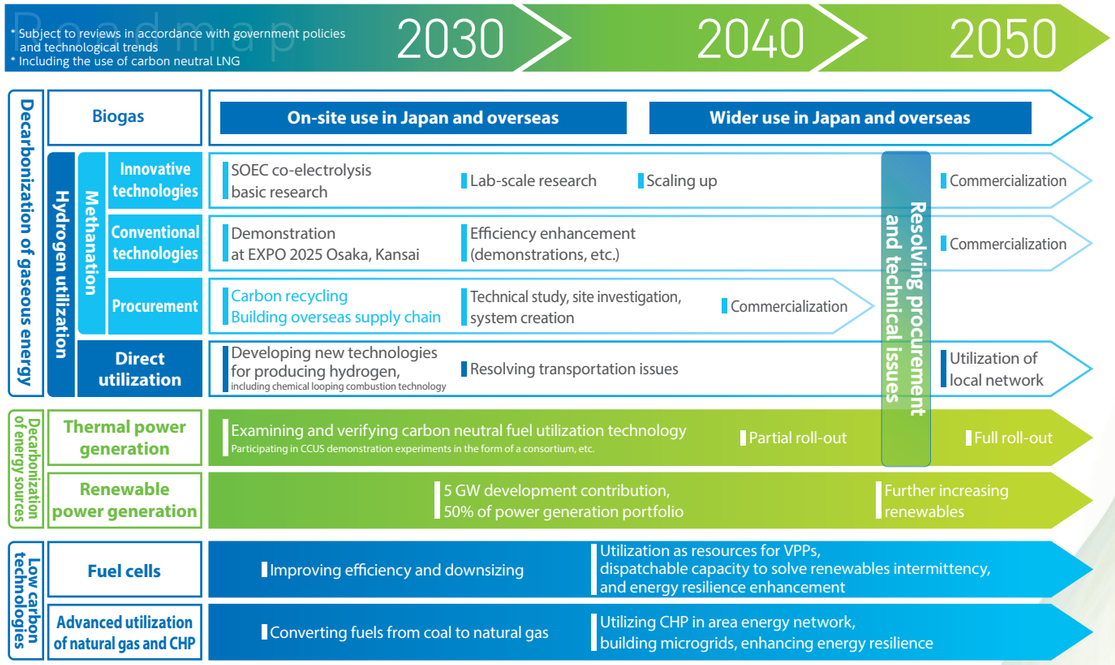
Roadmap

The Daigas Group is researching and developing methanation technologies and promoting the wider use of renewable energy.
We intend to accelerate our activities in line with our medium- to long-term roadmap.



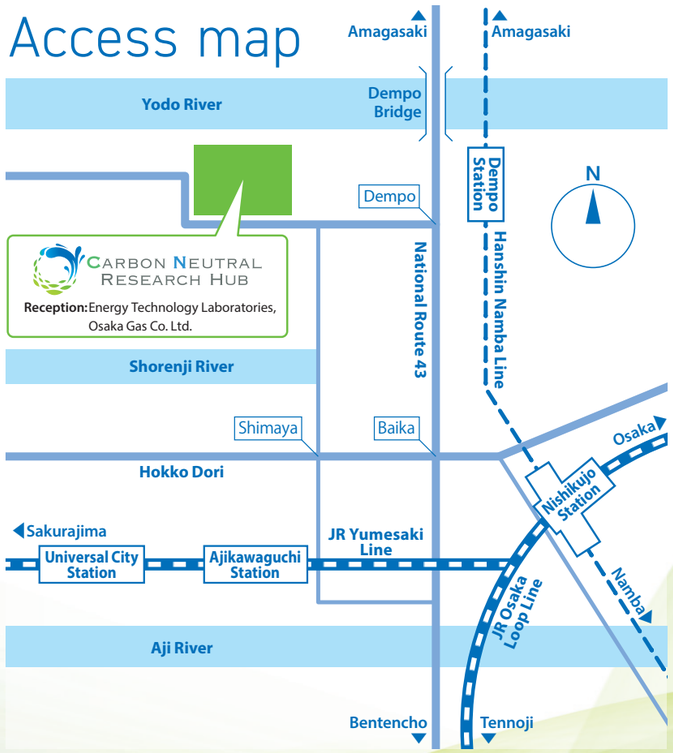
OSAKA GAS

Daigas Group

CARBON NEUTRAL RESEARCH HUB

FACILITY INFORMATION

Access map



CARBON NEUTRAL RESEARCH HUB

Carbon Neutral Research Hub, Osaka Gas Co., Ltd.
6-19-9 Torishima, Konohana-ku, Osaka 554-0051
(Reception: Energy Technology Laboratories)

Carbon Neutrality Challenge 2050

The Daigas Group aims to achieve net zero by 2050 in its energy businesses. In the gas sector, we are working to introduce carbon neutral synthetic methane produced through methanation technologies[1] using renewable energy and hydrogen. In the electricity sector, we are decarbonizing power sources by increasing renewable energy. As an innovative energy and services company, we continue providing solutions for creating a sustainable society.

In addition, while those technologies are being developed, we pursue CO_2 emissions reduction as the key to a smooth transition to a decarbonized society. We aim to achieve 8.5 million tons[2] of CO_2 emissions reduction contribution as a target for fiscal 2030 through energy conservation, advanced utilization of natural gas, and broader use of renewable energy.

2050 Carbon neutral

1 Initiatives to achieve carbon neutrality in our group business through innovation

2 Contribution to reducing society-wide CO_2 emissions

FY2030

- **5 GW**[3] of renewables development contribution on a global basis
- Approximately **50%**[3] of our power portfolio in Japan consisting of renewables
- **10 million tons/year**[4] of avoided emissions

1 Technology to produce synthetic methane (CH4) using hydrogen and CO2

2 Amount of contribution to reduction in fiscal 2030 in line with the long-term management vision 2030 target (cumulative reduction of 70 million tons by fiscal 2030) formulated in 2017

3 Including power sources covered by the feed-in tariff (FIT) system, such as solar, wind, and biomass

4 Equivalent to approximately one-third of the current CO2 emissions (approximately 33 million tons/year) of our group and customers

Energy-saving equipment

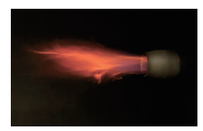
CHP (cogeneration system)

Industrial burner

Gas air conditioning

Hydrogen and ammonia

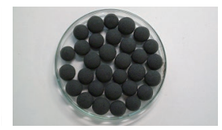
Hydrogen generator (HYSERVE)



Combustion technologies for hydrogen and ammonia

Methanation

SOEC cell



Methanation catalyst

SOEC methanation

Biomethanation

ECO Center

Environmental experiment building

CARBON NEUTRAL RESEARCH HUB ANNEX

Laboratory Building 3

Laboratory Building 1

Laboratory Building 2

Hydrogen test site

EI Lab

Biomass

Biogas upgrading

Chemical looping combustion

Small biogasification equipment

VPP* and renewable energy

VPP, storage batteries, renewable power generation forecasting

※VPP：Virtual Power Plant

Exhibition room

Fluorene cellulose*

Radiative cooling material (SPACECOOL)

*Biomass-derived resin-reinforcing fiber that achieves high strength and light weight