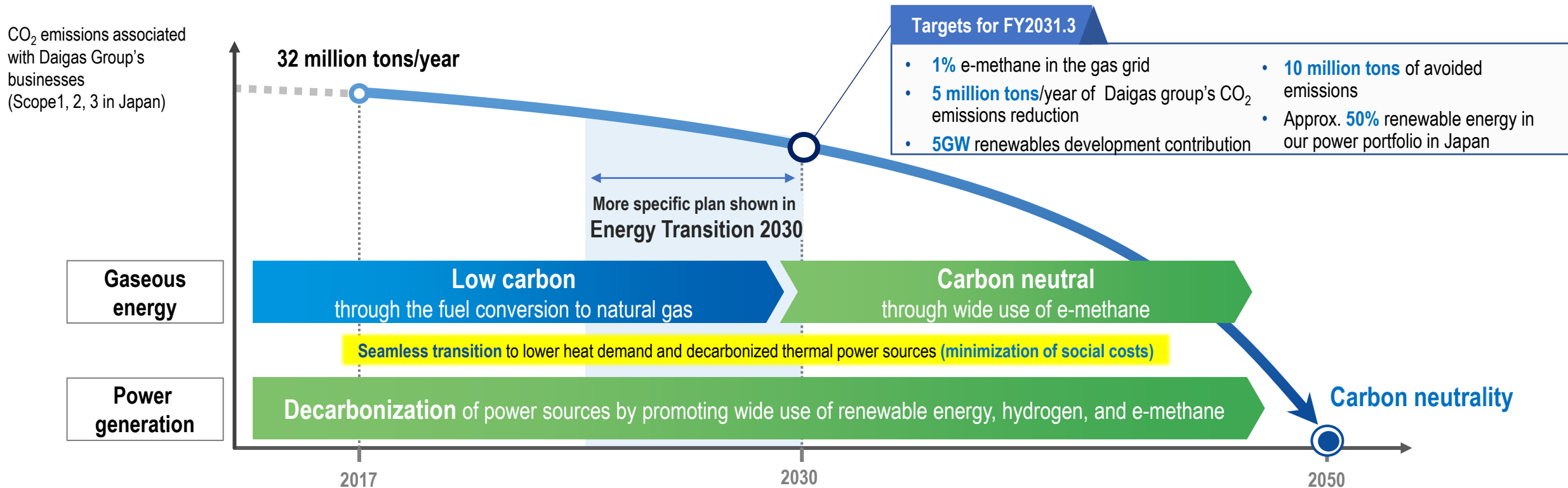
- Promoted flexible and diverse ways of working
  - Consideration of Daigas Transformation
- Improved diversity in promotion
  - Appointment of a female executive
- Increased employment of skilled and experienced talent and diverse hiring of new graduates

## Response to rapidly changing business environment

With the global situation changing dramatically and at an accelerated pace, we strive to contribute significantly to addressing social issues from a long-term perspective, such as achieving carbon neutrality while fulfilling our responsibilities of ensuring energy safety and stable supply by responding to immediate changes while.



We are progressing the development of methanation technology and e-methane supply chain to contribute to achieving carbon neutrality by 2050. We are also promoting wider use of natural gas and renewable energy as our mission to drive the energy transition to net zero emissions.



## Major Initiatives to Achieve a Carbon-Neutral Society

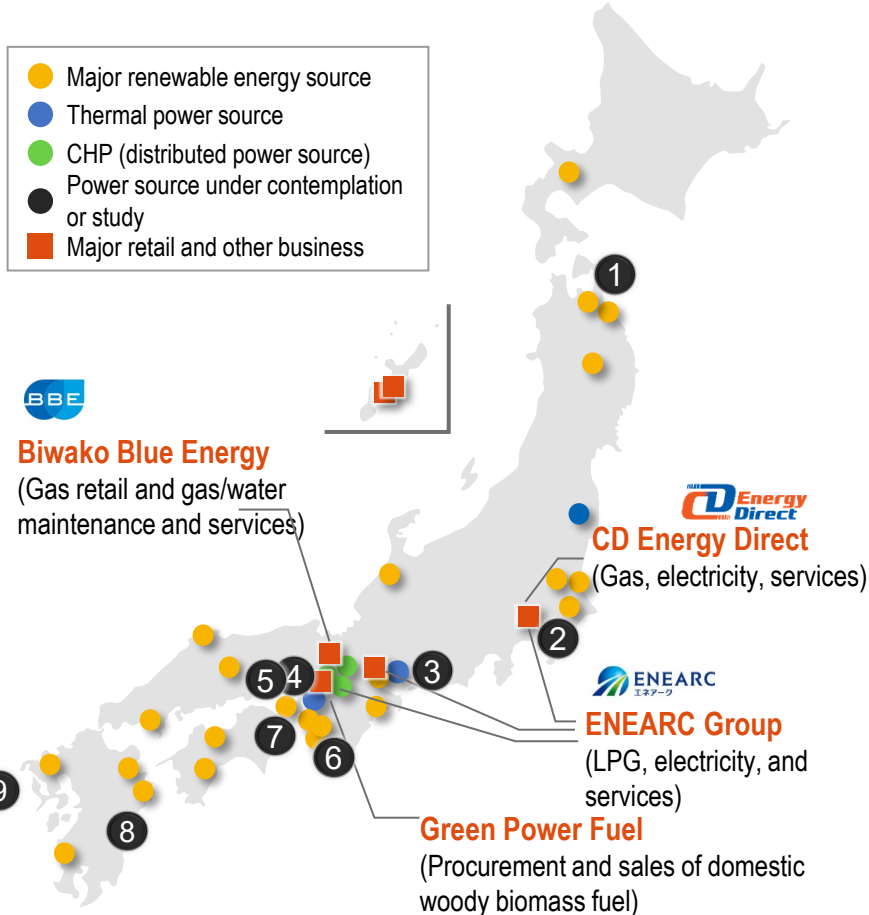
- Development of methanation technologies
- Establishment of e-methane supply chain ⇒ Considering several projects in Japan and overseas
- Verification of CO<sub>2</sub> Management System
- Development of hydrogen and ammonia combustion technologies
- Provision of energy services that contribute to low-carbon/net zero emissions
- Study on low-carbon and decarbonized thermal power sources





To achieve carbon neutrality, we are developing and acquiring renewable energy capacity in Japan and overseas while building competitive infrastructure and providing services in Japan by leveraging our accumulated strengths in energy business.

## Japan



- |   |  |
|---|--|
| ① Yokohama Town Wind Power Plant<br>(43,200 kW)<br>COD: 2023    | ⑥ Gobo Biomass Power Plant<br>(50,000 kW)<br>COD: 2025                                 |
| ② Sodegaura Biomass Power Plant<br>(74,900 kW)<br>COD: TBD      | ⑦ Tokushima Tsuda Biomass Power Plant<br>(74,800 kW)<br>COD: 2023                      |
| ③ Aichi Tahara Biomass Power Plant<br>(75,000 kW)<br>COD: 2024  | ⑧ Hyuga Biomass Power Plant<br>(50,000 kW)<br>COD: 2024                                |
| ④ Hirohata Biomass Power Plant<br>(74,900 kW)<br>COD: 2023      | ⑨ Goto City, Nagasaki Prefecture Offshore Wind Power Plant<br>(16,800 kW)<br>COD: 2024 |
| ⑤ Himeji Natural Gas Power Plant<br>(1,245,200 kW)<br>COD: 2026 |  |

## Overseas (major renewable energy projects)



Provided by Summit Ridge Energy, LLC

- Summit Ridge Energy
- Maine, USA
- 70,400 kW (equity capacity)
- COD: 2022 (currently in operation)



- Brighter Future Solar project
- State of North Carolina, USA
- 15,700 kW (Total installed generating capacity)
- COD: 2022 (currently in operation)



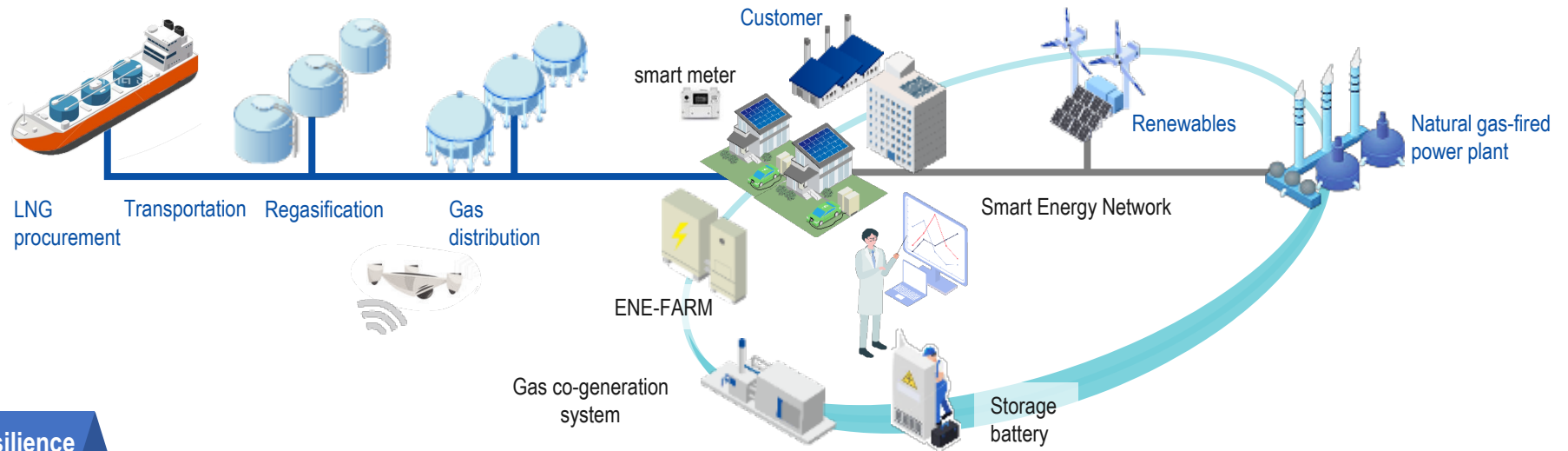
Installation of rooftops at local semiconductor manufacturers' plants

- OE Solar
- Thailand
- 8,800 kW (Total installed generating capacity)
- Company established in August 2019

※ Domestic: kW figures are total capacity for power generation, Overseas: kW figures are all as of the end of December 2022.

With the energy supply-demand balance losing stability due to changing global situations and accelerating decarbonization trends, we are working to maintain stable energy supply by securing LNG and electricity and enhancing safety and stability in each part of the energy supply chain.

## Energy Supply Chain



## Major Initiatives to Improve Resilience

### Across the value chain

- **LNG: Procurement by taking a longer position**
- **Electricity: Stable power supply through in-house power generation and procurement, establishment of a power portfolio centered on highly efficient gas-fired power plants and renewables**

### Procurement

- Mainly stable long-term contracts
- **Diversification of LNG sources** (7 countries)



### Trading

- **Flexible response** utilizing accumulated know-how



**OSAKA GAS**  
Energy Supply & Trading

### Regasification and power generation

- **Enhancement of operations and maintenance** utilizing AI, remote monitoring, etc.
- Large-scale earthquake-resistant measures for **safety and continuous energy supply**

### Distribution

- **Reinforcement of facilities** through the improvement of disaster-resistant pipelines and construction of high-pressure Amagasaki-Kumiyama Line
- **Enhancement of security and stable supply** using DX, including AI

### Development and sales

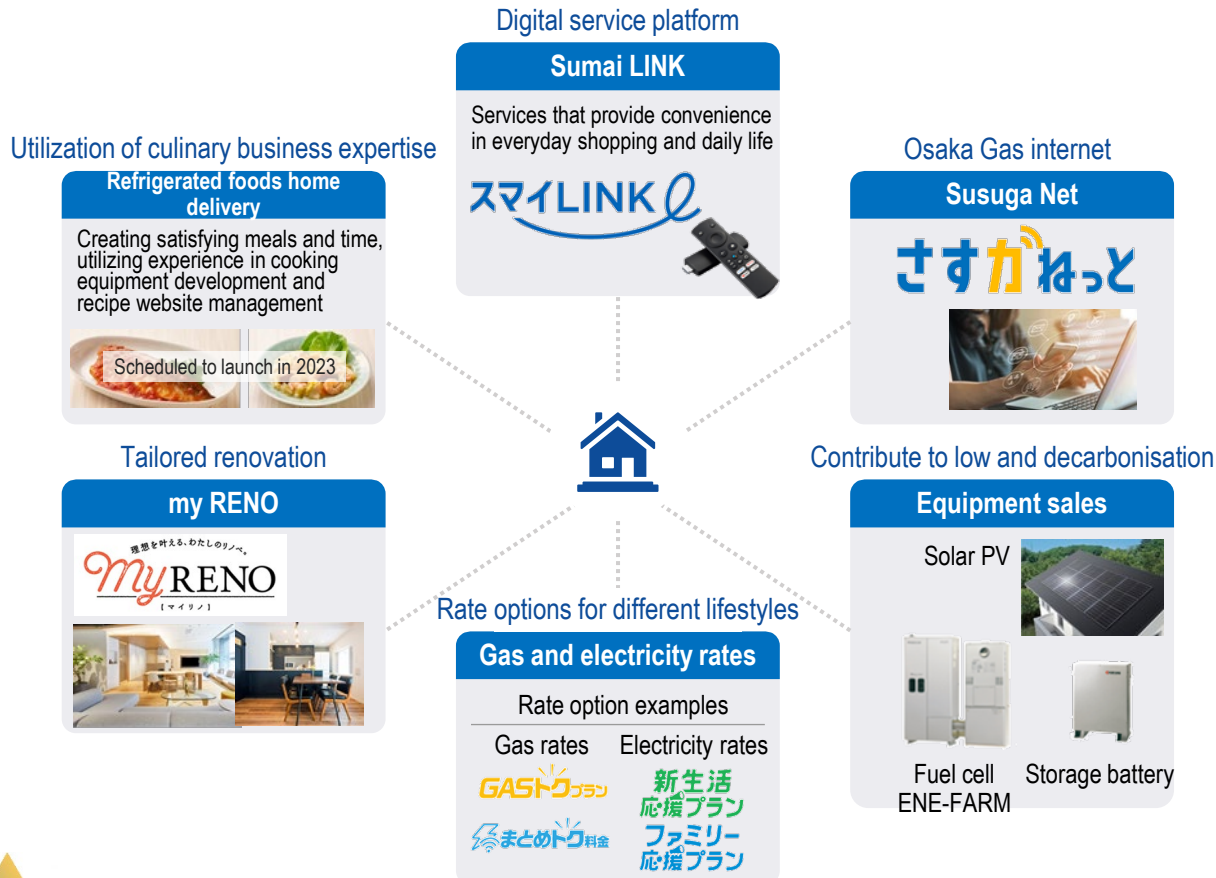
- **Promotion of wide use of products that can be used in the event of a disaster**, such as products with power outage response functions and IoT-enabled products



In response to diversifying customer needs and advancing digitization, we are providing various innovative products, services, and solutions that contribute to the advancement of people's lives and businesses, aiming for sustainable growth as a company always chosen by customers.

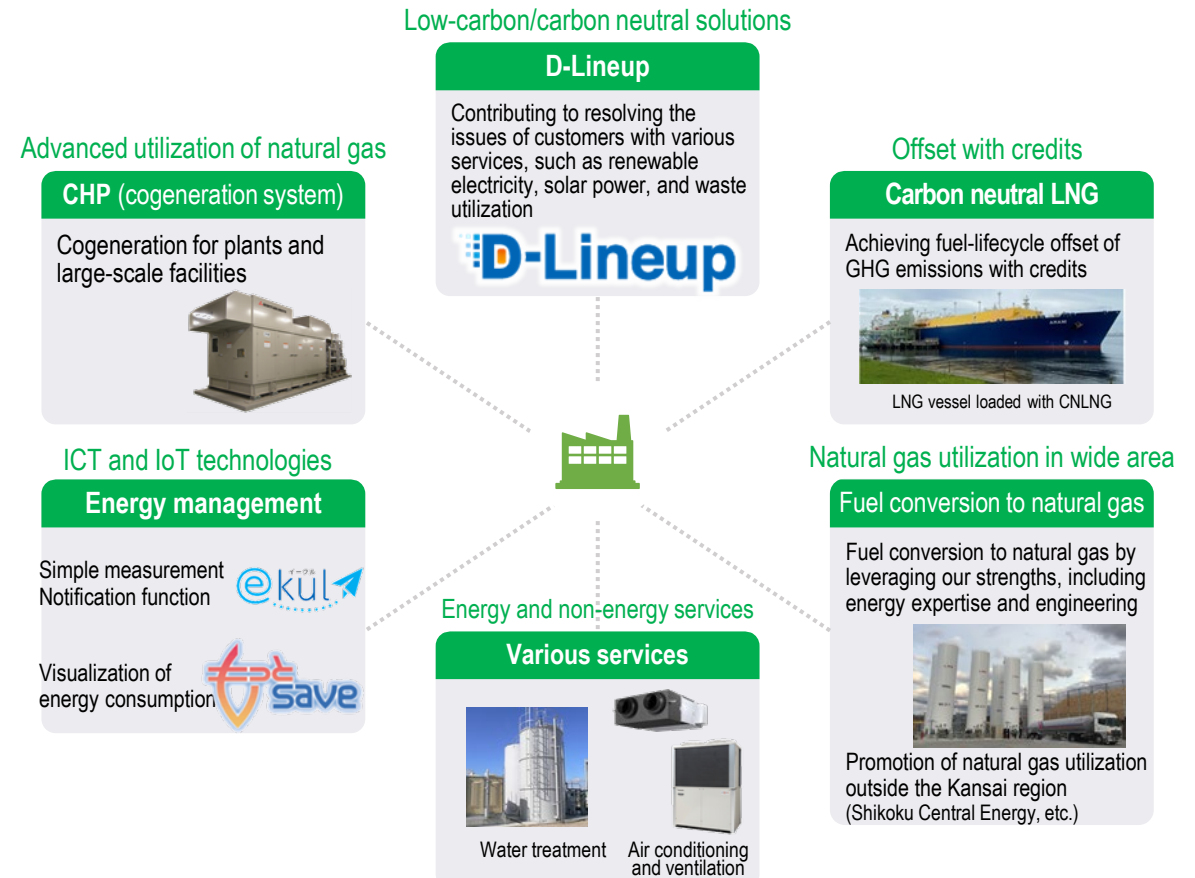
## Residential sector

Supporting customers' comfortable living by responding to their diverse needs appropriately with our digital capabilities and in-person responsiveness we have cultivated



## Commercial and industrial sectors

Contributing to customers' business development and Japanese society's prosperity by offering advanced comprehensive solutions that go beyond the boundary of energy field

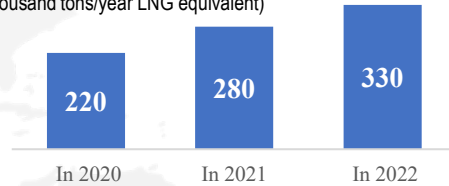


We aim to develop overseas energy businesses into our major earning drivers that achieve stable operations and sustainable growth. We also strive to ensure the stable procurement, supply, and wide use of natural gas, a key transition fuel, and develop renewable energy and new energy sources to contribute to global carbon emissions reduction and decarbonization.

## Contribution to carbon emissions reduction in the transition period

- Expanding Sabine's shale gas production in Texas, USA

Production volume  
(10 thousand tons/year LNG equivalent)



Sabine Oil & Gas in Texas, USA



- Stably operating Freeport LNG's liquefaction plants in Texas, USA
- Continuing participation in Gorgon and Ichthys, Australian upstream projects

Freeport in North America

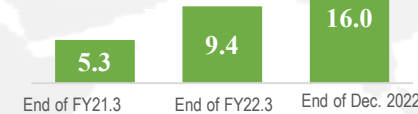


Courtesy of Freeport LNG Development, L.P.

## Accelerated efforts to achieve carbon neutrality

- Expanding the development and ownership of renewable energy capacity mainly in North America

Overseas renewable energy equity capacity on an actual basis  
(10 MW)



Brighter Future solar PV project



- Developing e-methane supply chains around the world (North America, South America, Middle East, Australia, Asia, etc.)

Cameron LNG Terminal in Louisiana, USA



## Operations in growth markets and developed markets

### Europe

- Acquiring information and know-how of new energy businesses in the leading markets and exploring opportunities for reserve capacity business, etc



JEDLIX

(Dutch Jedlix Company, Power Supply and Demand Coordination Project)

### Asia

- Increasing participation mainly in natural gas infrastructure and renewable energy businesses



(City Gas Business in India)

### Australia

- Exploring opportunities to acquire renewable energy capacity and achieve carbon neutrality



Image credit: Antony Evans, AGL Energy employee.

(Feasibility study on the green hydrogen hub concept of AGL Australia)

We are promoting the growth of existing business domains and the expansion of business domains to develop the LBS segment into a greater pillar of the Daigas Group's business.

## Real estate business

 Offering housing for comfortable, healthy, and high-quality living and providing offices for enhanced productivity

 Osaka Gas Urban Development Group




- Continuing to develop and supply quality housing that resolves social issues (e.g., SDGs) and meets customer needs
- Participating in large-scale leasing and sales projects in alliance with local governments, etc.
- Selling and replacing assets to enhance profitability and capital efficiency


Deepening existing businesses

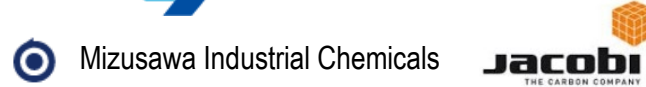
- Accelerating the development of new businesses, including logistics real estate and private REITs
- Promoting the development of land to the west of the head office
- OGFA<sup>1</sup>: Increasing orders of real estate management services through agency services and energy-saving proposals
- KRP<sup>2</sup>: Expanding efforts for projects outside KRP region

1 Osaka Gas Facilities 2 Kyoto Research Park

## Materials solutions business

 Creating value for customers by providing high-quality material solutions and contributing to the sustainability of society

 Osaka Gas Chemicals Group



- Shifting to high-profit products in the activated carbon business and enhancing PR of wood-protection paints and termite repellent
- Jacobi: Increasing production capacity and sales of palm kernel shell activated carbon and ion-exchange resins
- Mizusawa Industrial Chemicals: Expanding overseas sales of anti-blocking agents for plastic films

- Promoting the growth of new one-off projects through Frontier Materials Research Institute<sup>3</sup> initiatives (polyester resin films, antimicrobial and antivirus materials, BHB, etc.)
- Promoting M&A

3 In-house laboratory

## Information solutions business

 Promoting the advancement of customers' businesses and lifestyles through digital transformation

 OGIS-RI Group



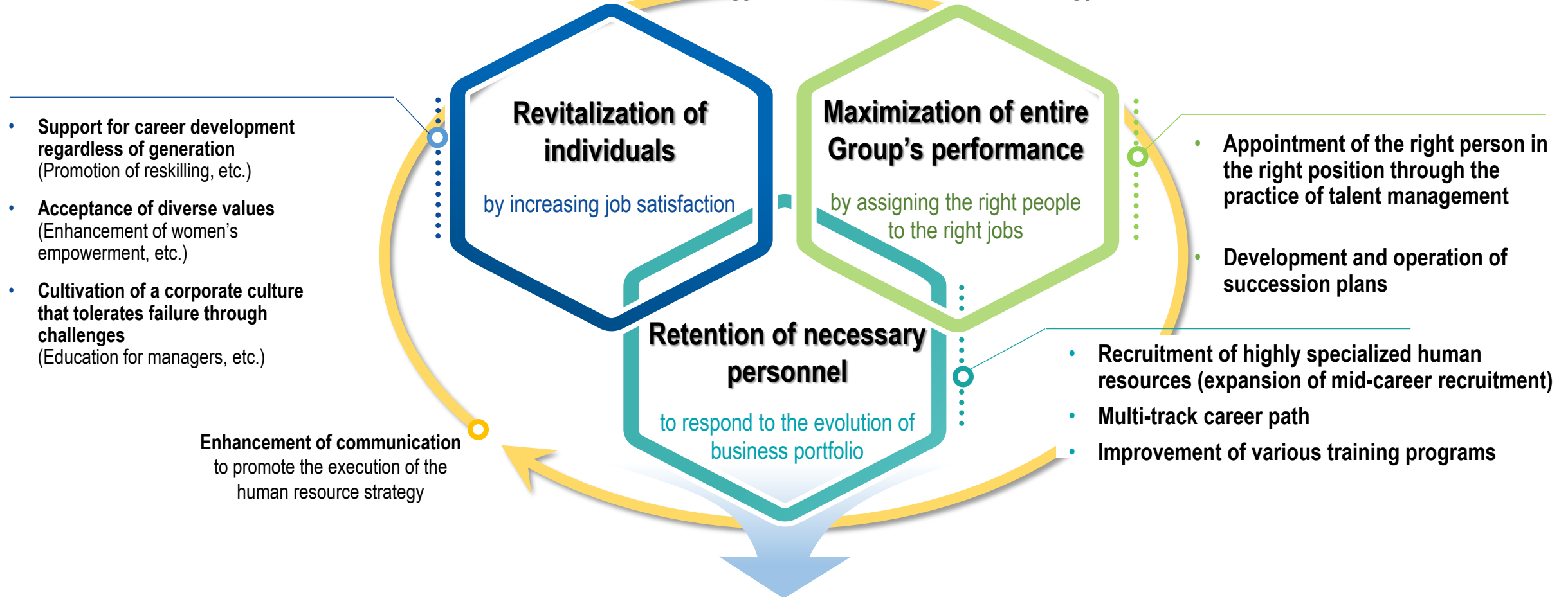
- Contributing to the promotion of DX by Daigas Group and other shareholders
- Enhancing activities in growing areas, such as rule-based AI, embedding, and cloud
- Securing IT human resources by revising the personnel system and enhancing recruitment activities

- Expanding ERP<sup>4</sup> businesses through collaboration with Agnie Consulting and Ammic
- Sakura Information Systems: Expanding solutions businesses, such as human resources and accounting
- Ube Information Systems: Enhancing functions of in-house solutions for the manufacturing industry

4 Enterprising Resource Planning

We are improving employee satisfaction and Group's entire performance through various initiatives and enhancing the value for the Group and the value for employees in a rapidly changing business environment with increasingly diversified employees' work perspectives.

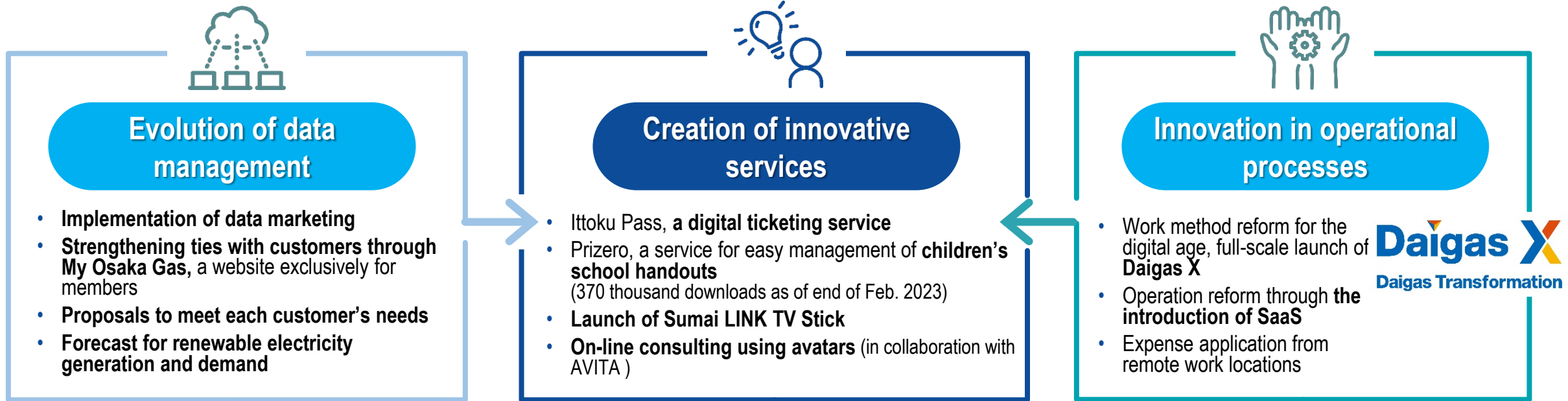
## Human resource strategy based on business strategy



Co-creating value for a sustainable future and evolving our corporate group



We are further accelerating the enhancement of Daigas Group's corporate activities by utilizing digital technologies for the reform of business processes and the creation of new services in anticipation of changing times.



## Top-Down Promotion System

- Operation of DX Committee
- Reform starting with business for the residential sector
- External expert lectures for and dialogue with the management
- Enhancement of internal communication and enlightenment of managers



## System Renovation and Enhanced Security

- Promotion of SaaS introduction and agile development
- Enhancement of IT governance, transition to zero-trust security model
- Renovation of data analytic infrastructure
- Trial operation of virtual offices



## Human Resource Development

- Expansion of DX driving force development program (OJT, interviews, support for reskilling, etc.)
- Implementation support from OGIS-RI
- Collaboration with venture fund WiL

# Creating value through innovation

We aim to create new value through open innovation and other effective measures that combine our strengths with the technologies and services of other companies while developing advanced technologies to resolve social issues.

## Technology development

Development of the technologies we have cultivated and advanced technologies that contribute to resolving social issues.



SOEC metanation

- Methanation technology development

Development of SOEC-, Sabatier-, and Bio-methanation technologies under national projects, such as the Green Innovation Fund Project



Development of combustion technology

- Technological development contributing to carbon emissions reduction and decarbonization

Development of downsized SOFC units that achieve high efficiency, VPP and storage battery-related technologies, and combustion technologies for ammonia and hydrogen



- Carbon Neutral Research Hub

Communication on information and promotion of joint research with alliance partners at the R&D center to contribute to achieving a low-carbon/carbon neutral society

## Creating new businesses

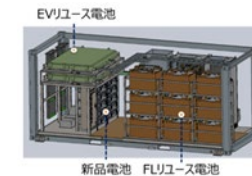
Creation of new value through open innovation and other means by leveraging our strengths in various fields.

SPACE COOL



- SPACECOOL, radiant cooling materials

Expansion of a business to sell radiant cooling materials that decrease the indoor temperature lower than outside through radiant cooling without using energy



- Launch of a new storage battery business

Launch of a stationary storage battery business utilizing NExT-e Solutions' storage battery control technology and KRI's deterioration diagnosis technology for reusable storage batteries







- Development of a supplement raw material business using 3HB

Development of a supplement raw material business using naturally-derived ketone bodies (3HB) manufactured using our original fermentation method



The Daigas Group's ESG-focused management has received recognition<sup>1</sup> from external organizations. We intend to continue promoting ESG initiatives while responding to social demands, disclosing information responsibly, and striving for sustainable growth.

Charter of Business Conduct	Value for a sustainable future	Initiative to create value for a sustainable future	Indicator	Goal	Target year	
I Creating value for customers	 Establishing lifestyles and businesses adjusted to the new normal	Maintain and expand customer base	Number of customer accounts	10 million or more	FY2031.3	
	 Enhancing resilience of customers and society	Strengthen resilience of energy supply	Build resilient energy supply facilities	Implementation of measures for disaster prevention and aging pipes	FY2031.3	
II Contributing to the sustainability of the environment and society	 Achieving a low carbon/carbon neutral society	Implement carbon neutral measures	CO <sub>2</sub> emissions of Daigas Group	Net zero emissions	FY2051.3	
		Provide clean energy and expand renewable energy value chain	Percentage of renewables in our power generation portfolio in Japan	27.02 million t (-5 million tons from FY2018.3)	FY2031.3	
		Promote advanced utilization of natural gas and environmental products	Contribution to developing renewables capacity on a global basis	~50%	FY2031.3	
				5 GW	FY2031.3	
III Engaging with and contributing to society	 Building foundations that support the realization of value for a sustainable future	Promote communication with local communities	CO <sub>2</sub> emissions reduction contribution (avoided emissions)	2.5 GW	FY2024.3	
IV Respecting human rights		Promote the Group's compliance	Number of our participation in local governments' activities (i.e., community development planning)	10 million tons	FY2031.3	
V Complying with laws and regulations		Build a responsible supply chain	Number of serious violations of laws and regulations	14 cases	FY2024.3	
VI Providing work environment that supports employees' personal growth		Create a workplace where employees can feel a sense of fulfillment	Appropriate new supplier ratio	Zero serious violations	100%	FY2024.3
		Promote diversity and inclusion	Attitude survey (Royalty Score)	Maintained and improved employee engagement		FY2031.3
			Percentage of women among 1. Executives (Directors) 2. New recruits for career-track positions		1. 20% or more (20% or more) 2. Continue 30% or more	FY2031.3

<sup>1</sup> In 2022, Osaka Gas was selected for Dow Jones Sustainability Indices Asia Pacific Index and received CDP's A score for water security and A- for climate change.

Note: Initiatives, indicators, and targets are excerpts from the report.



(billion yen)	FY2023.3 Forecast	FY2024.3 Plan	Rate of change
Net sales	2,275.0	2,017.0	-11.3%
Operating profit	43.0	139.5	+224.4%
Ordinary profit	46.0	159.0	+245.7%
Profit attributable to owners of parent	36.0	116.0	+222.2%
EBITDA	161.0	264.5	+64.3%
ROIC <sup>1</sup>	1.8%	5.4%	-
ROE	2.7%	8.5%	-
Dividend forecast	60.0 yen/share	65.0 yen/share	-
Time-lag effect on gas	-5.9	23.7	-
Time-lag effect on electricity	-17.0	12.9	-
Ordinary profit excluding time-lag effect	68.9	122.3	-

Assumptions for FY2024.3 financial plan (FY2023.3 Forecast)

Crude oil price (all-Japan CIF price)	85 USD/bbl (96.4 USD/bbl)	Exchange rate	135 JPY/USD (135.7 JPY/USD)
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(billion yen)	Segment Profit <sup>2</sup>		
	FY2023.3 Forecast	FY2024.3 Plan	Rate of change
Domestic Energy (Electricity)	-42.0 (9.0)	66.0 (23.5)	- (+161.1%)
International Energy	69.0	69.0	±0.0%
LBS	25.0	27.0	+8.0%
Adjustment	-1.0	-1.0	-
Total	51.0	161.0	+215.7%

<sup>1</sup> ROIC = (Ordinary profit + Interest expenses - Interest income - Income taxes) ÷  
(Interest-bearing debts + Shareholders' equity)

Interest-bearing debts excludes risk-free leased Liabilities to us.

<sup>2</sup> Segment Breakdown (Trading is included in the Domestic Energy segment)

Domestic Energy	International Energy	LBS
LNG, Power & Engineering	Energy Resources & International Business	Real Estate
Network		IT
Energy Solution		Materials

(billion yen)	FY2023.3 Forecast	FY2024.3 Plan
Investment for quality improvement	74.0	90.0
Investment for growth	200.0	160.0
Domestic Energy	59.0	45.5
International Energy	89.0	74.0
LBS	52.0	40.5
<b>Total investment</b>	<b>274.0</b>	<b>250.0</b>
<b>Capital expenditures</b> (included in the total)	<b>192.0</b>	<b>214.0</b>

	FY2023.3 Forecast	FY2024.3 Plan
Shareholders' equity ratio <sup>1</sup>	50.8%	50.5%
D/E ratio <sup>1</sup>	0.66	0.59

<sup>1</sup> Calculated with 50% of issued hybrid bonds as equity

(million m <sup>3</sup> )	FY2023.3 Forecast	FY2024.3 Plan	Rate of change
Gas sales volume (Consolidated)	6,834	6,778	-0.8%
Residential	1,732	1,715	-1.0%
Non-residential	5,102	5,063	-0.8%

(GWh)	FY2023.3 Forecast	FY2024.3 Plan	Rate of change
Electricity sales volume	16,215	15,620	-3.7%

Sensitivity to fluctuations in crude oil prices and exchange rates to consolidated ordinary profit

1 USD/bbl increase in crude oil price	-0.93 billion yen
1 JPY/USD increase in exchange rate (depreciation of the yen)	-0.38 billion yen



#### Disclaimer

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Certain statements contained herein are forward-looking statements, strategies, and plans, which reflect our judgment based on the information so far available. Actual results may differ materially from those discussed in such statements. Among the factors that could cause actual results to differ materially are: economic trends in Japan, sharp fluctuations in exchange rates and crude oil prices, and extraordinary weather conditions.