



INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

IPHE Country Update November 2022: Republic of Korea

Name	Okheon Lee, Mansik Kim
Contact Information	mansikzang@korea.kr
Covered Period	April – November 2022

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

- (June, 2022) Hydrogen Economy Law¹ was revised to lay the institutional ground to promote clean hydrogen use. The revision includes articles on the definition and certification of clean hydrogen, and purchasing obligation for electricity produced using hydrogen (clean hydrogen portfolio standard).
- (Nov., 2022) Hydrogen economy policy outline of the new government (since May) was announced by Hydrogen Economy Committee (chair: Prime Minister), with vision of healthy growth of the hydrogen industry. The emphasis was placed on demand upscaling, Infrastructure & institutions and Industry promotion. Major goals and actions pertaining to each part are as follows:
 - Demand upscaling: 30K commercial FCEVs (2030), 7.1% share of hydrogen-fuelled power generation (2036)
 - Infrastructure & institutions: H2 power generation bidding ('23), Hydrogen business law ('23), Clean hydrogen certification ('24)
 - Industry promotion: R&D for core technologies, fostering of H2 specialized companies

2. Hydrogen and Fuel Cell R&D Update

Nothing new to report this period.

3. Demonstration, Deployments, and Workforce Developments Update

- FCEV self-charging demonstration ('22.8)
- 12.5MW scale electrolysis demonstration project ('22.9)
- Fuel cell forklift demonstration project ('22.4)
- Real-time RFS information system (Hying) going available on mobile apps ('22.5)

4. Events and Solicitations

Nothing new to report this period.

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

- (Jul., 2022) "Hydrogen Fund" was launched by Korea H2 Business Summit member companies and other investors with support of policy financial institutions. It is expected to contribute to development of domestic hydrogen infrastructure (production, transportation, storage, etc.) as well as technology R&D. It is aimed at 500B KRW (370M USD).

6. Regulations, Codes & Standards, and Safety Update

Nothing new to report this period.

¹ Hydrogen Economy Promotion and Hydrogen Safety Management Law



Summary Country Update September 2022: Republic of Korea

Transportation	Target Number	Current Status	Partnerships, Strategic Approach	Support Mechanism
Fuel Cell Vehicles ²	5.26 million (acc. production) in 2050	26,508	•	•
FC Bus	30,000 by 2030	206		•
Fuel Cell Trucks		5		
H ₂ Refueling Stations	Target Number	Current Status	Partnerships, Strategic Approach	Support Mechanism
Total	2,000 by 2050	153	•	•
LH ₂	70 by 2030	-		•
Stationary	Target Number ³	Current Status	Partnerships, Strategic Approach	Support Mechanism
Small ⁴	-	Installed Stationary		•
Medium ⁵				

² Includes Fuel Cell Electric Vehicles with Range Extenders

³ Targets can be units installed and/or total installed capacity in the size range indicated

⁴ <5 kW (e.g., Residential Use)

⁵ 5kW – 400 kW (e.g., Distributed Residential Use)



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Large ⁶		power is over 850MW		
District Grid ⁷				•
Regional Grid ⁸				
Telecom backup				
H ₂ Production	Target ⁹	Current Status	Partnerships, Strategic Approach	Support Mechanism
Fossil Fuels ¹⁰			•	
Water Electrolysis ¹¹ (PEM, Alkaline, SOEC)	0.25Mt by 2030 3Mt by 2050	12.5MW Demonstration		
By-product H ₂	-			

⁶ 0.3MW – 10 MW (e.g., Industrial Use)

⁷ 1MW – 30 MW (e.g., Grid Stability, Ancillary Services)

⁸ 30MW plus (e.g., Grid Storage and Systems Management)

⁹ Target can be by quantity (Nm³, kg, t) and by percentage of total production; also, reference to efficiency capabilities can be a target

¹⁰ Hydrogen produced by reforming processes

¹¹ Please indicate if targets relate to a specific technology (PEM, Alkaline, SOEC)