

Environmental Management

Basic Concept

We set 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 environmental and social contributions 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; latest revision in 2022) are regarded as 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.

Principles

- Principle 1** The Group will contribute to reducing the environmental impacts of its business on customers and society as a whole.
- Principle 2** The Group will reduce the impacts of its business activities on the overall environment.
- Principle 3** The Group will contribute to environmental preservation in collaboration with local communities and the global community.
- Principle 4** The Group will promote technological development related to the environment.

Environmental Action Guidelines

Our Environmental Action Guidelines, established in 2011 and most recently updated in 2022, outline the concept and action details of the environmental activities implemented by the Group.

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 and Social Contributions

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

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.

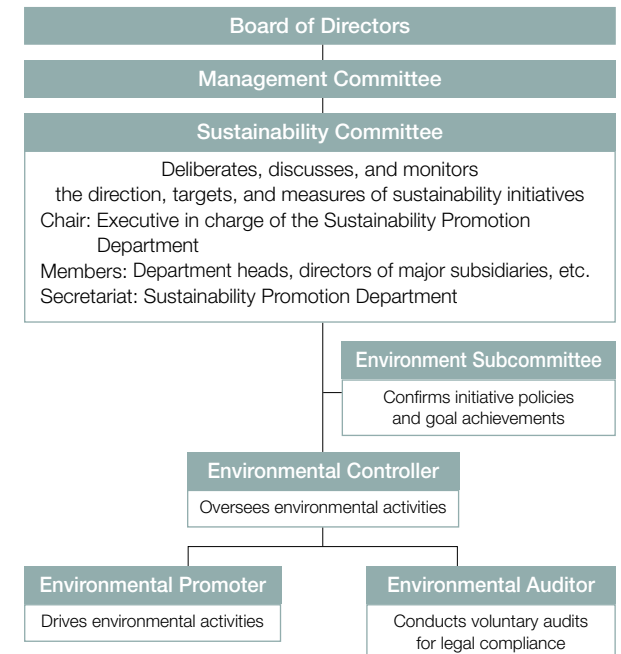
Environmental Management

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.

Environmental Management System

The Sustainability Committee, comprising Toho Gas and major affiliates, deliberates, discusses, and monitors the direction, targets, and various measures of key environmental activities to reduce the Group's environmental impact and comply with environmental laws and regulations. The Environment Subcommittee confirms the policies of initiatives for environmental action goals and the achievements of each department. In addition, each department and affiliate has specific roles to promote environmental activities, including an "environmental promoter" responsible for driving specific activities, an "environmental auditor" responsible for voluntary audits for compliance with environmental laws and regulations, and an "environmental controller" responsible for overseeing these roles.

Environmental Management Organizational Structure



Environmental Management

● Environmental Action Goals (FY2022–FY2025)

We set environmental action goals for FY2022–FY2025 as shown in the table below, and are promoting initiatives to achieve them. Our performance in FY2024 is also shown in the table.

Regarding our targeted reductions of CO₂ emissions intensity in business activities, reductions improved 2.2% year on year although the target was not achieved during the target period due to the impact of worsening emissions intensity in FY2022. We will continue to improve emissions intensity through comprehensive energy conservation measures. Progress remains steady on all other target items.

Type		Goal	FY2025 target value	FY2024 results
Environmental impact reduction	Global warming countermeasures	Contribution to CO ₂ reduction volume	1 million t compared with FY2020 levels	550 thousand t
		Volume of renewable energy sources handled	250 thousand kW	146 thousand kW
		Reduction of CO ₂ emissions intensity in business activities	CO ₂ emissions intensity: −2%/year	−2.2% YoY ^{*1} (total for FY2022–FY2024: +1.4%/year)
	Resource recycling	Zero emissions of industrial waste at city gas plants	Maintain current level (final disposal rate of 1% or less)	Final disposal rate of 0.73% (total for FY2022–FY2024)
		Recycling rate of waste generated from gas pipeline construction	99% or more	99.4%
		Promotion of the 3Rs in business activities		 Initiatives related to resource recycling For details, please refer to our website. https://www.tohogas.co.jp/lang/en/approach/eco/environment/pdf/2025toho_tougou_en_p60.pdf https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_circular-economy.pdf
Biodiversity conservation		Reduction of use of natural sand and crushed rock in gas pipeline construction	15% or less compared to conventional construction methods	11.8% compared to conventional construction methods
		Contribution to maintaining and restoring biodiversity through business activities and regional activities, conserving <i>satoyama</i> ^{*2} and forests, and protecting local species		 Initiatives related to biodiversity For details, please refer to our website. https://www.tohogas.co.jp/lang/en/approach/eco/environment/pdf/2025toho_tougou_en_p61-62.pdf https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_biodiversity.pdf
Environmental and social contributions		Environmental contribution activities in collaboration with local communities, and contribution to resolving regional and social issues		 Initiatives related to environmental and social contributions For details, please refer to our website. https://www.tohogas.co.jp/lang/en/approach/eco/social/pdf/2025toho_tougou_en_p65.pdf https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_coexistence.pdf
Technology development		Promotion of technology development for advanced use of energy and carbon neutrality		 Initiatives related to technology development For details, please refer to our website. https://www.tohogas.co.jp/lang/en/approach/eco/environment/pdf/2025toho_tougou_en_p39-42.pdf https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_carbon.pdf

*1 CO₂ emissions intensity calculation conditions for city gas emissions (temperature and pressure revisions) have been standardized in line with FY2024 conditions to calculate the rate of change from the previous fiscal year.

*2 Traditional agricultural area located near the foothills of mountains and forests


 Initiatives related to environmental management
 For details, please refer to our website.
https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_e-management.pdf

Global Warming Countermeasures

Basic Concept

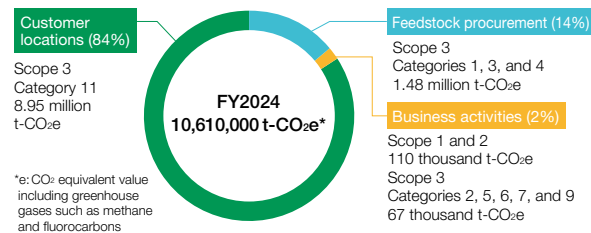
Global warming countermeasures are an important management issue for the Toho Gas Group. As an energy business operator, we are implementing countermeasures against global warming taking into consideration the value chain.

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

Resource Recycling

Basic Concept

Based on the Environmental Action Principles and Environmental Action Guidelines, Toho Gas Group has set Environmental Action Goals in the area of resource recycling, and is promoting the 3Rs (reduce, reuse, and recycle) toward the reduced consumption of natural resources and the effective use of recycled resources through efforts that include zero emissions from industrial waste at city gas plants, recycling the waste generated from gas pipeline work, and the promotion of paperless business.

Initiatives to Reduce Waste and Resource Consumption in Our Business Activities

Working to Achieve Zero Emissions of Industrial Waste at City Gas Plants

Since FY2008, we have been working to achieve zero emissions of industrial waste at city gas plants and reduce the final disposal rate of industrial waste. Our environmental action goal is to achieve a final disposal rate of 1% or less, and we are continuing to work toward that goal.

Regarding waste from plants, the recycling of sludge and mixed waste has been a concern, and these account for 80% of our final disposal volume. To handle sludge generated at seawater intake ports, we turned to graded recycling, which separates the sludge into slurry, sand, silt, and clay depending on the grain size, and remixes them to create a stable fluidization treatment soil. In this way, we have improved the recycling rate of sludge. In terms of mixed waste, we carefully sort and separate materials, thereby enhancing the recycling rate.

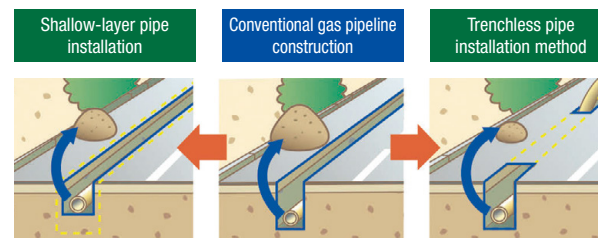
Through these initiatives, we have reduced the final disposal rate of industrial waste, aiming to achieve zero emissions for the entire period of the environmental action goal.

Recycling Industrial Waste and Reducing Natural Sand in Gas Pipeline Construction

Gas pipeline construction generates industrial waste such as asphalt and concrete blocks classified as rubble and used polyethylene pipes classified as waste plastic. Asphalt and concrete blocks are recycled into an asphalt mixture (paving material) and crushed stone, while used polyethylene pipes are recycled into raw materials for components that protect gas pipes. Through this resource recycling process, we have achieved a 99.4% resource recovery rate for industrial waste generated from gas pipeline construction.

Additionally, to reduce the amount of asphalt and concrete blocks and excavated soil generated during pipeline construction, we introduced shallow-layer pipe installation,^{*1} the trenchless pipe installation method,^{*2} and the repair and rehabilitation method,^{*3} and we promoted the use of temporary filling material^{*4} in work requiring re-excavation. As a result, in FY2024, we were able to reduce the amount of excavated soil by 25% compared to conventional construction methods.

We also processed excavated soil at a soil improvement center and reused it as backfill material for gas pipeline construction, resulting in a 72% reduction in external discharge of excavated soil compared to traditional methods. Furthermore, by combining the excavated soil with reused crushed stone as backfill material, we were able to reduce the amount of natural sand and crushed stone used in gas pipeline construction by 11.8% compared to conventional methods.



By reducing the extraction of new sand and crushed stone, we are lowering our impact on the environment.



Trenchless pipe installation method

^{*1} This refers to burying a gas pipeline in a roadway at approximately half the conventional depth.

^{*2} This method involves drilling at both ends of the construction area and pulling the gas pipeline underground.

^{*3} The method of repairing a gas pipe from the inside

^{*4} Polyethylene ball material used as temporary backfill

Initiatives related to resource recycling
For details, please refer to our website.
https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_circular-economy.pdf

Biodiversity — Responding to TNFD Recommendations

Basic Approach

To conserve biodiversity, we are making efforts to ascertain the impact of our business activities on biodiversity and ameliorate any negative impacts. By promoting biodiversity initiatives across the entire Group, we aim to create a nature-positive society, as outlined in the Kunming-Montreal Global Biodiversity Framework.

To achieve this, we identify and evaluate points of contact with nature, and in promoting initiatives and establishing systems, we utilize the framework provided by the Taskforce on Nature-related Financial Disclosures (TNFD) and organize nature-related initiatives and analysis results in accordance with TNFD disclosure requirements.

In ascertaining our points of contact with nature, determining our dependence and impact on nature, and identifying risks and opportunities related to nature, we conducted analysis based on the LEAP approach*¹ provided by the TNFD.

*¹ The LEAP approach is an analytical methodology developed by the TNFD to evaluate and implement corporate activities related to nature, including identifying points of contact between corporate activities and nature, as well as nature-related dependencies, impacts, risks, and opportunities, and the setting of targets. LEAP is an acronym for Locate, Evaluate, Assess, and Prepare.

Governance

Biodiversity-related initiatives are managed and monitored in the same way as our disclosure efforts regarding climate change based on TCFD recommendations. The Group has also established a Sustainability Policy, based on which we strive to understand the impact of our business activities on local natural environments and promote activities that take biodiversity into consideration.

Analysis Using the LEAP Approach

To more comprehensively evaluate the relationship between our business and nature—taking into account the scale of our business, and dependency and impact on nature—the LEAP approach scope of analysis covers direct operations and upstream supply chain investments in the Group's mainstay gas business, and direct operations only in other businesses.

In analysis conducted in FY2024, we analyzed items related to “Locate” (discovering points of contact with nature) and “Evaluate” (diagnosing dependencies and impacts) under the LEAP approach.



In FY2024, our analysis only focused on Locate and Evaluate.

Dependence and Impact on Nature

Using ENCORE,*² one of the analysis tools recommended by the TNFD, we analyzed the relationship between the target business, ecosystem services, and natural capital from the perspectives of potential dependence and impact on nature, obtaining the results shown in the table on the upper right.

Based on the ENCORE analysis results, we published a heat map on our website summarizing the dependencies and impacts between the target business and nature.

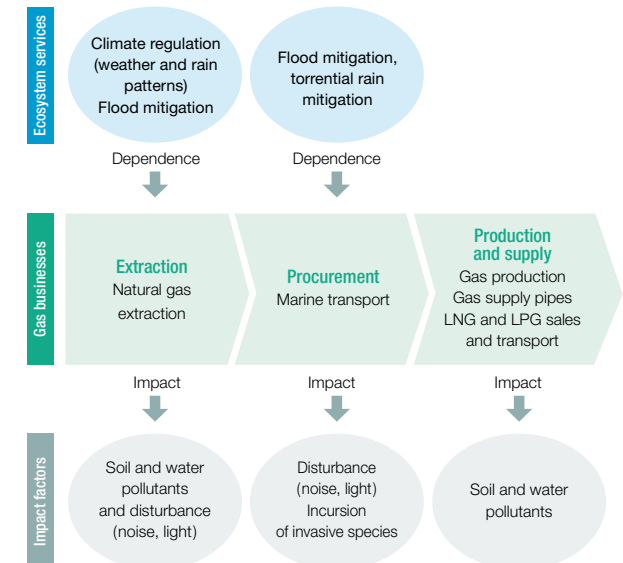
*² ENCORE is a tool supporting the understanding of nature-related dependencies and impacts jointly developed by the United Nations Environment Programme Finance Initiative and other organizations. Based on the International Standard Industrial Classification of All Economic Activities, ENCORE assesses the expected dependence and impact on nature of each economic activity.

Heat Map Showing the Interdependence and Impact of Our Business on Nature
For details, please visit our website.
https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_heat-map.pdf

Relationship Between Target Business, Ecosystem Services, and Natural Capital

Business	Dependence and impact on nature
Gas Businesses (including LPG)	There is a strong possibility of soil and water pollution during the natural gas extraction and urban gas manufacturing processes, as well as of impacts on native species from ballast water during the transport of natural gas. See the figure below for details on each supply chain.
Electricity Businesses	There is a strong possibility that greenhouse gas emissions from gas-fired, wind, and solar power generation will have an impact on climate regulation functions.
Heat Supply Business	There is a strong possibility of significant impact from greenhouse gas emissions from the manufacturing processes for steam, cold and hot water, etc.

Dependence and Impact on Nature for Each Supply Chain in the Gas Business



Biodiversity — Responding to TNFD Recommendations

Identifying Areas Requiring Caution

To understand the relationship between the Group's operating bases and core business investment destinations and the surrounding natural environment, we identified areas requiring caution within the Group using various tools recommended by the TNFD as evaluation criteria.

Analytical tools used to identify areas of concern included Integrated Biodiversity Assessment Tool (IBAT) and Global Forest Watch for assessing biodiversity importance, Aqueduct for assessing water stress, and GLOBIOweb for assessing ecosystem integrity.

As a result of the analysis, 32 sites in Japan and overseas were identified as areas of concern due to their proximity to natural parks and wildlife protection areas.

Initiatives Going Forward

We will continue to contribute to biodiversity conservation while initiating the "Assess" and "Prepare" steps of the LEAP approach as we strive to proactively disclose information. In particular, with regard to FY2024 analysis results, we will conduct a more detailed evaluation of our risks and opportunities analyses and consider countermeasures, targets, and indicators.

Initiatives Contributing to Biodiversity Conservation

Creating Biotopes

In 2000, we established a biotope at the Chita-Midorihamma Works and have strived to preserve the ecosystem by cultivating rare and endemic species, while also asking specialists to conduct surveys of animal and plant species. Additionally, biotopes were created at the Gas Energy Exhibition Hall in 2010 and at Minato AQUUS in 2018, where they are being used for the conservation of local endemic species and environmental education.



Chita-Midorihamma Works Biotope

Participation in the Inochi wo Tsunagu Project

The Inochi wo Tsunagu ("Connecting Life") Project is driven by a student executive committee that brings together multiple companies, government agencies, experts, and NPOs in the Chita Peninsula coastal area to create and preserve ecosystems in corporate green spaces and foster students as future leaders in building a sustainable society.

We actively participate in this project, working with neighboring companies to create green spaces and biotopes, eradicate invasive species, and conduct monitoring surveys of wildlife with local companies.

The Chita Peninsula Greenbelt (a group of corporate green spaces along the coast of the Chita Peninsula), where this project is being implemented, was designated as a Nature Coexistence Site for the first half of 2023 by the Ministry of the Environment. We will continue to collaborate with various companies with the aim of enhancing biodiversity on the Chita Peninsula.



Chita Peninsula Greenbelt



Initiatives related to biodiversity
For details, please refer to our website.

https://www.tohogas.co.jp/lang/en/approach/eco/pdf/2025toho_web_en_biodiversity.pdf