

December 5, 2024

Nippon Gas Line Co., Ltd.

**Commencement of Demonstration Tests of Liquefied CO<sub>2</sub> Transportation by Ship under operation of onshore terminals**

Nippon Gas Line Co., Ltd. (NGL) (Head Office: Matsuyama City, Ehime Prefecture. President: Yasuhiro Muramatsu), as one of the co-trustees of the NEDO(\*1) project(\*2) aimed at developing a safe, large-scale and long-distance integrated marine transportation technology for liquefied CO<sub>2</sub>, has been undertaking the operation and management of demonstration vessel “EXCOOL”, as well as conducting demonstration tests of marine transportation of liquefied CO<sub>2</sub> by the “EXCOOL” where NGL’s accumulated expertise by operating coastal gas carriers since its establishment in 1962 must be well contributing.

The liquefied CO<sub>2</sub> transport demonstration vessel, the “EXCOOL” equipped with marine cargo tank systems capable of demonstrating liquefied CO<sub>2</sub> transportation at low temperatures and low pressures (LTLP), which was developed by the NEDO project. After completion in November 2023, NGL conducted performance confirmation of the “EXCOOL”, crew training and several partial demonstration tests by the “EXCOOL”. Upon completion of the construction of onshore terminals (in Maizuru and in Tomakomai) at the end of November, 2024 by the other co-trustees, NGL, together with other co-trustees, have commenced full-scale and continuous demonstration tests for transportation of liquefied CO<sub>2</sub>.

In the transportation demonstration test, liquefied CO<sub>2</sub> around -50°C categorized in LTLP has been already used. In the NEDO project, through transportation demonstration tests in various liquefied CO<sub>2</sub> conditions by the “EXCOOL”, NGL will compile a database from the vast amount of data obtained in the demonstration tests. By organizing and analyzing the database, NGL will work to develop optimal marine transportation technology and cargo handling method of liquefied CO<sub>2</sub>.

\*1 NEDO: New Energy and Industrial Technology Development Organization

\*2 NEDO projects: CCUS R&D and demonstration related projects / CCUS Large-scale demonstration test in Tomakomai / Demonstration test on CO<sub>2</sub> transportation / Technology development and demonstration test on CO<sub>2</sub> vessel transportation

【On the day of the ceremony event】



• Completion Ceremony at Maizuru terminal

Mr. Akitsu Kamoda, Mayor of Maizuru City, and Mr. Toshiro Nakajima, President of Japan CCS Research Inc. presented bouquets of flowers to NGL Captain Iwama and Chief Engineer Chiba.

• Vessel "EXCOOL" berthing at Maizuru terminal.



• Vessel "EXCOOL" berthing at Tomakomai terminal.

• Vessel "EXCOOL" carried out unloading operation at Tomakomai terminal..

Liquefied CO2 loaded at Maizuru was unloaded at Tomakomai terminal.

Photographs provided by: New Energy and Industrial Technology Development Organization / Sanyu Kisen Co., Ltd.

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