

Management of Environmental Preservation

Basic Concept

Toho Gas Group has set its Environmental Action Principles and Environmental Action Guidelines to help the realization of a sustainable society, including carbon neutrality. Having set environmental action goals, we are engaging in a wide range of environmental actions, including global warming countermeasures, resource recycling, and making an environmental social contribution in cooperation with the region. Furthermore, in addition to engaging in compliance with environmental laws and environmental education by constructing Environmental Management Systems, we are managing the progress of initiatives through a PDCA cycle.

Environmental Action Principles

The Environmental Action Principles (established in 1993; final revision in 2022) are regarded at Toho Gas's business policy.

Environmental Action Principles

Basic Policy

Toho Gas and its Group companies recognize the importance of preserving the environment on a regional and global basis. The Group contributes to the realization of a sustainable society through the resolution of social issues relating to the environment.

Principle

- ⟨Principle1⟩ The Group will contribute to reducing the impacts of its business activities on the environment related to customers.
- ⟨Principle2⟩ The Group will reduce the impacts of its business activities on the overall environment.
- ⟨Principle3⟩ The Group will contribute to environmental preservation in collaboration with local communities and the global community.
- ⟨Principle4⟩ The Group will step up research and development regarding environmental preservation technologies.

Environmental Action Guidelines

Our Environmental Action Guidelines (established in 2011 and revised in 2022) set out the concept and content of key environmental activities that the Group is engaged in.

Environmental Action Guidelines

Global Warming Countermeasures

The Group aims to achieve carbon neutrality in the entire supply chain through the expansion, highly-efficient use, and high-degree application of environmentally-friendly energy, including natural gas, and the utilization of renewable energy and the decarbonization of gas itself.

Resource Recycling

The Group will promote the effective use of resources in each stage of business activities and reduce, reuse and recycle waste to minimize external emissions.

Biodiversity Conservation

The Group recognizes the importance of biodiversity, which is the foundation of society and the economy, and will work to grasp and analyze the impact of business activities on biodiversity as well as promoting biodiversity-friendly activities.

Environmental Social Contribution

The Group will contribute to the resolution of social issues by participating in environmental activities/projects in collaboration with local communities and the global community.

Technology Development

The Group will promote technology development toward realizing carbon neutrality, such as the highly-efficient and high-degree application of energy, the use of hydrogen and renewable energy, the capture and separation of CO₂ and methanation.

Environmental Management

Recognizing the impact of its business activities on the overall environment, the Group will rigorously enforce environmental management, and develop human resources who are environmentally conscious and can act on their own initiative. We comply with the demands of laws, ordinances and agreements relating to the environment.

Organizational Structure for Management of Environmental Preservation

Regarding key environmental challenges such as reducing environmental impact and complying with environmental regulations, the Sustainability Committee composed of Toho Gas and major subsidiaries deliberates, discusses, and monitors the direction, goals, and various initiatives of activities.

For environmental action goals, the Environment Subcommittee reviews achievements from various departments and confirms approaches. Also, within Toho Gas and subsidiaries, specific roles are assigned to drive activities: *environmental promoters* responsible for advancing specific actions, *environmental auditors* conducting voluntary environmental compliance audits, and *environmental controllers* overseeing these roles, all working to promote environmental initiatives.

Organizational Structure for Management of Environmental Preservation





Environmental Action Goals (FY2022-FY2025)

Aligned with the timeframe of the Medium-Term Management Plan, we have established environmental action goals for FY2022 to Fy2025 as follows, and are actively promoting initiatives to achieve them. Below is the progress for the initial fiscal year, FY2022. While the target for reducing CO₂ emissions per unit of business activity has not been met due to increased energy usage caused by changes in operational conditions resulting from global LNG supply-demand constraints, we will continue efforts to curb emissions through energy conservation measures. Progress on other target areas is proceeding smoothly.

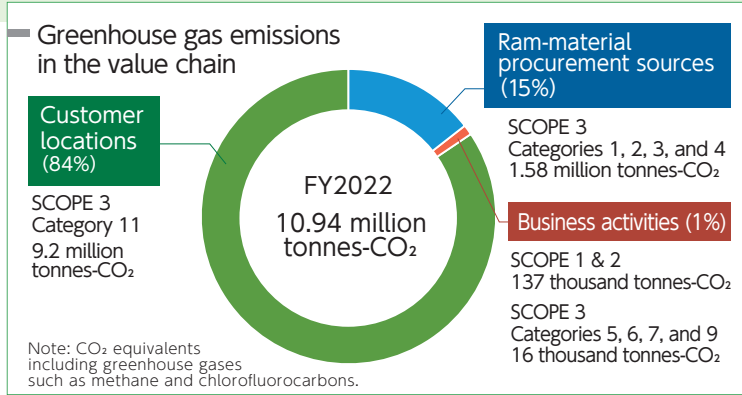
Type		Goal item	FY2025 target value	FY2022 results
Environmental load reduction	Global Warming Countermeasures	Amount of contribution to CO ₂ reduction	1 million tonnes compared to FY2020	307 thousand tonnes
		Amount handled of renewable energy power sources	250 thousand kW	93 thousand kW
		Reduction of CO ₂ emissions in business activities	-2% CO ₂ emissions intensity /year	+3.4% compared with the previous year
	Resource Recycling	Zero emissions of industrial waste at city gas plants	Maintain (1% or lower final disposal rate)	Maintained (0.3% final disposal rate)
		Recycling rate of waste generated after gas pipeline construction	99% or more	99.7%
		Promoting "3R" (reduce, reuse, and recycle) through business activities		<ul style="list-style-type: none"> •Promotion of emission reduction and recycling through 3R initiatives such as waste recycling •Company-wide rollout of in-house reuse activities •Appropriate compliance with waste-related regulations such as the Act on Promotion of Resource Recycling Related to Plastics
Biodiversity Conservation	Reduction in the use of natural mountain sand and crushed stone in gas pipeline construction	15% or lower compared to conventional engineering methods	10.0% compared to conventional engineering methods	
	Sustenance and recovery of biodiversity through business activities and regional contribution activities, satoyama and forest conservation, and contribution to protection of local species		<ul style="list-style-type: none"> •Certified company under the Aichi Biodiversity Company Certification Program •Maintenance and management of biotopes, and implementation of satoyama and orest conservation activities in collaboration with local governments •Planting of flower seedlings in the Western-style garden of Higashiyama Botanical Garden •Forest conservation volunteer activities in Nagoya Higashiyama Forest and Toho Gas Forests (Odai, Mitake, Seto) 	
Environmental Social Contribution	Environment social contribution activities in collaboration with local communities, and contribution to resolution of regional and social issues		<ul style="list-style-type: none"> •Company-wide cleanup activities •Beautification activities around business locations (conducted bimonthly: Mizushima Gas Co., Ltd., etc.) •Providing environmental learning opportunities through the Gas Energy Exhibition Hall (number of visitors: about 12,000) •Offering special on-site classes and environmental education courses 	
Technology Development	Advanced use of energy and promotion of technical development for achieving carbon neutrality		<ul style="list-style-type: none"> •Initiation of verification testing for CO₂ separation and capture technology targeting factory exhaust gas •Signing an agreement with the city of Chita for methanation verification utilizing biomass-derived CO₂ •Expansion of hydrogen-utilization support services for industrial combustion equipment and construction of a dedicated testing site 	

Management of Environmental Preservation

Environmental Load of the Value Chain

Emissions of CO₂ and other greenhouse gases as well as other instances of environmental load occur throughout the entire value chain, including in such *business activities* as the manufacturing and supply of city gas, LPG, and electricity, as well as at different stages such as *raw-material procurement* and at *customer locations*.

In the gas business, a significant portion of greenhouse gas emissions occurs at *customer locations*, and so the Toho Gas Group devotes effort to mitigating these emissions. Additionally, we assess the state of greenhouse gas emissions and evaluate environmental load in relation to *raw-material procurement sources*. For our *business activities*, we also make effort to reduce greenhouse gas emissions through measures such as improving energy efficiency and energy conservation.



Resources for city gas	LNG 2,660 thousand tonnes LPG 150 thousand tonnes	Amount of energy consumption	Purchased electricity 118.2 million kWh City gas 15.85 million Nm ³ Vehicle fuel 110 thousand GJ	Energy sales volume	City gas 3,550 million m ³ Electricity 2,400 million kWh Heat 370 thousand GJ LPG 480 thousand tonnes
Resources for LPG	LPG 480 thousand tonnes	Water usage amounts	Tapwater 1,280 thousand m ³ Seawater 225 million m ³		

Release to the atmosphere	Greenhouse gases 1,580 thousand tonnes-CO ₂ (Portion thereof released during facility construction) 50 thousand tonnes-CO ₂	Release to the atmosphere	CO ₂ 134 thousand tonnes-CO ₂ NOx 35 tonnes SOx 0 tonnes	Release to the atmosphere	Combustion of city gas 7,780 thousand tonnes-CO ₂ Combustion of LPG 1,430 thousand tonnes-CO ₂
		Industrial waste materials	Amount generated 38,593 tonnes Reduction/recycling ration 96% Amount of external disposal 1,467 tonnes		





Environmental Management System (EMS) Certification

We are working proactively to acquire EMS certification to enhance its environmental management. We have obtained the ISO 14001 certification at all city gas plants. Some subsidiaries have obtained Eco Action 21 certification from Japan's Ministry of the Environment. In addition, Toho Gas and its subsidiaries have also gained environmental certification from local authorities, such as Nagoya SDGs Green Partners.

Type	Certified companies (offices)
ISO14001	Toho Gas (Chita-Midorihamma Works, Chita LNG Terminal, Chita Calorific Value Adjustment Center, Yokkaichi Works)
Eco Action 21	Toho Gas Engineering Co., Ltd.
Certification programs of municipalities	<ul style="list-style-type: none"> •Toho Gas (branch office, Minato AQUUS Energy Center, etc.), •Toho Liquefied Gas Co., Ltd. (Nagoya branch office, etc.), •Toho Real Estate Co., Ltd. (Imaie Gas Building, etc.), •Toho Gas Engineering Co., Ltd. •Toho Gas Techno Co., Ltd. (branch office, etc.),

Environmental Education

Toho Gas Group provides environmental education by target employees. We hold environmental seminars on topics such as environmental policies and social trends for senior management. We also annually conduct environmental law training seminars and e-learning courses tailored to different levels of managers and employees to raise awareness and knowledge of environmental laws and regulations and to bolster our response capabilities.

Compliance with Environmental Laws and Regulations

The main environmental laws and regulations related to the Toho Gas Group are as follows. Under our environmental management framework, we conduct environmental law and regulation seminars, voluntary environmental audits, and the like to ensure proper compliance. There have also been no accidents or violations of regulations that would significantly impact the environment.

Type	Main environmental laws and regulations
General	Basic Environment Act
Global Warming Countermeasures	Act on the Rational Use of Energy, Building Energy Efficiency Act, Act on Promotion of Global Warming Countermeasures, Act on Rational Use and Proper Management of Fluorocarbons, Act on the Protection of the Ozone Layer
Resource Recycling	Waste Management Act, Act on Special Measures Concerning Promotion of Proper Treatment of PCB Wastes, Act on Recycling of Construction Materials, Act on Recycling of Specified Kinds of Home Appliances, Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging, Act on Promotion of Recycling and Related Activities for Treatment of Cyclical Food Resources, Act on Promotion of Resource Recycling Related to Plastics
Pollution Prevention	Air Pollution Control Act, Water Pollution Prevention Act, Noise Regulation Act, Vibration Regulation Act, Soil Contamination Countermeasures Act, Mercury Pollution Control Act, Law concerning Pollutant Release and Transfer Register (PRTR)

Name	Target
Environmental training seminars	Senior management
Environmental law training seminar	Managers and employees
New employee training	New employees

Self Environmental Audits

Toho Gas Group has conducted self environmental audits since FY1994. We conduct annual audits at workplaces of Toho Gas and subsidiaries whose operations relate to environmental laws and regulations. We use a duplicate audit system of primary audits at workplaces of Toho Gas and its subsidiaries that are related to environmental laws and regulations, and secondary audits at each department and company.

Implementation of Self Environmental Audits

Implementation period
July through September, 2022

Audit target
Workplaces of Toho Gas and subsidiaries whose operations relate to environmental laws and regulations

Environmental auditors
Individuals appointed in each department and subsidiary who have been confirmed to have acquired sufficient knowledge of environmental laws and regulations through environmental law training sessions and e-learning

Target laws and regulations	Key points of confirmation during audits
Waste Management and Public Cleansing Act	Internal rule enforcement regarding pre-contract compliance checks for industrial waste disposal outsourcing (including confirmation of contractor's permit, contract signing, and on-site verification), proper operation of storage areas and the like, manifest issuance and retention, and status of submission of regular reports, and other such matters
Act on Rational Use and Proper Management of Fluorocarbons	Implementation of equipment management ledger for GHP and other regulated containers under the Act on Rational Use and Proper Management of Fluorocarbons and regulatory inspection as well as thorough implementation of company rules on legal compliance check when disposing equipment
Air Pollution Control Act	Thorough prior survey on asbestos before demolishing buildings
Other environmental laws and regulations	Organizational check on requirement of filing for Construction Material Recycling Act