

PRESS RELEASE

26 October 2022

**Implementation of Pre-FEED for Hydrogen Supply Chain Business Development
using SPERA Hydrogen™ (LOHC-MCH) with Sembcorp Industries and Mitsubishi Corporation**

Chiyoda Corporation (Chiyoda), Sembcorp Industries (Sembcorp) and Mitsubishi Corporation (Mitsubishi), have signed a memorandum of understanding (MOU) regarding the commercialization of a hydrogen supply chain in Singapore utilizing SPERA Hydrogen (LOHC-MCH)¹, Chiyoda's proprietary technology for the safe and reliable storage and transportation of hydrogen.

In October 2021, the three parties signed a strategic MOU to explore the feasibility and implementation of a commercial-scale supply chain to deliver low-carbon hydrogen into Singapore, utilizing Chiyoda's proven hydrogen storage and transportation technology "LOHC-MCH" (Project) and have progressed with specific discussions and considerations.

With the completion of the initial feasibility study, the three parties are advancing to a Pre-FEED² study, laying the foundation for a final investment decision for the Project. Located on Jurong Island, the Project will leverage synergies with Sembcorp's gas-fired power generation facilities. The Project will utilize a LOHC-MCH to transport low-carbon hydrogen from countries such as Australia or the Middle East to Singapore.

When operational in 2026, the Project is expected to be the single largest low-carbon hydrogen import project in Asia with a capacity of approximately 60 kilotonnes per year. This is equivalent to generating about one million megawatt-hour of renewable energy, which will double the current output from existing renewable capacity in Singapore.

Through this partnership with Sembcorp and Mitsubishi, Chiyoda will be among the first in the world to implement a competitive hydrogen supply chain utilizing "LOHC-MCH", contributing to carbon neutral initiatives in Singapore and other countries around the world.

¹ SPERA Hydrogen (LOHC-MCH) is a technology that utilizes methylcyclohexane (MCH) as a liquid organic hydrogen carrier (LOHC) and Chiyoda's proprietary dehydrogenation catalysts to transport and store hydrogen. MCH is a chemically stable liquid at ambient temperature and pressure, easy to handle and maximizes the advantages of using existing petrochemical infrastructure, regulations and standards. Parties in Singapore favor MCH as a hydrogen carrier because of its safety record and cost competitiveness, supported by using existing infrastructure.

² Pre-FEED is Pre-Front End Engineering Design, which examines technical issues and approximate costs through the conceptual design of the plant.

<Reference Information>

1. About Chiyoda

- I. Headquarters: 4-6-2, Minatomirai, Nishi-ku, Yokohama, Japan
- II. Main Business: Integrated engineering including consulting, planning, engineering, procurement, construction, commissioning and maintenance for facilities related to gas, electricity, petroleum, petrochemical, chemical, pharmaceutical, antipollution, environment, preservation and other services. Mineral resource exploration and investment, including oil and gas.
- III. Representative: Mr. Masakazu Sakakida, Chairman of the Board, President & CEO

2. About Mitsubishi Corporation

- I. Headquarters: 3-1 Marunouchi 2-chome, Chiyoda-ku, Tokyo, Japan
- II. Main Business: Globally integrated enterprise comprised of ten (10) Business Groups: Natural Gas, Industrial Materials, Petroleum & Chemicals, Mineral Resources, Industrial Infrastructure, Automotive & Mobility, Food Industry, Consumer Industry, Power Solutions and Urban Development. Through these 10 Business Groups plus the addition of its Industry DX Group, MC's current activities have expanded far beyond its traditional trading operations to include project development, production and manufacturing operations, working in collaboration with our trusted partners around the globe.
- III. Representative: Mr. Katsuya Nakanishi, President and CEO

3. About Sembcorp Industries

- I. Headquarters: 30 Hill Street #05-04, Singapore 179360, Singapore
- II. Main Business: A leading Pan-Asian energy and urban solutions provider and one of Singapore's largest homegrown renewable energy players with more than 7.1 gigawatt of renewable energy capacity globally. For more information, please visit www.sembcorp.com
- III. Representative: Mr. Wong Kim Yin, Group President & CEO

For more information, please contact:

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