

Institute of Japan Green LP Gas Promotion  
N.E. CHEMCAT Corporation

## **Announcing the Launch of R&D Project “Research and Development of LP Gas Synthesis Technology through Carbon Recycling” Commissioned by NEDO**

The Institute of Japan Green LP Gas Promotion, the National Institute of Advanced Industrial Science and Technology (“AIST”), and N.E. CHEMCAT Corporation (“NECC”) announced the launch of “Research and Development of LP Gas Synthesis Technology through Carbon Recycling” (hereinafter the “R&D Project”) to be conducted in FY2022-2024 starting April 2022. This R&D Project was proposed jointly by the three parties under a public solicitation by the NEDO (“New Energy and Industrial Technology Development Organization”) as a commissioned R&D project under the “Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation; Project for Promotion of Next Generation Thermal Power Generation; Development of Common Fundamental Technologies for Carbon Recycling.”

The Institute of Japan Green LP Gas Promotion, AIST, and NECC will gather their technologies and expertise in an aim to establish an optimized process to produce carbon-neutral propane and butane at high yields by catalytic reactions via an intermediate of DME (dimethyl ether) which can be produced from renewable hydrogen and CO<sub>2</sub> recovered from power plants and other sites.

### Outline of the Project “Research and Development of LP Gas Synthesis Technology through Carbon Recycling”

#### ■ Project Theme:

Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation; Project for Promotion of Next Generation Thermal Power Generation; Development of Common Fundamental Technologies for Carbon Recycling

#### ■ Objectives:

To conduct research and development of indirect carbon-neutral LPG synthetic technology to produce propane (C<sub>3</sub>H<sub>8</sub>) and butane (C<sub>4</sub>H<sub>10</sub>) by catalytic reactions from dimethyl ether (DME) produced using renewable hydrogen and CO<sub>2</sub> recovered from power plants, etc.

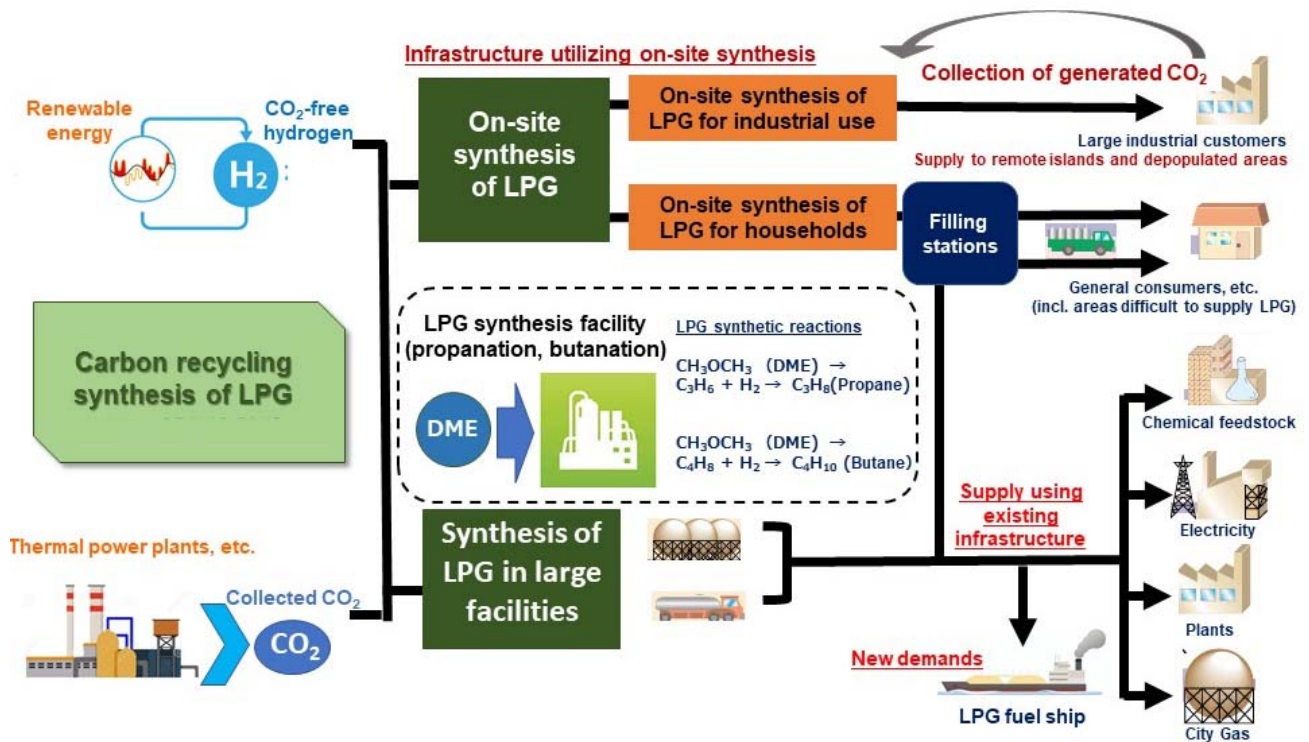
#### ■ Outline of the R&D Project:

LP gas (propane and butane) is used in a wide range of sectors, including household, commercial, chemical raw materials, automobiles and boosting calorific value of city gas. Japan’s domestic LPG demand stood at about 13 million tons in the last fiscal year. Due to its portability and property of not deteriorating over time, LPG expects to see new demands including stockpiling as disaster-resistant energy source and possible use for marine fuel in the future, and is expected to remain in significant demand in 2050 as an essential energy source that supports the lives of the people, according to government estimate. Through the commissioned project, the parties aim to promote the greening of LPG, thereby contributing to the realization of a carbon neutral society in 2050.

- Planned project locations:
  - The Institute of Japan Green LP Gas Promotion
  - The National Institute of Advanced Industrial Science and Technology
  - N.E. CHEMCAT Corporation

■ Image of implementation:

### 【Project Members】



### The Institute of Japan Green LP Gas Promotion

The Institute of Japan Green LP Gas Promotion is conducting a series of research and development projects listed below in an aim to realize the social implementation of carbon-neutral LPG. The consortium is formed by five member companies of the Japan LP Gas Association (Astomos Energy, ENEOS GLOBE, Gyxis, Japan Gas Energy and Iwatani).

1. Greening of LPG using biomass-derived dimethyl ether (DME)
2. Greening of LPG using hydrogen with carbon monoxide and carbon dioxide
3. Other projects for the development of production technologies for greening of LPG, and projects in order to achieve the objectives of social implementation

[Address] Yusei Fukushi Kotohira Bldg. 4F, 14-1 Toranomom 1-chome, Minato-ku, Tokyo 105-0001  
(c/o Secretariat of the Japan LP Gas Association)

[Representative] Tsuyoshi Ogasawara, Representative Director and Chairman

[Established] October 2021

### The National Institute of Advanced Industrial Science and Technology (AIST)

The National Institute of Advanced Industrial Science and Technology (AIST), one of the largest public research organizations in Japan, focuses on the creation and practical realization of

technologies useful to Japanese industry and society, and on “bridging” the gap between innovative technological seeds and commercialization.

[AIST Tokyo Headquarters] 1-3-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-8921  
[Representative] Kazuhiko Ishimura, President  
[Established] April 2001  
[URL] <https://www.aist.go.jp/>

### **N.E. CHEMCAT Corporation**

N.E. CHEMCAT Corporation is engaged in the development, manufacturing, and distribution of chemical catalysts, auto exhaust catalysts (including three-way catalysts and diesel auto catalysts), and fuel cell catalysts, and collection/refinement of precious metal catalysts.

[Head Office] 27<sup>th</sup> floor, World Trade Center Bldg. South Tower, 2-4-1 Hamamatsucho, Minato-ku, Tokyo 105-5127  
[Numazu Plant] 678 Ipponmatsu, Numazu City, Shizuoka Pref. 410-0314  
[Tsukuba Plant] 25-3 Kohshindaira, Bando City, Ibaraki Pref. 306-0608  
[Representative] Matsuura Kushida, Representative Director & President  
[Established] April 1964  
[Capital] 3.4235 billion yen  
[URL] <https://www.ne-chemcat.co.jp>

### **【Contacts】**

- Inquiries on the Project and social implementations:  
The Institute of Japan Green LP Gas Promotion (c/o Secretariat of the Japan LP Gas Association)  
Uehira, Mikita  
TEL: +81-3-3503-5741
  
- Inquiries on technologies:  
N.E. CHEMCAT Corporation (Public Relations, Corporate Administration Dept.)  
E-mail : [info-pr@ne-chemcat.co.jp](mailto:info-pr@ne-chemcat.co.jp)