

Disclosure Based on TCFD Recommendations

The Toho Gas Group recognizes addressing climate change as a critical management issue and endorsed the Task Force on Climate-related Financial Disclosures (TCFD) in April 2020. The Group appropriately discloses information about the impact of climate change on the Company’s business activities and its efforts to address these in accordance with TCFD recommendations.

Information Disclosure in Line with TCFD Recommendations

The TCFD encourages companies to disclose information about governance, strategies (risks, opportunities, and responses), risk management, metrics, and targets related to climate change.



1. Governance

The Toho Gas Group recognizes addressing environmental issues, including climate change countermeasures, as a critical management issue.

The Carbon Neutral Promotion Committee, chaired by the Representative Director and President of the Company and composed of executive officers in charge of relevant departments, is held to discuss and determine the direction on important matters, including the formulation of policies and plans related to carbon neutrality.

The Sustainability Committee, chaired by the executive officer in charge of the CSR Environment Department and composed of directors, department heads, and others from Toho Gas and major affiliates, is convened to discuss and check sustainability policies and targets including climate change countermeasures.

Important matters such as climate change risks and opportunities, strategies, risk management, and metrics reports are deliberated by the Management Committee and submitted to the Board of Directors, who oversees their implementation.

The achievement status of climate-related metrics, such as contribution to CO₂ reduction, for each fiscal year is reflected in the remuneration of internal Directors.

2. Strategy

A cross-sectional scenario analysis for the year 2050 is implemented to identify and evaluate future risks and opportunities related to climate change and strategies to address these, in line with TCFD recommendations.

As external scenarios, we selected the 1.5°C scenario, in which temperature rise is limited to 1.5°C, and the 4°C scenario, in which low-carbon initiatives are not promoted.

Main external scenarios used in scenario analysis

International Energy Agency (IEA)

■ World Energy Outlook: NZE, APS, STEPS

■ Energy Technology Perspectives: B2DS and RTS

Intergovernmental Panel on Climate Change (IPCC)

■ Fifth Assessment Report: RCP2.6 and RCP8.5

Based on the envisioned society in 2050 derived from these scenarios, we identified risks and opportunities considering temporal axes such as short- to medium-term (through 2030) and medium- to long-term (through 2050), assessed their impact, and worked on enhancing resilience.

As a strategy for 2050, we formulated the Toho Gas Group 2050 Carbon Neutrality Initiative following deliberation by the Management Committee and submission to the Board of Directors, and announced it in July 2021.

To address the organized risks and opportunities, we are accelerating our efforts to achieve carbon neutrality by identifying overseas e-methane production projects and studying the feasibility of its import, demonstrating domestic e-methane production, developing CO₂ separation and capture technology, assessing the business feasibility of fixing and storing CO₂, building a hydrogen supply chain, promoting CNxP business, developing and introducing renewable energy sources, and demonstrating virtual power plant (VPP) services.

3. Risk Management

The Toho Gas Group promotes organizational identification, assessment, and addressing risk occurrence and change based on risk management rules, and we are working to improve the level of risk management and ensure smooth business operations.

Risks associated with climate change are integrated into the company-wide risk management system and processes based on risk management rules. Risk factors, including those related to climate change, are identified each year, countermeasures by responsible departments are examined, and a comprehensive assessment is performed. The results of the comprehensive assessment and other related information are deliberated by the Management Committee and submitted to the Board of Directors at least once a year, and the Board of Directors oversees company-wide risk management and its implementation.

4. Metrics and Targets

Environmental action goals and other values are used as metrics and targets.

● Main climate change-related metrics and targets

Metrics	Targets	
Contribution to CO ₂ reduction (compared to FY2020 levels)	[2025] 1 million tonnes-CO ₂ /year	[2030] 3 million tonnes-CO ₂ /year
Greenhouse gas emissions (Scopes 1 to 3)		[2050] Carbon neutrality
Reduction of CO ₂ emissions intensity in business activity	[2025] CO ₂ emissions intensity: -2%/year	
Introduction of e-methane		[2030] Begin import of e-methane
Volume of renewable energy sources handled	[2025] 250 thousand kW	[2030] 500 thousand kW

Contribution to CO₂ reduction

The contribution to CO₂ reduction volume is the quantified measure of how much Toho Gas products and services have contributed to reducing CO₂ emissions from others.

Calculated based on “Guidelines for Calculating Contributions to Greenhouse Gas reduction in the City Gas Industry” (Japan Gas Association)

How the Toho Gas Group affects total CO₂ emissions in society

By transitioning from other fossil fuels to low-carbon city gas, CO₂ emissions from the Group increase, but CO₂ emissions from customers decrease.

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Scenarios and external environment					Risks with comparatively large financial impact	Opportunities with comparatively large financial impact
					Short- to medium-term (through 2030)	Medium- to long-term (through 2050)
Major climate change-related risks	1.5°C scenario	Transition risks	Technology	Progress of decarbonization innovation	Poor competitiveness due to delay in technological development	Further loss of competitiveness due to delay in technological development
			Regulation	Carbon pricing	Increased sales price of gas and electricity	Accelerated overseas relocation of domestic companies
				Transition to renewable energy	Shift to electrification starting from the ground up	Advances in energy conservation and shift to electrification in the thermal sector
			Market	Change in customer preferences	Decreased thermal demand in industrial sector (electrification of passenger cars) Shift to electrification due to ZEH and ZEB (mainly new buildings)	Decreased thermal demand in industrial sector (electrification of various vehicle models) Shift to electrification due to ZEH and ZEB (new and existing buildings)
	4°C scenario	Physical risks	Reputation	Assessment by investors	Lower assessment of companies that are unwilling to decarbonize	Even lower assessment of companies that are unwilling to decarbonize
			Acute	Increasing weather intensity	Gradual increase in the cost of countermeasures related to production and supply facilities Gradual increase in disaster recovery costs	Further increase in the cost of countermeasures related to production and supply facilities Further increase in disaster recovery costs
Major climate change-related opportunities	1.5°C scenario	Transition risks	Chronic	Rising temperatures	Decreased demand for heating and hot water Strain on power transmission capacity at peak periods	Further decreased demand for heating and hot water Further strain on power transmission capacity at peak periods
			Regulation	Progress of decarbonization innovation	Expanded use of technology for energy conservation and advanced, high-efficiency energy utilization Social implementation of decarbonization technology (e-methane, hydrogen, etc.)	Further expanded use of technology for energy conservation and advanced, high-efficiency energy utilization Expanded use of decarbonization technology (e-methane, hydrogen, etc.)
				Carbon pricing	Rising demand for gas and electricity (fuel conversion and advanced use)	Expanded use of carbon neutral energy
			Market	Transition to renewable energy	Expanded use of renewable energy and storage batteries Expanded use of cogeneration	Further expanded use of renewable energy and storage batteries Expanded use of decarbonization technology
	4°C scenario	Physical risks	Reputation	Change in customer preferences	Growing need for decarbonization support Expanded use of fuel cell vehicles (passenger vehicles and small special-purpose vehicles) Growing need for optimal and advanced energy utilization	Further growing need for decarbonization support Expansion of fuel cell vehicle market (passenger vehicles, buses, cargo vehicles, etc.) Expanded use and expansion of energy demand optimization systems
			Acute	Assessment by investors	Higher assessment of companies that are proactive in decarbonization efforts	Even higher assessment of companies that are proactive in decarbonization efforts
	4°C scenario	Physical risks	Chronic	Increasing weather intensity	Growing need to introduce a highly resilient supply infrastructure and energy system	Further growing need to introduce a highly resilient supply infrastructure and energy system
			Chronic	Rising temperatures	Rising demand for air conditioning and growing need for high-efficiency HVAC systems Rising demand for products and services that reduce peak electricity usage	Further rising demand for air conditioning and growing need for high-efficiency HVAC systems Further expanded use of products and services that reduce peak electricity usage

			Main responses
Main responses to climate change	1.5°C scenario	Transition risks	<ul style="list-style-type: none"> Identify overseas e-methane production projects and study the feasibility of import Demonstrate domestic e-methane production Develop CO₂ separation and capture technology Assess business feasibility of fixing and storing CO₂ Build a hydrogen supply chain Promote CNxP business Develop and introduce renewable energy sources Demonstrate virtual power plant (VPP) service, and other efforts <p>➔ We are challenging ourselves to become carbon neutral by 2050 throughout the entire supply chain including customers' sites.</p> <p>Toho Gas Group 2050 Carbon Neutrality initiative https://www.tohogas.co.jp/lang/en/corporate/company-vision/pdf/carbon-neutrality-initiative.pdf</p>
		Physical risks	<ul style="list-style-type: none"> Storm surge and flood countermeasures Supply block subdivision Expanded use of a highly resilient energy system Proposals for energy conservation and advanced energy utilization Peak shaving through aggregation and advanced utilization of city gas