



IPHE Country Update Mar 2024 – Nov 2024: Republic of Korea

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1. New Initiatives, Programs, and Policies on Hydrogen and Fuel Cells

- (Nov 2024) The first bidding process was closed for the world's first clean hydrogen power market, or the clean hydrogen section of **Clean Hydrogen Portfolio Standard (CHPS)**. Power generation companies submitted their bids for 15-year contracts with Korea Electric Power Corporation, which is due to procure 6.5TWh of clean hydrogen electricity through those long-term contracts this year. In order to secure clean hydrogen, mostly in the form of ammonia from abroad, they have consulted with suppliers that are willing to produce hydrogen with GHG emissions equal to or less than 4kgCO₂eq/kgH₂ (well-to-gate).
Winners are to be announced by Korea Power Exchange and they are required to start producing clean hydrogen electricity by 2028 at the latest.
- (Nov 2024) Ministry of Trade, Industry and Energy (MOTIE) designated two **hydrogen-specialized complexes**. They are expected to accommodate hydrogen-related companies to form clusters and the government will support them as leaders to accelerate the growth of hydrogen industry eco-system in Korea. Governmental supports may include additional subsidy for eligible companies, incentives on joint R&D projects, etc.
The two first ever complexes are Donghae-Samchuk for liquid hydrogen transport and storage, and Pohang for fuel cells for power generation. In total, 510 billion KRW (365 million USD) are to be invested in them ('24 – '28).

2. Hydrogen and Fuel Cell R&D Update

- (May 2024) MOTIE announced that ten hydrogen R&D projects would receive government funding of 24.3 billion KRW (17.5 million USD). Research area of the projects includes **AEM electrolyzer** system, **HRS key component** upgrades and **mobile fuel cell power generation** for civilian and military use.
The ministry will select additional eight projects eligible for 23.4 billion KRW (16.8 million USD) in the second half of this year. The annual budget this year is 47.8 billion KRW (34.3 million USD).
- (May 2024) The world's largest **hydrogen liquefaction plant** started commercial Operation in the city of Incheon. Incheon Liquid Hydrogen Plant has annual capacity of 30,000 tons of liquid hydrogen, which would be able to refuel 5,000 FC buses. SK E&S invested 700 billion KRW (500 million USD) in it to expand its liquid H₂ refueling station network to 40 locations by 2026. Liquid hydrogen supply chain is essential for Korea's rapid growing FC bus



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fleet. National and local governments have plans to deploy more than 20 thousand FC buses by 2030

3. Demonstration, Deployments, and Workforce Developments Update

4. Events and Solicitations

5. Investments: Government and Collaborative Hydrogen and Fuel Cell Funding

6. Regulations, Codes & Standards, and Safety Update