

First Domestic Liquefied Hydrogen Charging Station Opens in Incheon

- Commencement of Operations for the Incheon Gajwa Liquefied Hydrogen Charging Station Installed through Ministry of Environment's Private Capital Subsidy Program

The Ministry of Environment (Minister Han Wha-jin) announced that the completion ceremony of the first domestic liquefied hydrogen charging station, 'Incheon Gajwa Liquefied Hydrogen Charging Station,' will be held at the site of the charging station (located in Gajwa-dong, Seo-gu, Incheon) on the morning of April 17.

On this day, attendees at the completion ceremony include Lim Sang-jun, Vice Minister of Environment; Park Deok-soo, Vice Mayor of Incheon Metropolitan City; Ahn Gwang-hyeon, CEO of Seun Industrial Co., Ltd.; Chu Hyeong-wook, CEO of SK E&S; Jeong Yu-seok, Vice President of Hyundai Motor Company; Choi Yeong-rak, Director of Incheon Metropolitan City Bus Transport Association; and Kang Jung-gu, President of the Korea Natural Gas Hydrogen Association.

Seun Industrial Co., Ltd. was selected as a participant in the Ministry of Environment's '2022 Hydrogen Electric Vehicle Charging Station Installation Private Capital Subsidy Project,' jointly with SK E&S, and received KRW 4.2 billion in national funding, 60% of the total project cost of KRW 7 billion, over a two-year period.

The Incheon Gajwa Liquefied Hydrogen Charging Station, which is the first commercial operation in Korea, successfully passed a completion inspection on January 30 of this year and underwent two months of test runs for system stabilization. This charging station is equipped with facilities capable of

charging 120 kilograms of hydrogen per hour and can charge an average of 120 hydrogen buses per day.

Liquid hydrogen is obtained by cooling gaseous hydrogen to extremely low temperatures (-253°C) to be liquefied. Liquefied hydrogen offers lower pressure compared to gaseous hydrogen, making it safer* and enabling large-scale transportation**. These advantages are expected to contribute to the expansion of hydrogen commercial vehicles, such as hydrogen buses, that require high hydrogen consumption.

* Liquefied hydrogen operates at pressures of 10 atmospheres or less (compared to gaseous hydrogen, which operates at pressures of 200 atmospheres or more).

** The transportation capacity of liquefied hydrogen is 3 tons or more per shipment (compared to 300 kilograms for gaseous hydrogen).

The Ministry of Environment plans to launch support projects starting with the Incheon Gajwa Liquefied Hydrogen Charging Station and concurrently install gaseous hydrogen charging stations. The goal is to install over 40 liquefied hydrogen charging stations by 2024 and over 280 by 2030 (cumulative basis).

Meanwhile, prior to attending the completion ceremony of the Incheon Gajwa Liquefied Hydrogen Charging Station, Vice Minister Lim Sang-jun of the Ministry of Environment visited the SK E&S Liquefied Hydrogen Plant (located in Wonchang-dong, Seo-gu, Incheon) to inspect the test run and other aspects. Following the completion of the Doosan Liquefied Hydrogen Plant (1,700 tons/year) in Changwon in January of this year, the openings of the Incheon (SK E&S, 30,000 tons/year) and Ulsan (Hyosung Hydrogen, 5,200 tons/year) Liquefied Hydrogen Plants are expected to bring the total domestically producible liquefied hydrogen to approximately 36,900 tons annually.

Vice Minister Lim Sang-jun stated, “Countries around the world are focusing on building their own capabilities to secure leadership in the

hydrogen vehicle and hydrogen industry.” He added, “The Ministry of Environment will spare no effort in supporting the nurturing of the hydrogen vehicle ecosystem, along with its steadfast efforts towards carbon neutrality. We hope everyone will gather their strengths together.