

Tokyo Gas Co., Ltd. | Overview

TOKYO GAS Co., Ltd. : Transition Bond

■ Corporate Profile

Industry	Gas/Electric Power
Location	Japan
Business	Japan's major gas company. The company operates in gas, electric power, overseas, energy-related, and real estate businesses.

■ Bond Outline

Issuer	TOKYO GAS Co., Ltd.
Structuring Agency	NA
Evaluation Agency	DNV BUSINESS ASSURANCE JAPAN K.K.
Issue Amount	20 billion yen (Planned)
Issue Date	December 2022 (Planned)

Alignment with the Four Elements in the Guideline*

Element 1	<ul style="list-style-type: none"> Strategy: Transition roadmap(Compass Action) to achieve net zero CO2 emissions in 2050 is formulated. Plans to achieve decarbonization without locking in natural gas by progressively introducing hydrogen and carbon neutral methane after 2030, while promoting carbon reduction by utilizing natural gas. Governance: Established a structure to promote the transition strategy at the management level.
Element 2	<ul style="list-style-type: none"> Identified environmental materiality based on guidelines such as TCFD, GRI standards, and ISO26001, including responses to climate change. As the most important management issue, the company aims to "lead in net zero CO2 emissions as a leading natural gas company."
Element 3	<ul style="list-style-type: none"> Scope 1, 2, and 3 mid-term targets are set to achieve net-zero CO2 emissions in 2050. The low-carbon and decarbonization efforts to achieve these targets are aligned with the transition roadmap for gas sector by METI.
Element 4	<ul style="list-style-type: none"> Plans to invest approximately 2 trillion yen in growth areas including decarbonization by 2030; plans to invest 1 trillion yen in the medium-term management plan for FY2020-FY2022, including growth areas such as decarbonization. Annual reporting of the environmental improvement effects of the project is planned (until bond redemption).

Potential Use of Proceeds

* **Bold:** Prospects for the use of funds from this project

category	major projects
Advanced use of natural gas	<ul style="list-style-type: none"> Fuel conversion to gas <ul style="list-style-type: none"> -Construction of new LNG terminals, pipeline extension etc. Installation of high-efficiency gas appliances <ul style="list-style-type: none"> -Industrial/commercial/domestic use
Use of natural gas as a low-carbon solution	<ul style="list-style-type: none"> Power generation & cogeneration <ul style="list-style-type: none"> -Conventional fuel cell (ENE-FARM) -Gas cogeneration, VPP -Construction and maintenance and renewal of high-efficiency LNG-fired power stations Area energy use <ul style="list-style-type: none"> -Smart Energy Networks, etc. Use of CCUS technology <ul style="list-style-type: none"> -CCU system at the customer sites and CCS
Decarbonization of gas and electricity	<ul style="list-style-type: none"> Decarbonization of gaseous energy <ul style="list-style-type: none"> -Hydrogen utilization <ul style="list-style-type: none"> -New hydrogen stations -Hydrogen pipelines installation, etc. Development of technology for decarbonization of gaseous energy <ul style="list-style-type: none"> -Green hydrogen production by water electrolysis -Innovative methanation, etc. Expansion of renewable energy power sources <ul style="list-style-type: none"> -Zero emission of in-house thermal power (introduction of H2, NH3)
Expansion of renewable energy power sources	

*Basic Guidelines on Climate Transition Finance

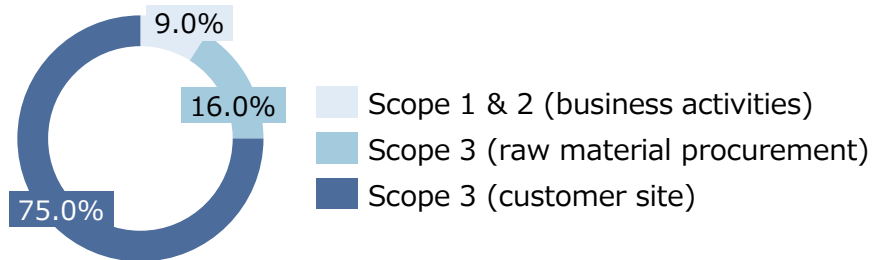
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Transition Strategy and Governance (Element 1)

Targets

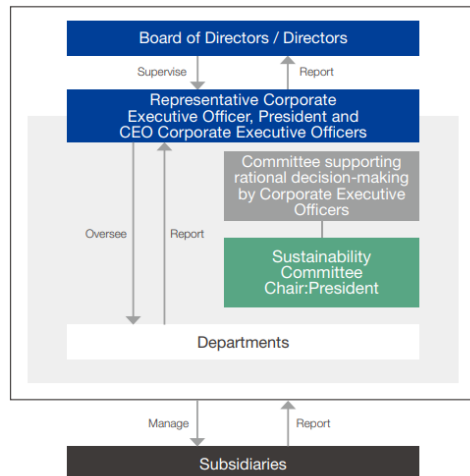
2030

- Scope 1&2 (city gas production, company owned buildings, and company vehicles): **Net zero**
- CO2 Avoided Emissions (compared to 2013): **approx. 17 million tons***
*includes ▲750,000 tons of reduction in Scope 3 emissions



GHG emissions (FY2021)

Governance



- Built a system to promote sustainability in the entire group, including subsidiaries
- Established a Sustainability Committee chaired by the president to promote efforts on material issues

Transition Strategy

2030

2040

2050

Accelerate transition

Advance toward carbon neutrality

- **Contribute to CO2 reduction at customers: Use of natural gas as a low-carbon solution**
Fuel conversion to natural gas, higher efficiency of gas equipment, multifaceted use of energy, enhancement of resilience, introduction of carbon-neutral LNG, utilization of CCUS technology
- **Contribute to CO2 reduction at customers: Decarbonization of gas & electricity**
Development of decarbonization technology for gaseous energy, expansion of renewable energy sources and zero emission of gas-fired power
- **Reduce in-house CO2 emissions**
Promote decarbonization of corporate facilities, buildings used, company vehicles, etc. by using solar power generation, CCU, HEV/FCV/EV and others

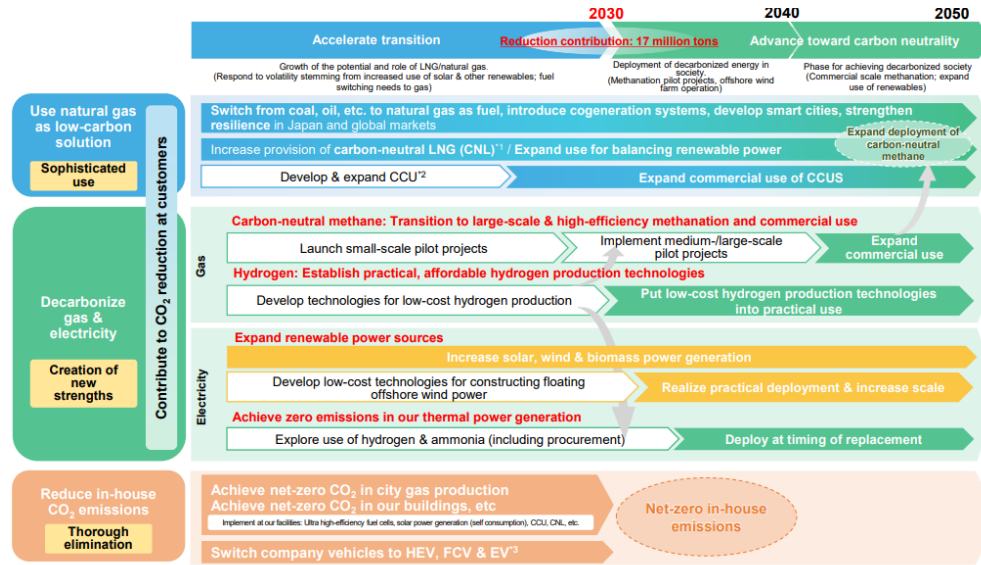
Key points

- Based on their pathway for carbon neutrality, they will promote transition through fuel conversion to natural gas in the short term and gradual introduction of hydrogen and synthetic methane from 2030 onwards.
- One of the pillars of their strategy (decarbonization of gas & electricity) is to contribute to the reduction of Scope 3 emissions, which account for the majority of their emissions. Plans and efforts are also made to steadily decarbonize Scope 1 & 2 emissions.
- Together with the procurement on March 2022 (Transition Bond), it covers all the initiatives in Tokyo Gas' transition plan.
 - March 2022: Focusing on "Use of natural gas as a low-carbon solution"
 - This Bond: Focusing on "Decarbonization of gas & electricity"

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Science Based Targets and Pathways (Element 3)

Compass Action
Tokyo Gas



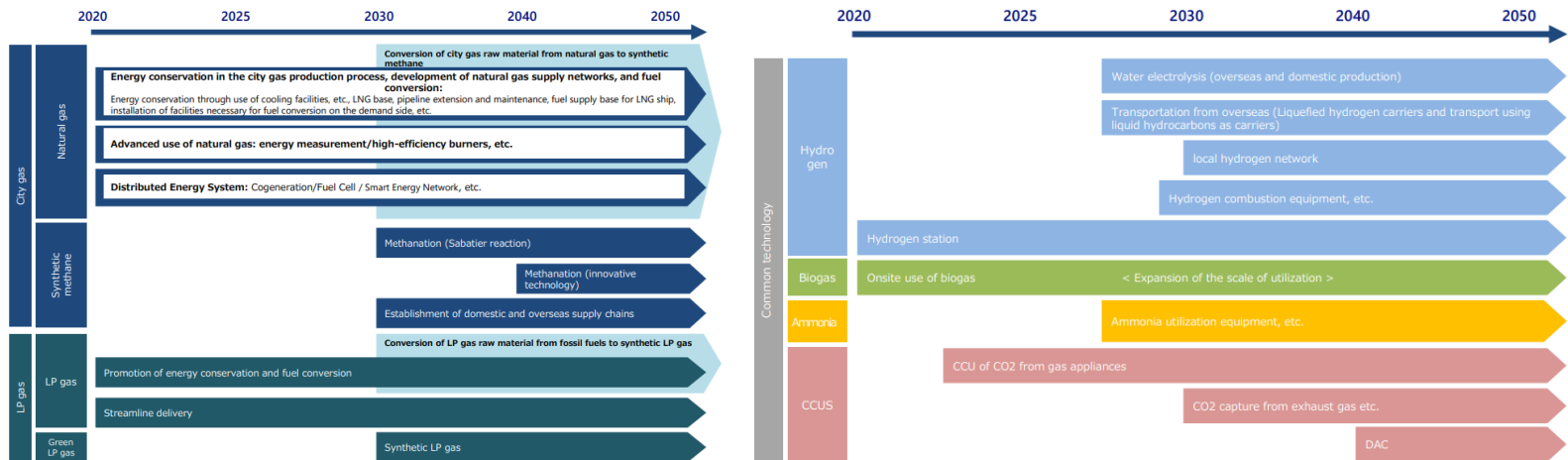
*1: A type of LNG that is deemed carbon neutral as greenhouse gas emissions generated by the processes from natural gas exploration to combustion are offset with carbon credits received on forest conservation projects, etc.
*2: Carbon capture & utilization *3: Hybrid electric vehicles, fuel cell vehicles & electric vehicles

Initiatives aligned with the roadmap

- ▶ Related to **Natural gas**
- ▶ Related to **CCUS**
- ▶ Related to **Synthetic methane**
- ▶ Related to **Hydrogen**
- ▶ Related to **Synthetic methane**

Technology
Roadmap for Gas
Sector

METI



Committee | Results

TOKYO GAS Co., Ltd. : Transition Finance

RESULTS:

Approved for Climate Innovation Finance Promotion Grants Scheme

Main Opinions

Transition Strategy

- A solid transition strategy has been formulated, thus appropriate for the transition grant scheme.
- The funds will be used for initiatives in line with the transition strategy shown in the previous model project, and initiatives are being steadily implemented based on the procurement in March 2022. Overall commendable.
- Part of the renewable energy listed as the use of proceeds is based overseas, therefore it is desirable how this overseas project reflects to the achievement of 2030, 2050 targets.

Others

- As quantitative and qualitative procurement of biomass is becoming difficult, assurance of the long-term procurement is becoming increasingly crucial.
- Inclusion of methanation in the use of proceeds is exemplary for a gas company. For future business expansion, it would be desirable to consider procurement of CO2 and hydrogen.

This document focuses on the contribution of transition finance to the realization of Japan's carbon neutrality by 2050 and the Paris Agreement and does not cover any of the risks associated with transition finance as a financial instrument. It should be noted that even the approved cases of this scheme, there are credit risks and other risks (in the case of bonds, price fluctuation risks, liquidity risks, etc.) as in ordinary financing.