

**Establishment of a New R&D Base in the Torishima District**  
**– Toward the social implementation of carbon-neutral technologies such as SOEC methanation –**

April 19, 2022  
Osaka Gas Co., Ltd.

Osaka Gas Co., Ltd. (President: Masataka Fujiwara, hereinafter “Osaka Gas”) will establish a new R&D base in the Torishima district of Konohana-ku, Osaka City (hereinafter referred to as the “new R&D base”), with the aim of commencing operations in 2025 when the Osaka-Kansai Expo is scheduled to be held, in order to promote research and development, information dissemination, and co-creation with external parties related to carbon-neutral technologies such as SOEC methanation.\*<sup>1</sup>

The Torishima district is the place where Osaka Gas began its R&D activities. Since it established its first R&D site in 1947, the Company has been researching and developing technologies for producing city gas from coal and oil and for making advanced use of natural gas as exemplified by cogeneration systems and Ene-Farm, a fuel cell system for residential use.

In recent years, various companies, government agencies, universities, and research institutes have been accelerating their efforts toward the realization of carbon neutrality by 2050. We have also been promoting research and development on methanation technology\*<sup>2</sup> and in October 2021, we opened the "Carbon Neutral Research Hub" (hereinafter "CNRH") as a research and development base for carbon-neutral technology in the Torishima district. In addition, SOEC methanation has been adopted by the Green Innovation Fund Project (hereinafter referred to as the "GI Fund")\*<sup>3</sup> and we will further promote research and development toward the realization of carbon neutrality.

The new R&D base will consolidate research and development activities toward carbon neutrality as the central facility of CNRH and the functions of the conventional Energy Technology Laboratories will also be transferred to the base, which aims to create new businesses that contribute to solving social issues such as radiative cooling materials\*<sup>4</sup> and naturally derived ketone bodies 3HB\*<sup>5</sup> and to promote the external expansion of our unique technology.\*<sup>6</sup>

A new research building and an outdoor field will be located in an area of approximately 27,000 square meters (m<sup>2</sup>) in the Torishima district. The new research building will have a co-creation / exhibition area for deepening interaction with external parties, and the outdoor field will have testing facilities for carbon-neutral technology. SOEC methanation is also scheduled to be tested in this outdoor field. Space will be secured for bench scale testing (scheduled from FY 2025 to FY 2027) and pilot scale testing (scheduled from FY 2028 to FY 2030).\*<sup>7</sup>

With the development of this research environment, we will realize an attractive base for continuous and integrated activities, such as further promotion of research and development, dissemination of information to increase understanding of our company’s initiatives, and co-creation with external parties through meaningful exchanges, to accelerate the social implementation of our company’s technologies.

The Daigas Group, under the "Carbon Neutral Vision" that was announced in January 2021,

remains committed to developing technologies and services that contribute to a carbon-free society and solving social issues, including climate change, in order to become a corporate group that helps customers both on the livelihood and business fronts for their “further evolution.”

- \*1: Previously announced on January 25, 2021 in “Success in Prototyping a New SOEC, the Key to Innovative Methanation, which Will Contribute to City Gas Decarbonization  
– Developing a Technology Applicable to Highly Efficient Hydrogen and Liquid Fuel Production –”  
([https://www.osakagas.co.jp/company/press/pr2021/1291456\\_46443.html](https://www.osakagas.co.jp/company/press/pr2021/1291456_46443.html)) (in Japanese)
- \*2: Technology for synthesizing methane by recovering and recycling CO<sub>2</sub> that would normally be released into the atmosphere and combining it with hydrogen derived from renewable energy.
- \*3: "SOEC Methanation Technology Innovation Project" was proposed and adopted for "Development of innovative technology for the production of synthetic methane," which is one of the research and development items of the "Green Innovation Fund Project / Development of Technology for Producing Fuel Using CO<sub>2</sub>, etc." Previously announced on April 19, 2022 in “Adoption of Green Innovation Fund Project Regarding SOEC Methanation  
– Challenge to Develop the World's Most Efficient Synthetic Methane Production Technology –”  
([https://www.osakagas.co.jp/company/press/pr2022/1305922\\_49634.html](https://www.osakagas.co.jp/company/press/pr2022/1305922_49634.html)) (in Japanese)
- \*4: Previously announced on April 26, 2021 in “Notice Regarding Commencement of Business Related to Radiative Cooling Material, a New Product, by SPACECOOL  
– Also Contributing to Realizing a Decarbonized Society with World-Class Cooling Performance –”  
([https://www.osakagas.co.jp/en/whatsnew/\\_icsFiles/afieldfile/2021/06/07/210426.pdf](https://www.osakagas.co.jp/en/whatsnew/_icsFiles/afieldfile/2021/06/07/210426.pdf))
- \*5: Previously announced on December 15, 2021 in “First Adoption of Naturally Derived Ketone Bodies Produced by Osaka Gas through Its Unique Fermentation Process as Cosmetic Raw Material”  
([https://www.osakagas.co.jp/en/whatsnew/\\_icsFiles/afieldfile/2022/01/05/211215.pdf](https://www.osakagas.co.jp/en/whatsnew/_icsFiles/afieldfile/2022/01/05/211215.pdf))
- \*6: Services that utilize our unique weather forecasting technology, digital technology, such as AI, and high-precision gas sensing technology.
- \*7: Bench scale testing is planned to have a synthetic methane production scale of 10 Nm<sup>3</sup>/h class, equivalent to approximately 200 households, and pilot scale testing is planned to be 400 Nm<sup>3</sup>/h class, equivalent to approximately 10,000 households.

## 1. Overview of new R&D base

Location	5 Torishima, Konohana-ku, Osaka (on the premises of our company)
Function	① New research building (office / laboratory area, co-creation / exhibition area) ② Outdoor field (SOEC methanation, other carbon neutral technologies, etc.)
Installation scale	Entire area: 27,000 square meters (planned) Building scale: 3 stories above ground Total floor area of the building: 14,000 square meters (planned) Area of outdoor field site: 17,000 square meters (planned)
Number of occupants	Approximately 200 people
Start of operation	2025 (planned)

<Location of new R&D base>



<Concept of new R&D base>



<Exterior image of new R&D base>



More information on the technological development of the Daigas Group is available on the website below.

The Daigas Group is active in a wide range of fields by deepening and expanding technologies cultivated in the energy business.

<https://www.osakagas.co.jp/en/rd/>