

1

Promote carbon neutrality

2

3

4

5

6

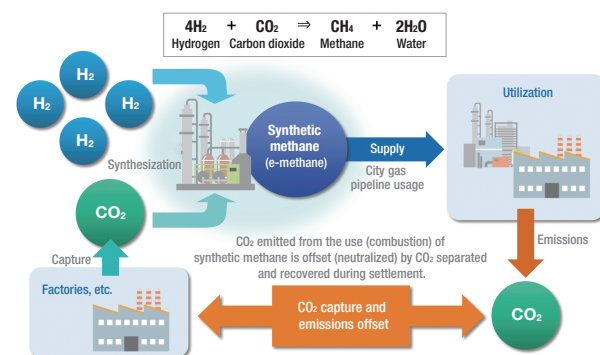
Target materiality

Business Strategy: Mission and Responsibility Toward Carbon Neutrality

Special Features of E-methane

E-methane, synthesized from CO₂ and hydrogen recovered from factories and other sources through methanation, is a decarbonized fuel that, like hydrogen and ammonia, does not increase CO₂ in the atmosphere when used.

With e-methane, we can effectively utilize existing city gas infrastructure and consumer equipment, facilitating efficient energy transport and contributing to reduced social costs and continued convenience for customers.



Overseas Procurement of E-methane and International Collaborations

To commercialize e-methane, it is important to secure a stable supply of hydrogen and CO₂ as raw materials, build domestic and international supply chains utilizing existing infrastructure, and establish international CO₂ calculation rules. We will continue working with partners to heighten and accelerate efforts to achieve this goal.

Participating in an International Alliance for E-methane

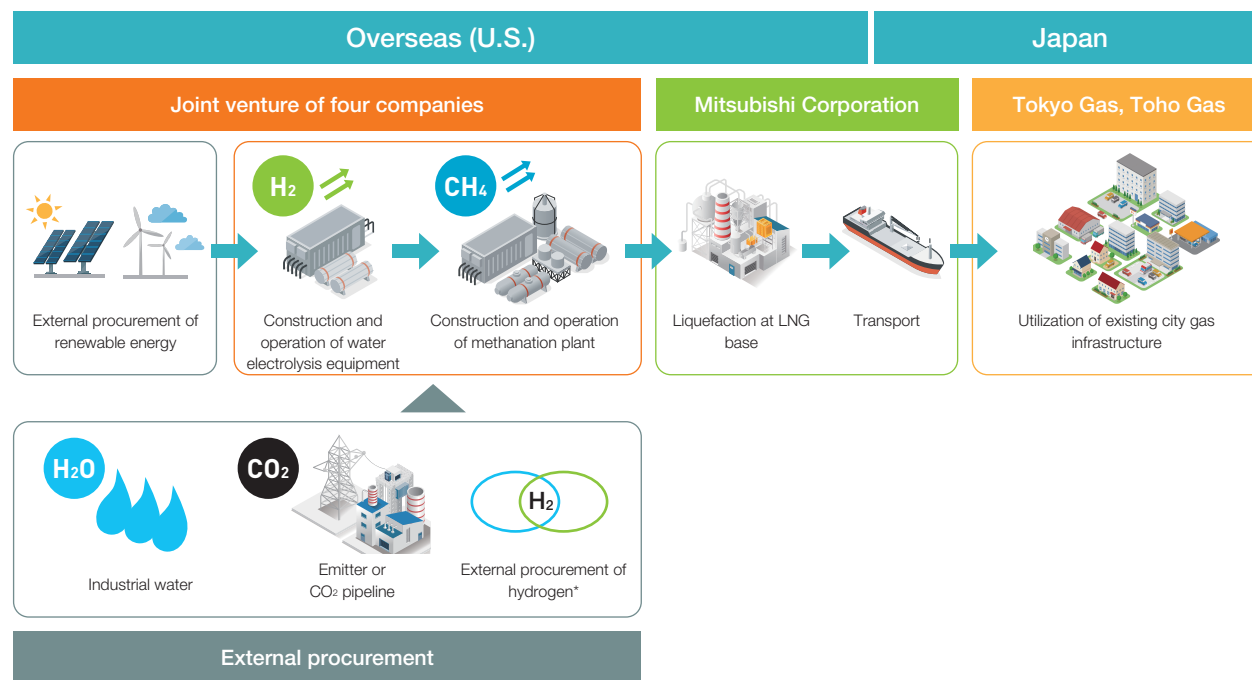
Together with seven other companies operating in the energy sector, we established the international alliance e-NG Coalition, which aims to expand the global adoption of e-methane. Through this alliance, we aim to collaborate across borders and industries to promote the global spread of e-methane and realize a carbon-neutral society.



Full-Scale Planning Underway for the Introduction of E-methane Using LNG Terminals in the U.S.

Together with Mitsubishi Corporation, Tokyo Gas, and Semptra Infrastructure Partners LP, we are continuing detailed project studies on the production of e-methane near the Cameron LNG shipping terminal in southwest Louisiana and the export of e-methane to Japan utilizing the existing LNG infrastructure of LNG shipping terminals, LNG vessels, and receiving terminals.

We plan to commence production of e-methane in FY2030 and begin exports to Japan.



* We are also examining external procurement of hydrogen (both blue and green, especially at the start-up phase).

Note: Excerpt from the 13th Methanation Promotion Public-Private Council's explanatory materials, partially edited by Toho Gas Group

1

Promote carbon neutrality

2 3 4 5 6

Target materiality

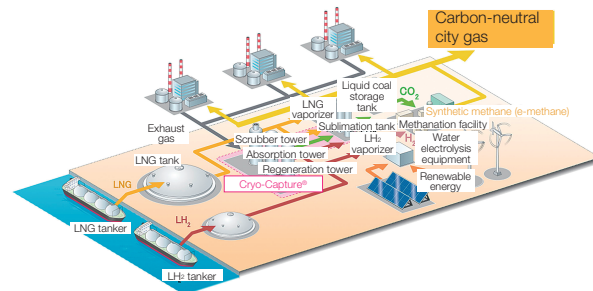
Business Strategy: Mission and Responsibility Toward Carbon Neutrality

Detailed Study Begins on the Production and Export of E-methane in Australia

Based on the feasibility study conducted jointly with Santos Ventures Pty Ltd (hereinafter, “Santos”), we are conducting detailed discussions with Tokyo Gas Co., Ltd., Osaka Gas Australia Pty Ltd, a subsidiary of Osaka Gas Co., Ltd., and Santos, regarding the production of e-methane and its export to Japan. We will review technologies, systems, and commercial affairs, with the aim of exporting more than 130,000 t of e-methane (equivalent to approximately 180 million m³ of city gas) to Japan annually from 2030 onwards.

CO₂ Capture, Utilization, and Storage

In terms of CO₂ separation and capture at large-scale plants on coastal waterways, we are working with Nagoya University as part of the Green Innovation Fund project sponsored by the New Energy and Industrial Technology Development Organization (NEDO) for the commercialization of technology. During the demonstration phase (FY2028 to FY2030), we are planning to conduct a demonstration in which CO₂ captured at an LNG base using Cryo-Capture® will be used to produce e-methane. Regarding separation and capture of atmospheric CO₂, we are conducting R&D in collaboration with academia as part of a “moonshot”-type research and development project.



Rendering of Cryo-Capture® implementation in society

Building a Hydrogen Supply Chain with Chita-Midorihama Works as the Base

Construction of a Hydrogen Production Plant at Chita-Midorihama Works

We constructed a hydrogen production plant at Chita-Midorihama Works and began operations in June 2024. As part of our efforts to achieve carbon neutrality, we will start by producing and supplying 1.7 t of hydrogen per day from natural gas, and then expand the size of the plant according to growing regional demand for hydrogen.



Hydrogen production plant at Chita-Midorihama Works

Promotion of Collaboration for Hydrogen Business

Our collaboration with Taiyo Nippon Sanso Corporation on hydrogen business includes hydrogen supplies from the hydrogen production plant constructed at Chita-Midorihama Works, as well as alternative hydrogen procurement. Taiyo Nippon Sanso Corporation also procures and sells a portion of the hydrogen produced at this plant. Through this collaboration, our two companies will work together to build a hydrogen supply chain in the region.

Expanding Our Hydrogen Combustion Trial Service

By utilizing our expertise and technology in fuel conversion and burner development, hydrogen is burned in combustion equipment at customer plants and other locations, and we help customers identify and address issues related to hydrogen use. Large-scale hydrogen combustion tests can also be conducted at a dedicated testing facility within the Technical Research Institute.



Hydrogen combustion test conducted at Technical Research Institute