

## Osaka Gas Singapore to Undertake Joint Methanation Study in Singapore

March 18, 2022

Osaka Gas Singapore Pte. Ltd.

Osaka Gas Singapore Pte. Ltd. (OGS) has entered into an agreement with energy-related companies in Singapore including City Energy Pte. Ltd. (as Trustee of City Energy Trust) and City-OG Gas Energy Services Pte. Ltd. (City-OG) to conduct a feasibility study on a methanation project in Singapore.

Methanation is a chemical reaction that converts carbon dioxide (CO<sub>2</sub>) and hydrogen to methane (synthetic methane), which is carbon neutral when converted from CO<sub>2</sub> and green hydrogen that is produced from electrolysis powered by renewable electricity. Synthetic methane can be distributed through existing gas infrastructure, combusted in existing gas appliances, and used to meet the market demand for high-temperature heat that cannot be generated by electricity.

The joint study will explore business models and conduct economic evaluation over an approximately 6 months period to produce synthetic methane from low carbon hydrogen and CO<sub>2</sub> sourced from either overseas or in Singapore.

This study is in line with the Daigas Group Carbon Neutral Vision (CNV) announced in January 2021. Aiming to become carbon neutral by 2050 under CNV, Osaka Gas has also been developing other methanation projects such as the methanation technical development with INPEX in Nagaoka city, Niigata prefecture<sup>1</sup>, the innovative methanation (SOEC methanation) basic research to synthesize methane with a high energy conversion efficiency using renewable energy<sup>2</sup> and the joint study with ATCO Australia Pty Ltd on methanation project in Australia<sup>3</sup>.

<sup>1</sup>Announced on October 15, 2021 in a press release “Osaka Gas to Commence Technical Development Business on CO<sub>2</sub> Emissions Reduction and Practical Application of Effective CO<sub>2</sub> Use Through One of World’s Largest Methanation Operations: Toward the Practical Application of Technology Enabling Carbon Neutralization of City Gas” (in Japanese)

[https://www.osakagas.co.jp/company/press/pr2021/1300478\\_46443.html](https://www.osakagas.co.jp/company/press/pr2021/1300478_46443.html)

<sup>2</sup>Announced on January 25, 2021 in a press release “New SOEC Prototype Developed by Osaka Gas, Key Technology to Innovative Methanation for Carbon Neutralization of Gas: Applicable to Highly Efficient Production of Hydrogen and Liquid Fuels” (in Japanese)

[https://www.osakagas.co.jp/company/press/pr2021/1291456\\_46443.html](https://www.osakagas.co.jp/company/press/pr2021/1291456_46443.html)

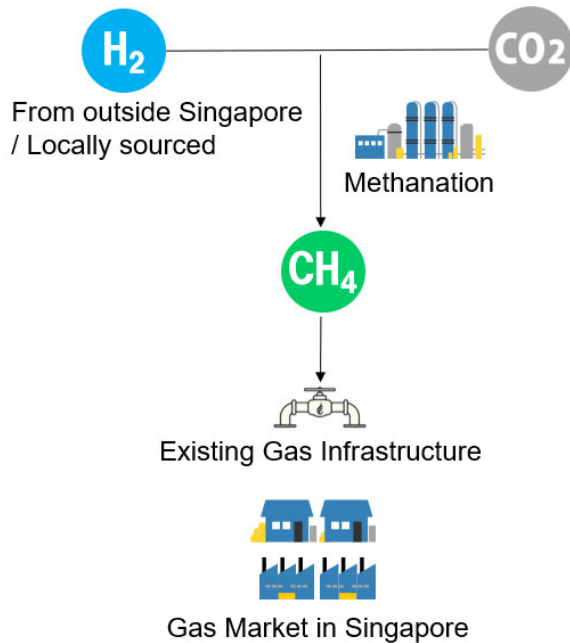
<sup>3</sup>Announced on December 23, 2021 in a press release “Osaka Gas Australia to Undertake Joint Methanation Study with ATCO Australia”.

[https://www.osakagas.co.jp/en/whatsnew/\\_icsFiles/afiedfile/2021/12/23/211223\\_1.pdf](https://www.osakagas.co.jp/en/whatsnew/_icsFiles/afiedfile/2021/12/23/211223_1.pdf)

### 1. Joint Study Overview

Period	Approximately 6 months (plan)
Subject	1. Suitable locations and technologies for a methanation pilot plant 2. Transportation of CO <sub>2</sub> and hydrogen

### 2. Scope of Study



### 3. Company Overview

Name	Osaka Gas Singapore Pte. Ltd. (OGS)
Location	182 Cecil Street #30-02 Frasers Tower Singapore 069547
Representative	Hirabayashi Motoyuki
Establishment	2013
Main business	Providing Energy Solutions in Southeast Asia

Name	City Energy Pte. Ltd. (as Trustee of City Energy Trust)
Location	1 Harbourfront Avenue, #18-01, Keppel Bay Tower, Singapore 098632
Representative	Perry Ong
Establishment	1861
Main business	Manufacturing and retailing town gas in Singapore

Name	City-OG Gas Energy Services Pte. Ltd. (City-OG)
Location	26 Senoko Avenue, Singapore 758312
Representative	Tan Jun Jie
Establishment	2013
Main business	Retailing natural gas to industrial customers in Singapore