

Actions for Climate Change

Principle and Outline

The Daigas Group believes that climate change represents an important management challenge, and that initiatives to reduce CO₂ emissions are a crucial mission. In January 2021, we established and announced the “Daigas Group Carbon Neutral Vision,” indicating our vision of how we strive to become carbon neutral by 2050. In light of the global trend to address climate change, we aim to become carbon neutral by 2050 by reducing CO₂ emissions at the Group, customers, and their value chains, to contribute to achieving a carbon neutral society.

Daigas Group Energy Transition 2050

The Daigas Group has announced its ambition to achieve carbon neutrality (“CN”) by 2050 through publication of its “Carbon Neutral Vision” (January 2021), and has outlined its approaches and specific strategies for the energy transition by 2030 in “Energy Transition 2030” (March 2023).

Since then, we have deepened our activities, while being faced with increasing international geopolitical risks, such as Russia’s invasion of Ukraine, as well as even greater demands to achieve both carbon neutrality and energy supply stability. In light of this situation, we formulated “Energy Transition 2050” in February 2025, which clarifies our energy transition roadmap for achieving carbon neutrality by 2050.

Energy Transition 2050 summarizes the “Comprehensive Overview of Carbon-Neutral Strategy,” “Low-Carbon and Carbon-Neutral Energy Initiatives,” and “Daigas Group’s Solutions for Customers,” and outlines our approaches, initiatives, and co-creation with our customers.

 ▶ Carbon Neutral Vision (released in January 2021)

 ▶ Energy Transition 2030 (released in March 2023)

 ▶ Energy Transition 2050 (released in February 2025)

Challenges Regarding Energy Supply and the Daigas Group’s Principle

Our basic approach to energy supply is S+3E^{*1}, in which balancing the three Es is essential for the transition to low-carbon and decarbonized energy.

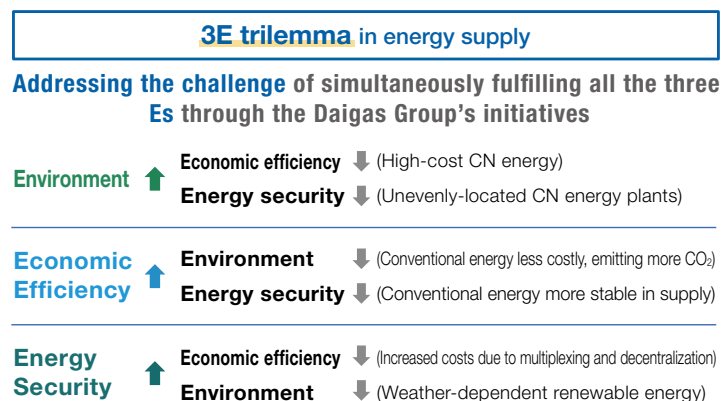
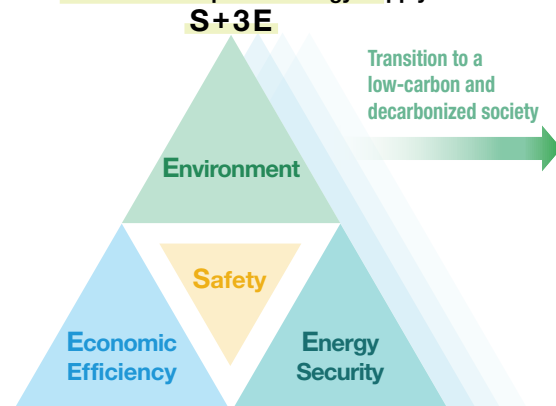
However, switching to environmentally friendly energy currently leads to increased costs and reduced supply stability when the supply chain is not yet established. This relationship is referred to as the “3E trilemma,” and the Daigas Group will challenge itself to satisfy all three Es simultaneously. In particular, because Japan is not blessed with natural resources and has a low energy self-sufficiency rate of 12.6%, it relies on energy imports from overseas. As a result, it is necessary to pay close attention to changes in the international situation and global energy policies.

In light of this background, the Group’s fundamental principle is to prioritize supply stability while ensuring safety as a cornerstone, and to offer our customers a variety of environmentally and economically friendly options.

■ Japan’s energy Policy

Achieving S+3E is considered important in Japan’s energy policy. The Seventh Strategic Energy Plan, approved by the Cabinet in February 2025, outlines a new policy direction for 2040, placing emphasis on natural gas in a balanced manner with the country’s basic policy of S+3E, and indicating a policy of prioritizing a stable supply of energy on the premise of safety.

Fundamental Principle for Energy Supply



Risks to consider in energy supply

- International affairs (international conflicts)
- Geopolitics (low energy self-sufficiency)
- Natural disaster (earthquakes, typhoons)
- Pandemic (COVID-19)
- Regulation (carbon pricing)
- Foreign exchange (yen depreciation)

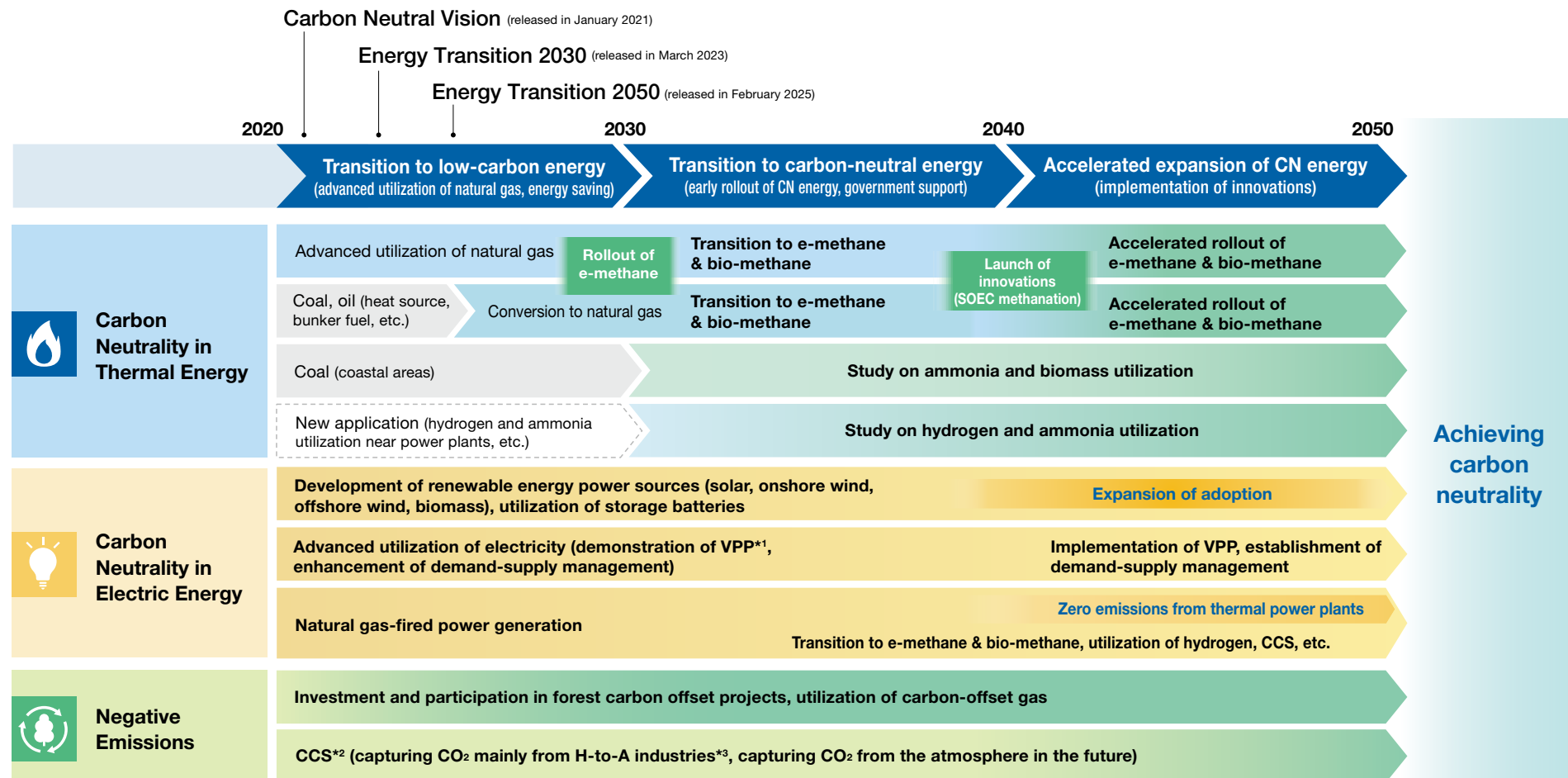
Japan’s energy self-sufficiency: 12.6%^{*2}
→ Reliance on energy imports

^{*1} S+3E: Safety, Energy Security, Economic Efficiency, and Environment ^{*2} FY2023.3 Energy Supply and Demand Results (confirmed report)

Roadmap to Low-Carbon and Carbon-Neutral Energy

As carbon-neutral (CN) energy remains relatively expensive at the current stage, we believe a phased transition is essential to minimizing social costs.

In line with this approach, we will drive the energy transition by reducing carbon emissions through energy savings and existing technologies until 2030, shifting to carbon neutrality with CN energy from 2030, and accelerating the growth of CN energy through innovation from 2040. Through these efforts, we will fulfill our role as a comprehensive energy company in achieving carbon neutrality with stakeholders while delivering optimal solutions in light of S+3E.



^{*1} Virtual Power Plant: Operating as a single power generation facility by integrating and controlling distributed energy sources through an aggregator, utilizing information and communication technology.

^{*2} Carbon dioxide Capture and Storage

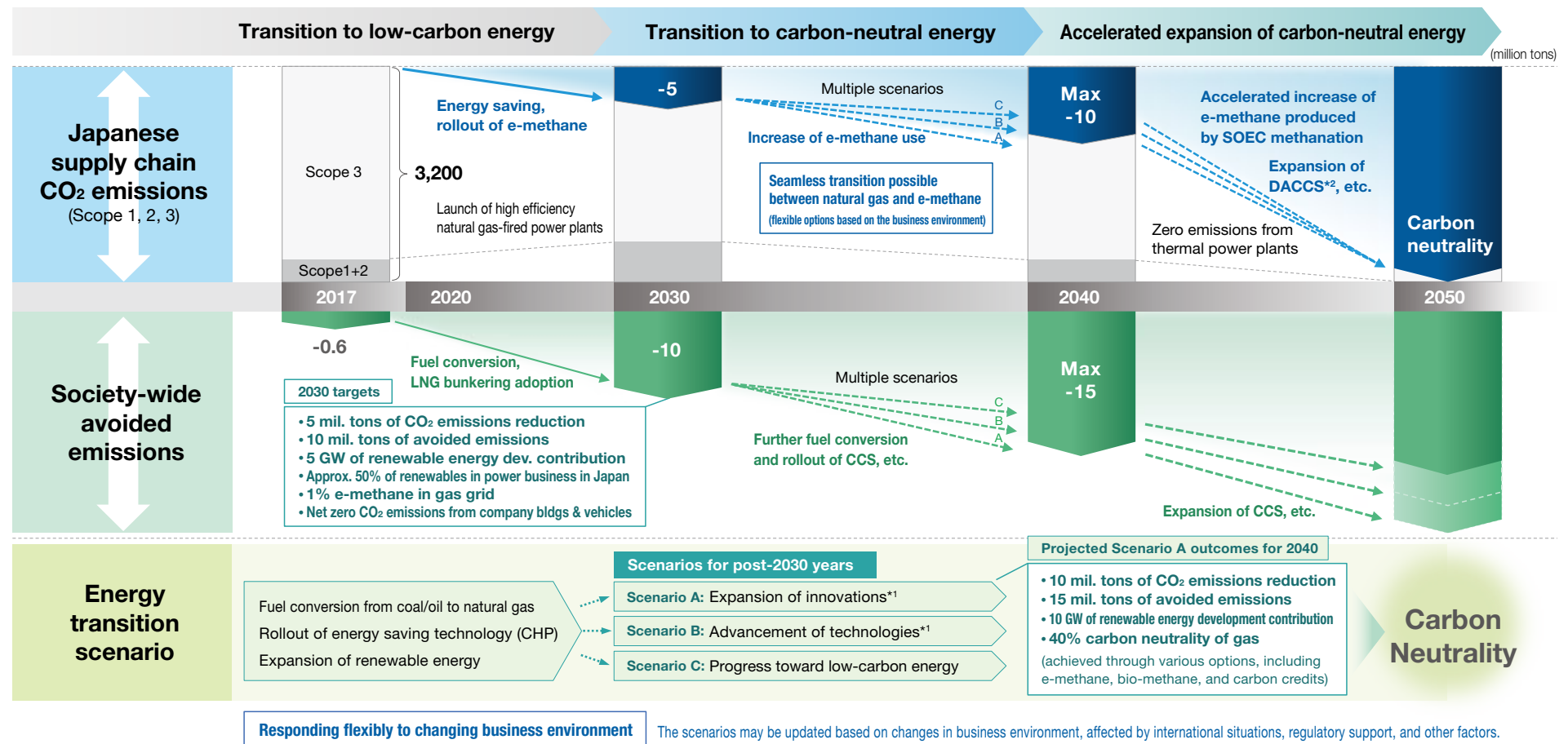
^{*3} H-to-A (Hard-to-Abate) industry: Sectors in which CO₂ emissions reduction is challenging

Roadmap to CO₂ Emissions Reduction

The Daigas Group has formulated a CO₂ reduction roadmap to achieve a CN society in 2050.

With the current emphasis on energy security, the country's energy supply and demand outlook for 2040 requires a variety of scenarios, including risk cases.

Based on this, the Group had considered multiple scenarios for 2040, including the scenario assumed by the government. Below are the estimated values based on the scenario of "Expansion of innovations," which assumes the maximum progress toward carbon neutrality. This is merely one scenario, and we intend to determine its feasibility by around 2030, and to review the scenario, taking into account international situations and trends in regulatory changes.



*1 Energy demand and supply outlook scenarios from Japan's Seventh Strategic Energy Plan.

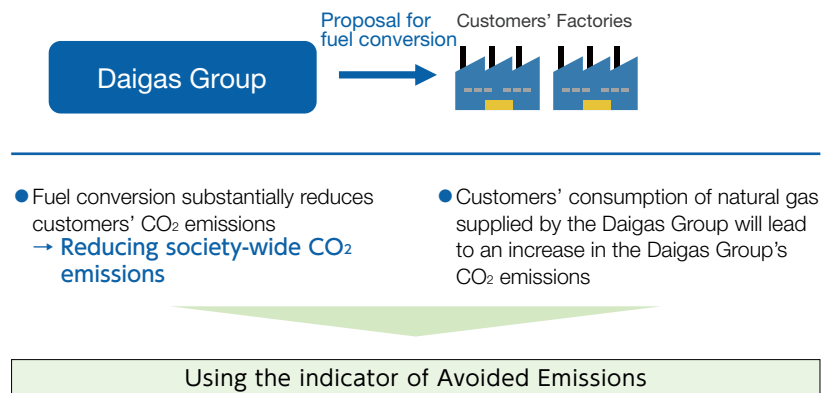
*2 Direct Air Carbon Capture and Storage: Technology that combines DAC for separating and capturing CO₂ with CCS for underground storage.

Approach to Avoided Emissions in Society

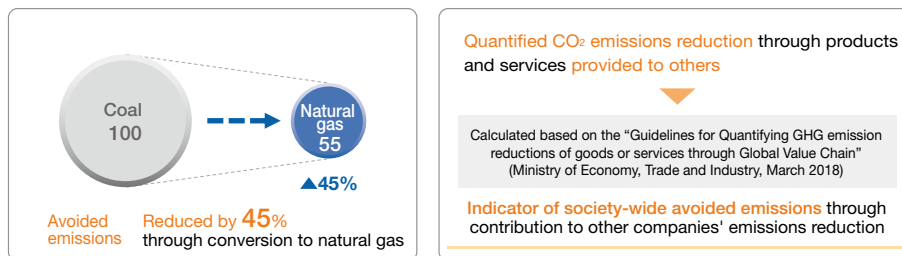
As we move toward providing carbon neutral thermal energy, one effective measure during the transition period is fuel conversion from coal and oil to natural gas, which leads to certain reduction of carbon. For example, simply switching from coal to natural gas can reduce CO₂ emissions per unit of heat by about 45%. By switching our fuel to natural gas, the Daigas Group aims to achieve significant regional low carbonization together with our customers and reduce CO₂ emissions throughout society.

Meanwhile, although society's overall CO₂ emissions will decrease significantly, this fuel conversion will increase the use of natural gas, which appears to increase CO₂ emissions throughout the Group's supply chain. This reduction in CO₂ emissions throughout society can be measured with an indicator known as "avoided emissions." It quantifies the extent to which a company's products and services have contributed to reducing CO₂ emissions for others, and the Group will actively promote it as an important indicator.

Case Fuel conversion by the Daigas Group (coal to natural gas)

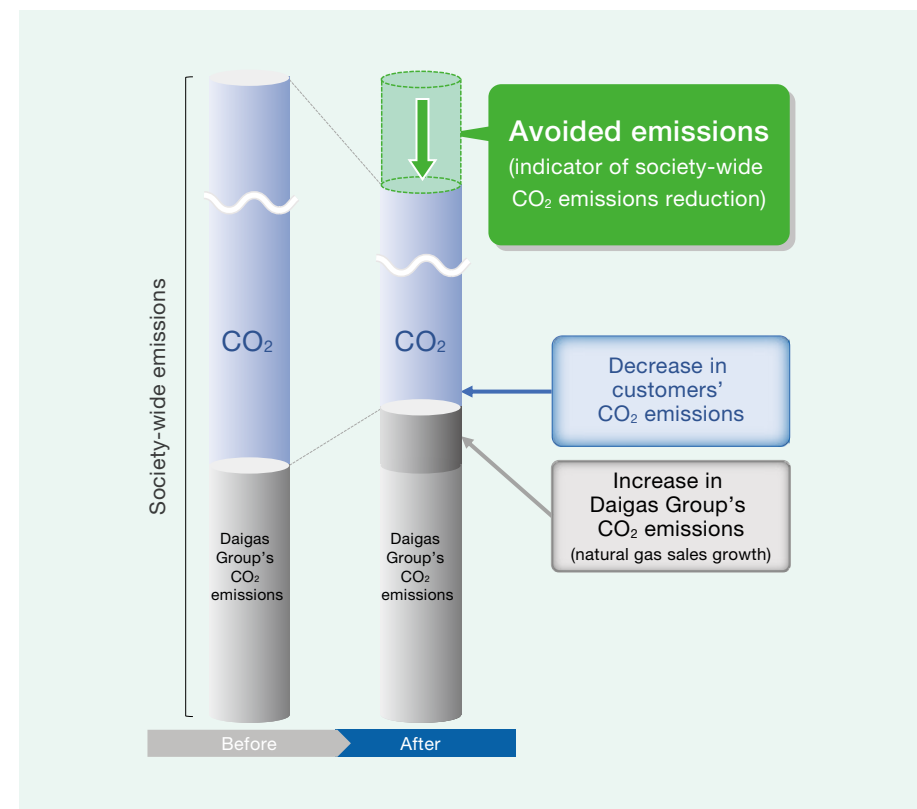


CO₂ Emissions Per Same Calorific Value*² What is "Avoided Emissions"?



*Prepared based on the "Ordinance Concerning Calculation of GHG Emissions from Business Activities of Specified Emitters" issued by METI and the Ministry of the Environment

Conceptual Diagram of Avoided Emissions



Daigas Group's Avoided Emissions

The Daigas Group is working to introduce various low-carbon or decarbonized systems both domestically and internationally at our customers' sites and in our own business activities. The avoided CO₂ emission is calculated for such systems that contribute to the reduction of CO₂ emissions in society as a whole.

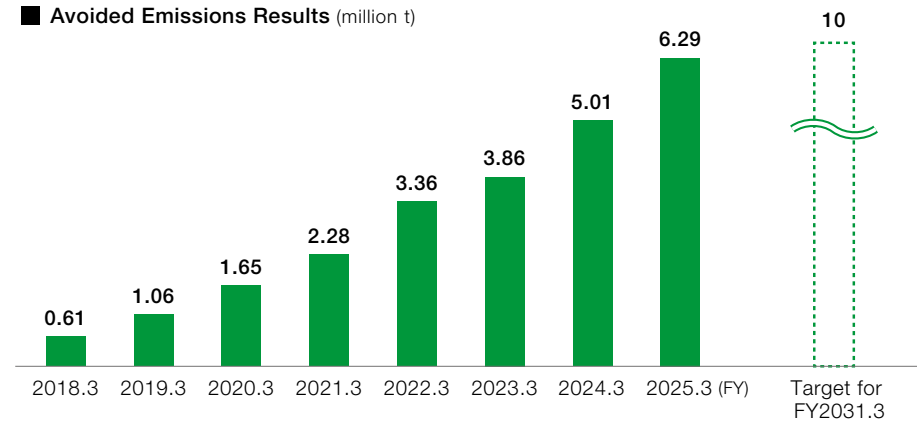
The Daigas Group contributed to a 6.29-million-ton CO₂ emissions reduction, as revealed by the results of calculations of the effect of reducing CO₂ emissions in FY2025.3 (FY2025.3 results) achieved by using the systems listed below that the Daigas Group has introduced since FY2018.3 at customer sites and in its own business activities.

The results were calculated using the stock-based approach, based on the "Guidelines for Quantifying GHG Emission Reductions of Goods or Services through Global Value Chain" (published by the Ministry of Economy, Trade and Industry in March 2018), assuming the calculation method and baseline concept shown in the table below. The calculation results were validated by a third-party review by Bureau Veritas Japan Co., Ltd.

■ Calculation Method

	Low-carbon/ carbon-neutral system	Reduction effect calculation method	Baseline concept		Low-carbon/ carbon-neutral system	Reduction effect calculation method	Baseline concept
Reduction of CO ₂ emissions from business activities	Renewable energy sources  Wind farm Solar power plant  Biomass power plant etc.	Amount of electricity generated or procured × Average electricity emission factor of thermal power*	Substitution for thermal power generation	Reduction of CO ₂ emissions at customer sites	High-efficiency distributed system  Household fuel cell system Cogeneration system	Household fuel cell system: Number of installed units × Reduction per unit Cogeneration system: Installed capacity × Reduction per unit capacity	Substitution for conventional water heaters (boilers) and purchased electricity
	High-efficiency thermal power generation  High-efficiency thermal power plant	Amount of electricity generated × Difference in CO ₂ emission factor between high-efficiency and existing thermal power	Comparison with emission factor of existing thermal power generation		Expanded and advanced use of natural gas  Fuel conversion High-efficiency water heater	Fuel conversion: Amount developed × Difference in CO ₂ emission factor Gas-powered air conditioning: Capacity sold × Reduction per unit capacity	Emissions comparison with other fuels Substitution for conventional air conditioners
	Cryogenic power generation facilities using cold heat generated in the manufacturing process of city gas	Amount of electricity generated × Average electricity emission factor of thermal power	Substitution for thermal power generation		 Gas-powered air conditioning	High-efficiency water heater: Number of installed units × Reduction per unit	Substitution for conventional water heaters
					Proposals for energy saving (Photovoltaic power generation systems/Conversion to LED lighting)	Amount of electricity generated or saved × Average electricity emission factor of thermal power*	Substitution for thermal power generation

■ Avoided Emissions Results (million t)



* Calculated using the average electricity emission factor of thermal power given in the Plan for Global Warming Countermeasures (2025): 0.65 kg-CO₂/kWh (FY2014.3)

Efforts to achieve net zero emissions regarding the Group's CO₂ emissions (environmental impact throughout the Daigas Group value chain)

The Daigas Group calculated the amount of greenhouse gas (GHG) emissions from companies that constitute the Daigas Group's value chain network, based on the GHG Protocol, an international emission accounting standard. The methodology of the calculation and its results have been certified by an independent organization to verify their reliability and accuracy.

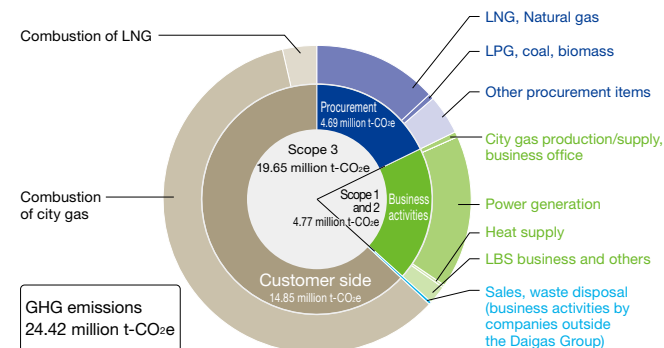
Combined GHG emissions by the Daigas Group and value chain companies, measured by CO₂, totaled about 24.42 million tons in FY2025.3. The sum breaks down into about 4.77 million tons, or about 20%, for GHG emitted through business activities by the Daigas Group (Scope 1 and Scope 2), and about 19.65 million tons, or about 80%, emitted by others in our value chain (Scope 3). GHG emissions from city gas and LNG combustion on the customer side amounted to 14.85 million tons in the reporting year in terms of CO₂, accounting for about 61% of the total. GHG emissions through electricity generation, as measured in terms of CO₂ in the year, amounted to 4.08 million tons, accounting for about 17% of the total emissions, which represented the majority of GHG emissions from the Group's own business activities. 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 emissions from material and fuel procurement totaled 4.69 million tons, as measured in terms of CO₂ in the year, accounting for about 19% of the total emissions. The procurement of energy sources, especially LNG, accounted for over 80% of that amount. Under these circumstances, we will continue our efforts to improve fuel efficiency regarding the operation of LNG tankers in collaboration with resource suppliers.

* CO₂ emissions in the domestic supply chain (Scope 1, 2 and 3) amounted to 23.44 million tons.

GHG Emissions from the Value Chain (FY2025.3 results)

Please see P.033 for detailed data.



Companies subject to the calculation of GHG emissions:
68 companies in total, including Osaka Gas Co., Ltd. and 67 companies among 163 consolidated subsidiaries are subject to calculation of GHG emissions. Those housed in office buildings as tenants and whose environmental data are difficult to grasp and whose environmental effects are minimal are not subject to such calculation. Also excluded from the calculation are overseas companies, except two companies.

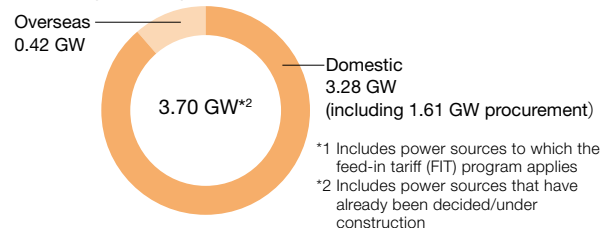
Reduction of CO₂ Emissions from the Group's Own Business Activities—Facilitating the Development of Renewable Energy Sources

The Daigas Group aims to raise by FY2031.3 the percentage of renewables in its power portfolio in Japan to about 50% and renewables development contribution on a global basis to 5 GW. To achieve these targets, it is engaged in renewable energy businesses such as wind, solar, and biomass.

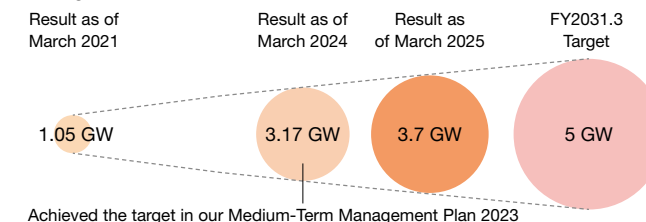
In FY2025.3, the percentage of renewables in our power portfolio was 30.4%, and renewable power development contribution was 3.7 GW.

The Hyuga Biomass Power Plant started commercial operation in October 2024, followed by the Aichi Tahara Biomass Power Plant in November. In addition, in July 2024, we joined Floating Offshore Wind Technology Research Association "FLOWRA," a group of power generation companies working on technology development to achieve large-scale commercialization of floating offshore wind power generation. Furthermore, in November 2024, we joined the "24/7 Carbon-free Energy Compact," an international initiative aiming to popularize carbon-free electricity supply at all times, and will continue to contribute to further popularization in the future.

Contribution to Developing Renewables Capacity on a Global Basis^{*1} (FY2025.3)



Contribution to Developing Renewables Capacity on a Global basis: Targets and Results



Reducing CO₂ Emissions from the Group's Own Business Activities—Improving Energy Consumption Management and Operational Efficiency

Within the framework of the Energy Efficiency Act, the Group has energy-saving goals and action plans for each company covered by the Act and regularly monitors energy flows that are important to overall energy efficiency. Each company reviews its energy consumption every year and evaluates progress toward its energy goals and action plans. Initiatives to reduce energy consumption include providing energy management training to employees and suppliers and promoting the adoption of cutting-edge energy management technologies and energy-saving systems.

The Group is also working to reduce CO₂ emissions within the Group with measures such as reducing the CO₂ emissions from our offices and company vehicles and adopting cryogenic power generation at our LNG terminals. In FY2025.3, the Materials Business also advanced efforts to reduce CO₂ emissions by installing power generation equipment that utilizes waste heat at its activated carbon factory in India.

CO₂ Reduction Initiatives at Customers and in the Value Chain

The Daigas Group believes that it is important to reduce not only GHG emissions from its own business activities but also CO₂ emissions at customers' sites. We are seeking to assist customers in reducing their CO₂ emissions by popularizing the use of natural gas and developing and proposing highly energy-efficient equipment. We are also cooperating with our business partners and affiliated companies to reduce CO₂ emissions from logistics.

Efforts to reduce CO₂ emissions in LNG transportation

Heavy fuel oil is mainly used for marine fuel, and the International Maritime Organization (IMO) has set a goal of zero GHG emissions by around 2050. Osaka Gas became the first city gas company to start a Shore-to-Ship^{*1} LNG fuel supply business for ships in April 2025, aiming to reduce the carbon footprint of marine fuel.

Since 2019, the Company has been supplying LNG fuel to ships using the Truck-to-Ship method^{*2}, and with the launch of the Shore-to-Ship supply business, we are now able to supply LNG fuel with two methods. In addition, we plan to start a Ship-to-Ship^{*3} LNG fuel supply business for ships in the Osaka Bay and Setouchi area in FY2027.3. This will enable LNG fuel supply in a variety of ways, contributing to a stable and flexible LNG fuel supply. In the future, we aim to decarbonize marine fuel by replacing LNG supplied as marine fuel with e-methane.

^{*1} A method in which LNG is supplied from an onshore LNG terminal to LNG-fueled ships moored at a quay or pier.

^{*2} A method in which LNG is supplied to an LNG-fueled ship moored at a quay from an LNG tanker truck parked at the pier.

^{*3} A method in which a bunkering vessel comes alongside an LNG-fueled ship moored at a quay or anchored at an anchorage to supply LNG.

■ LNG bunkering methods



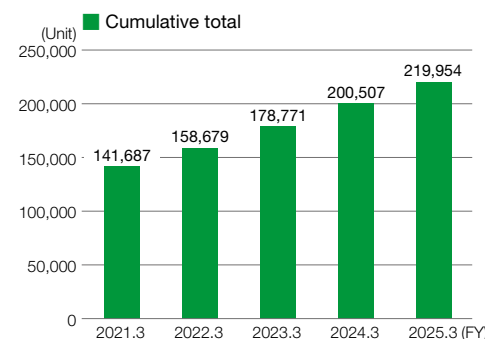
Approaches at customer sites to reduce CO₂ emissions through the introduction of high-efficiency decentralized system

To help realize a low-carbon society, Osaka Gas is striving to sell and disseminate “ENE-FARM” as a co-generation system for household use that helps conserve energy and reduce CO₂ emissions, which generates electricity through chemical reactions between the hydrogen extracted from city gas and oxygen in the air. “ENE-FARM” is a high-efficiency energy system that makes effective use of the heat generated alongside electricity to supply hot water.

“ENE-FARM type S,” launched in April 2020, attains the highest power generation efficiency in the world^{*1} of 55%^{*2}. Moreover, the main unit has improved in durability and has been significantly downsized. It is equipped with the industry’s first electric water-heating mode, which allows customers to use hot water heated by a built-in electric heater even when the supply of city gas is interrupted. As these features were highly regarded, “ENE-FARM type S” won the 7th Japan Resilience Award (2021)^{*3} and other awards. In addition, with our IoT connection services, which provide even greater convenience and security, we have developed the “EF Failure Sign Monitoring System.” This system can monitor for signs of failure in a timely manner using “ENE-FARM” operating data, and it won a grand prize in FY2025.3 Japan Gas Association Technology Award.

Furthermore, we offer various enhanced services, which have been chosen by many customers, including the surplus power purchase service “E-Share,” designed to improve ENE-FARM’s environmental friendliness and economic efficiency even more.

■ Cumulative Sales Total of the Fuel Cell Systems



^{*1} Household fuel cell system whose rated output is 1 kW or less in Lower Heating Value (LHV). (based on a survey conducted by Osaka Gas as of the end of January 2020)

^{*2} Power generation efficiency when rated power generation is continued for at least three hours (e.g. under the surplus electricity purchase system). In the cases other than the above, the rated power generation efficiency is 54% (overall efficiency: 87%) in Lower Heating Value (LHV).

^{*3} A system organized by the Association for Resilience Japan that discovers, evaluates, and awards advanced activities related to resilience which are being developed throughout Japan in order to build a resilient society for the next generation. The award was held for the seventh time in FY2022.3.

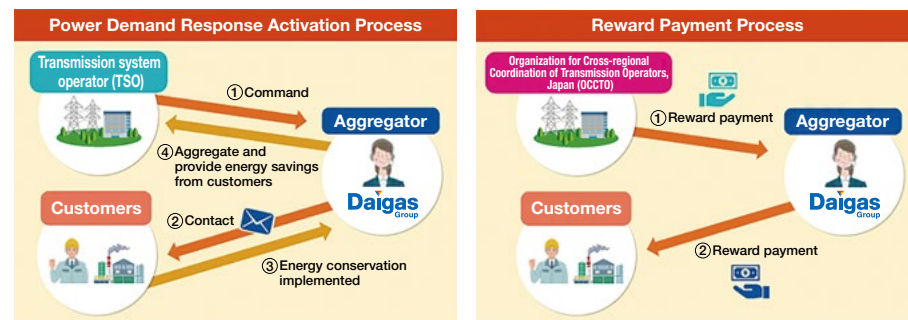
Initiatives to Reduce Future Energy Consumption

The Daigas Group has been offering “D-Response,” a demand-response service that allows customers to control their power load equipment and private power generation equipment (load equipment and the like), as an aggregator in the capacity market* operated by the Organization for Cross-regional Coordination of Transmission Operators, Japan (OCCTO). This service enables customers to receive rewards by reducing their electricity demand. As of the end of FY2025.3, this service has been implemented at approximately 243 locations.

* In the capacity market, future supply capacity (kW) is traded, rather than electricity volume (kWh).

■ D-Response

When power supply is tight, demand response is activated at the discretion of the transmission system operator.



Initiatives for Carbon Dioxide Capture, Utilization, and Storage (CCUS)

Osaka Gas is cooperating with partners to explore and collaborate on carbon dioxide capture and utilization (CCU) and carbon dioxide capture and storage (CCS), applying the expertise of both companies.

In May 2023, Osaka Gas started conceptual design and economic feasibility studies in collaboration with Mitsui Chemicals, Inc., applying our expertise in e-methane and CO₂ storage. Our goal is to separate and capture CO₂ from exhaust gas emitted from the manufacturing plants and utility facilities of Mitsui Chemicals, Inc.'s Osaka Works, with the aim of utilizing CO₂ (CCU) both domestically and internationally and storing it underground (CCS). Furthermore, also in May 2023, we signed a joint study agreement with Shell Singapore Pte. Ltd. ("Shell") to combine our knowledge of CO₂ emissions from factories with Shell's global network and expertise relating to CO₂ liquefaction and transportation and CCS to conduct a feasibility study of a CCS value chain that envisions collecting and liquefying captured CO₂, transporting it by ship to a storage site in the Asia-Pacific region, and injecting and storing it underground.

Starting in March 2024, we have been working with Mitsubishi UBE Cement Corporation, drawing on our knowledge of e-methane and CO₂ storage, to design a CCUS value chain and assess its economic feasibility, consisting of CCS, including capturing CO₂ derived from thermal energy emitted from cement calcination kilns and cement raw materials at Mitsubishi UBE Cement Corporation's Kyushu Plant and injecting and storing it underground, as well as reusing it using e-methane.

Furthermore, by combining Mitsubishi Heavy Industries, Ltd. and Osaka Gas's expertise in e-methane and CO₂ storage with Mitsubishi Heavy Industries, Ltd.'s expertise in CO₂ capture, liquefied CO₂ transportation, and CO₂ management (CO₂NNEX®*), we are conducting a business feasibility assessment of CCUS, consisting of CCS, including CO₂ capture measures, CO₂ transportation by ship, and underground storage, as well as reusing it as e-methane.

Through these initiatives, we aim to build a CO₂ value chain and promote the expansion of carbon recycled fuel applications.

* CO₂NNEX: trademark owned by Mitsubishi Heavy Industries, Ltd.

A business aiming to achieve local production for local consumption of biomass fuel and a stable supply system using fast-growing trees

In March 2019, Osaka Gas established Green Power Fuel Corporation (hereinafter, “GPF”), a joint venture company that procures and sells domestically grown woody biomass for biomass power plants, in cooperation with Seishin Shinrin Shigen Co., Ltd. and Nippon Paper Lumber Co., Ltd.

In cooperation with Seishin Shinrin Shigen, which has abundant knowledge about forestry, and Nippon Paper Lumber, which has a long track record in dealing in domestically grown woody biomass, GPF procures and transports unused wood from woodlands in Japan as power generation fuel to ensure stable, long-term biomass supply for several biomass power plants, such as Hirohata Biomass Power Plant and Hyuga Biomass Power Plant owned by the Group.

Furthermore, in December 2021, we signed a cooperation agreement with Shiso City, Hyogo Prefecture, regarding the utilization of fast growing trees for fuel applications, with the aim of local production and local consumption of biomass fuel and sustainable growth of Japan's forestry. We also signed a comprehensive agreement with Himeji City, Hyogo Prefecture in March 2025 regarding efforts to decarbonize through the use of wood resources for energy.

Both agreements focus on “fast growing trees*¹,” which are expected to have shorter growth and logging cycles than those of general tree species, from the perspective of further increasing its biomass procurement volume and ensuring procurement stability. We will work to build a stable biomass fuel supply system and develop a sustainable business model for forestry in Japan through the utilization of fast growing trees, and will use the results to realize the independent operation*² of biomass power plants after the purchase period under the FIT scheme expires.

*¹ A general term for trees that grow faster than the commonly planted tree species. Some representative species include Chinaberry and Chinese Fir.

*² Under the feed-in tariff (FIT) scheme, renewable electricity is purchased at fixed prices for 20 years at maximum. After this period, the generated electricity must be sold at market prices. For this reason, GPF aims to substantially reduce mainly transportation costs by using domestically produced fuels, thereby realizing sustainable fuel costs.

Building a system to evaluate carbon credit quality using generative AI

The Daigas Group is working to realize a carbon-neutral society with a wide range of initiatives, including expanding the use of renewable energy, improving energy efficiency, and introducing new technologies. We also believe that contributing to stakeholders' decarbonization efforts with carbon credits tailored to customer needs is an important initiative.

Carbon credits are gaining attention both in Japan and abroad as a means to offset carbon dioxide emissions that cannot be fully reduced through renewable energy use and energy-saving efforts. Osaka Gas promotes the acquisition and utilization of carbon credits through investments in domestic and international projects.

In FY2025.3, we developed a carbon credit quality assessment system using generative AI with the aim of significantly improving the transparency and reliability of the carbon credit market. With this system, companies and investors can select high-quality credits and achieve effective emission reductions. It also helps avoid the risk of greenwashing and improve corporate environmental performance.

This system uses generative AI to analyze carbon credit creation project plans and assess their quality by assessing the consistency between the standards established for actual credit certification and those set by initiatives and rating agencies. We have confirmed that the system's accuracy is high when compared with past assessments by rating agencies and other organizations. By utilizing AI, we are able to comprehensively assess a huge number of carbon credit creation projects, enabling us to compare the quality of projects, and we have obtained a patent for this system.

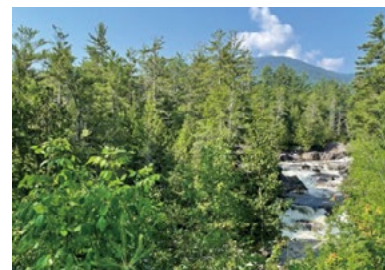
We will pursue all possibilities in collaboration with partners, such as licensing this system and utilizing it within the formation of a credit trading platform.

Furthermore, in March 2025, we launched the system as a web-based service called “GreenChecker.” This is the first service in the world to evaluate the quality of carbon credits using generative AI. By launching this web service on a preliminary basis, we further refined it based on feedback, and made it generally available in August 2025.

Involvement in a forestry fund formed by the Sumitomo Forestry Group

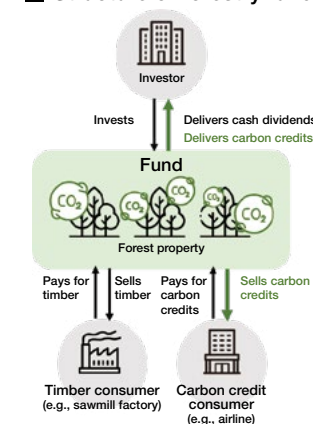
In July 2023, Osaka Gas announced its joint investment, along with nine other Japanese companies, in the Eastwood Climate Smart Forestry Fund I (“the Fund”) established by the Sumitomo Forestry Group.

The size of this fund is approximately 600 million yen, and the investment period is planned for 15 years. By 2027, the pooled capital will have been invested in the acquisition and management of 130 thousand hectares of forest, primarily in North America. The Fund will contribute to the realization of a carbon-neutral society by generating new absorption of CO₂ and the production and trading of high-integrity carbon credits. (Approx. 90 thousand hectares of forest assets acquired as of February 2025.) The value of forests as natural capital will also be enhanced, such as by maintaining biodiversity and conserving water resources. the Fund will deliver global climate benefits by supporting responsible forest management at an area and financial scale beyond that which individual companies could achieve on their own.



An example of forests purchased by the fund
(Courtesy of Eastwood Forests, LLC)

Structure of forestry fund



Osaka Gas Urban Development Co., Ltd. completed construction of its first logistics facility “MFLP•OGUD Osaka-Torishima”

—environmentally friendly facility, including ZEB certification—

Osaka Gas Urban Development Co., Ltd. completed construction of “MFLP•OGUD Osaka-Torishima” (Konohana-ku, Osaka), a joint project with Mitsui Fudosan Co., Ltd., in February 2024. “MFLP•OGUD Osaka-Torishima” is the first logistics facility project by Osaka Gas Urban Development, with solar panels installed on its rooftop that generate approximately 650,000 kWh of electricity through a corporate PPA project*1 with Daigas Energy Co., Ltd. In addition, it supports carbon neutrality, including provision of LED lighting for indoor lighting in common and private areas and RE100-compliant green power to meet customer needs.

These environmentally friendly efforts were highly regarded, and it received the A rank of the CASBEE Osaka Mirai (Comprehensive Assessment System for Built Environment Efficiency in Osaka City) and the highest rank of ZEB certification.

DBJ Green Building Certification*2 was also obtained.

*1 Corporate PPA project

Long-term contracts for the purchase of renewable energy power between companies as consumers of electricity and power producers.

*2 DBJ Green Building Certification

DBJ Green Building Certification is a certification system for real estate that takes environmental and social considerations into account.

Real estate sustainability is certified on a five-star scale from ★ to ★★★★★ based on a comprehensive assessment of five criteria, including the building's environmental performance and consideration for the surrounding environment and community.

Osaka Gas Urban Development Co., Ltd. has adopted ZEH-M Oriented as standard features of its condominium

Osaka Gas Urban Development Co., Ltd. obtained ZEH developer certification in April 2022, and has since adopted ZEH-M Oriented as standard features for its new condominium brand “Scenes.” For Scenes, efforts have been made to obtain Comprehensive Assessment System for Built Environment Efficiency (CASBEE) rank A certified, and certification as a low-carbon building (a building that contributes to the reduction of carbon dioxide emissions). In addition, the company is actively adopting energy-saving equipment such as household fuel cell system ENE-FARM, low-E double glazing, heated bathtubs, water-saving toilets, and LED lighting. Seven new condominiums have been offered with ZEH-M as standard features by FY2025.3 (Ready: 3 and Oriented: 4).

Rental apartment series “Urbanex” of Osaka Gas Urban Development Co., Ltd. obtained certification for ZEH-M Oriented certification

Osaka Gas Urban Development Co., Ltd. develops urban-type rental apartment series “Urbanex.” Urbanex Hommachi II, Urbanex Temmabashi South, and Urbanex Tsukaguchi obtained ZEH-M Oriented certification*1.

In addition to obtaining ZEH-M Oriented certifications for its rented apartments, the company also works to introduce renewable energy through Style Plan E-ZERO*2, and to obtain environmental certifications, such as CASBEE for Real Estate*3 and DBJ Green Building Certification.

■ Rented apartments with ZEH-M Oriented certification and renewable energy

Name	Urbanex Hommachi II	Urbanex Temmabashi South	Urbanex Tsukaguchi
Exterior view			
Outline	Completed in 2024 Total number of units: 76	Completed in 2025 Total number of units: 42	Completed in 2025 Total number of units: 40

*1 ZEH-M Oriented certification

ZEH is an abbreviation for “net Zero Energy House.” ZEH-M Oriented certification is obtained by reducing annual primary energy consumption by 20% or higher by achieving substantial energy conservation while maintaining the indoor environment through measures such as improving insulation performance and introducing efficient equipment, etc. in ZEH-M, the housing complex version.

*2 Style Plan E-ZERO

Electricity price menu offered by Osaka Gas, with zero CO₂ emissions and consisting of 100% renewable energy.

*3 CASBEE for Real Estate

CASBEE evaluates and rates the building's environmental performance. It is a system that comprehensively assesses the building's environmental performance including indoor comfort and consideration for the landscape, in addition to aspects of reducing environmental impact such as energy conservation, resource conservation, and recycling performance. CASBEE for Real Estate was developed to utilize the environmental assessment results of buildings in CASBEE for real estate assessment. The assessment is conducted on existing buildings that have been completed for at least one year, and buildings are scored in five categories of energy/greenhouse gases, water, resource use/safety, biodiversity/site, and indoor environment, and rated on four levels: “rank S★★★★★,” “rank A★★★★,” “rank B+★★★,” and “rank B★★.”

Support and Participation in Climate Change Prevention

Participated in the “Keidanren Carbon Neutrality Action Plan” (formerly titled “Commitment to a Low Carbon Society”)

Recognizing that global warming is a global long-term issue to be solved, the Japan Business Federation (Keidanren) formulated a plan titled “Keidanren’s Commitment to a Low Carbon Society” in 2013 (revised in 2017), presenting a vision common to the Japanese industries of leveraging their technological prowess to play a central role in achieving the target of reducing global GHG emissions by half by 2050. This plan envisions that each member industry should work to reduce CO₂ emissions from business activities and people’s lives in Japan by introducing the best available technologies (BAT) to the maximum and that aspiring initiatives to stop global warming should be actively encouraged abroad. The plan also sets targets for strategically developing innovative technologies that will help achieve a breakthrough for the reduction of CO₂ emissions by half by 2050.

Among the industrial organizations participating in this plan, the Japan Gas Association and the Electric Power Council for a Low Carbon Society have established their own action plans to achieve a low-carbon society in the city gas industry and the electricity industry, respectively. Osaka Gas, a member of both organizations, participates in those plans for both industries, cooperates in annual surveys of progress in reducing CO₂ emissions and energy-saving measures, and promotes initiatives to address global warming (climate change).

In June 2021, this plan was renewed as the “Keidanren Carbon Neutrality Action Plan.” From now on, we will formulate a plan to achieve carbon neutrality by 2050 and promote initiatives to serve that purpose.

Support for the “GX Acceleration Declaration”

In December 2024, Osaka Gas issued a declaration of intent regarding corporate procurement and initiatives for GX products*¹, titled the “GX Acceleration Declaration”^{*2}.

As early implementation in society of GX products is crucial to accelerating green transformation throughout society, the Company will promote GX throughout our supply chain by actively contributing to the social implementation of GX products through the evaluation of the GX value of our products and services, in addition to our Scope 1 and 2 reduction efforts.

*1 Products that significantly reduce emissions during the manufacturing process or contribute to reducing the emissions of others.

*2 A framework established in December 2024 following the discussion within the GX League, a consortium in which a group of internationally competitive companies that boldly take on the challenge of transitioning to carbon neutrality will drive GX.

Together with Kobe City, Osaka Gas was selected as a “Decarbonization Leading Area” by the Ministry of the Environment

Osaka Gas supports regional decarbonization policies promoted by the government and is working with local governments and other stakeholders to advance decarbonization initiatives tailored to the region’s characteristics.

In 2024, together with Kobe City and five other companies, we applied and were selected as part of the Ministry of the Environment’s “Decarbonization Leading Areas*(fifth round)” program with our plan aimed at evolving the post-earthquake reconstruction project, the “Kobe Biomedical Innovation Cluster,” into a decarbonized city that protects lives on the occasion of 30 years since the Great Hanshin-Awaji Earthquake. To promote this project, we concluded a partnership agreement with Kobe City for mutual partnership and cooperation.

The Company will promote urban development of decarbonized communities by providing a variety of solutions, including support for the introduction of renewable energy and energy-saving equipment and renewable energy supply.

* “Decarbonization Leading Areas” are regions that aim to achieve net-zero CO₂ emissions from electricity consumption in households and business sectors by 2030 and also make efforts to achieve reductions in other greenhouse gas emissions by utilizing local characteristics.



Signing ceremony for the partnership agreement with Kobe City

From left: Shinichi Ueda, Senior Executive Officer of Osaka Gas; Masao Imanishi, Deputy Mayor of Kobe City

Participating in the creation of guidelines for avoided greenhouse gas emissions

Osaka Gas participated in the formulation of “Guidelines for Calculating and Disclosing Avoided Organizational Greenhouse Gas Emissions,” published by the avoided environmental emission assessment study group of the Institute of Life Cycle Assessment, Japan in December 2024, as a member of the study group. These guidelines were made to enable organizations to understand the scale of their contribution to society by calculating their avoided emissions, and to use the results in organizational management and decision-making toward future decarbonization, as well as to communicate with society through disclosure. Osaka Gas was also involved in the production of the “Guidelines for Calculating Avoided Greenhouse Gas Emissions in the City Gas Industry,” published by the Japan Gas Association in March 2024. The project contributed to encouraging city gas business operators to quantify the amount of avoided emissions by their own businesses and services both at home and abroad, to appropriately communicate this information to stakeholders, and to utilize the results in management indicators.