

Global Warming Countermeasures

Basic Concept

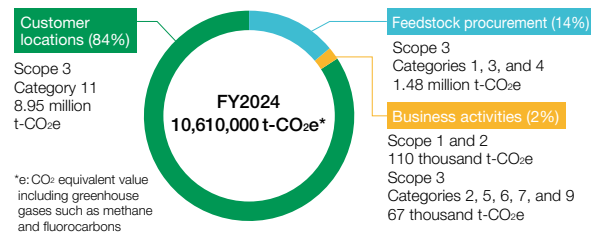
Global warming countermeasures are an important management issue for the Toho Gas Group. As an energy business operator, we are implementing countermeasures against global warming taking into consideration the value chain.

Toho Gas not only aims to reduce its own CO₂ emissions factor but also sets environmental action goals aimed at restraining CO₂ emissions at customer locations. We promote a wide range of initiatives, including supplying environmentally friendly energy, facilitating the switchover from other fuels to natural gas or LPG, and promoting the adoption of advanced and highly efficient devices such as fuel cells. We also foster the utilization of renewable energy and other resources in collaboration with local communities, as well as pursuing technological development and testing such technologies as methanation and CO₂ capture, utilization, and storage, all in the pursuit of achieving carbon neutrality by 2050.

● Environmental Impact of Value Chain

Throughout the entire value chain, environmental impacts such as CO₂ and other greenhouse gas emissions occur in business activities, including the production and supply of city gas, LPG,

Greenhouse Gas Emissions in the Value Chain



and electricity, as well as at every level of feedstock procurement and at customer locations.

In the gas business, much of the greenhouse gas emissions are accounted for by customer locations, and the Group is working on reducing these. We are also working to identify the status of greenhouse gas emissions in feedstock procurement and evaluate the impact on the environment. Regarding our business activities, we are reducing greenhouse gas emissions by improving energy use efficiency and energy conservation efforts.

● Global Warming Countermeasures at Customer Locations

We are promoting initiatives to contribute to CO₂ reduction through our business activities.

● Switching to Natural Gas

Natural gas is an environmentally friendly energy that, compared to other hydrocarbon fuels, produces less CO₂ and NO_x, and zero SO_x, when combusted. By switching the fuel used at customer sites from oil and other fuels to natural gas, we are contributing to the reduced emissions of greenhouse gases and air pollutants.

● Expanded Use of High-Efficiency Gas Equipment and Systems

In addition to switching fuels, we are introducing high-performance burners to facilities at customer locations to further reduce CO₂ emissions.

We are also promoting the expanded use of energy-efficient equipment and systems, such as the ENE FARM residential fuel cell system as well as gas cogeneration systems, high-efficiency boilers, and gas heat pump air-conditioning for commercial use.

● Reduction of CO₂ Emissions in Business Activities

As an energy operator, we promote energy conservation initiatives in all aspects of our business activities.

We invest in energy-saving equipment and conduct thorough operational management in each business field.

● Initiatives at City Gas Plants

At city gas plants, we use a highly energy-efficient method to produce gas by vaporizing liquefied natural gas (LNG) at around -160°C through heat exchange with seawater.

Furthermore, we make efficient use of the cold energy of LNG for cryogenic power generation, manufacturing dry ice and liquid nitrogen at adjacent plants, as well as equipment used to reliquefy boil-off gas (BOG) produced in LNG tanks.

We are also working to further reduce energy consumption, such as by utilizing pipelines and other equipment built for mutual backup and inventory adjustment between plants to adjust the amount of gas sent between plants. Through these efforts, we are reviewing operational methods to optimize the overall operational efficiency at all LNG plants.

Initiatives related to global warming countermeasures
For details, please refer to our website.
https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_global-warming.pdf



Gas engine cogeneration system



Flow-through boiler