INTERNATIONAL PARTNERSHIP FOR
HYDROGEN AND FUEL CELLS IN THE ECONOMY

IPHE Country Update March 2017: Korea

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1. New Policy Initiatives on Hydrogen and Fuel Cell

2030, Fuel Cell Vehicle 10% Era:
Objective is to have 10% of all new car sales to be FCEVs by 2030, estimated at 0.18M of 1.67M vehicles. The expectation is:

(1) The realization of a Hydrogen-based economy; and,
(2) FCV will become viable without financial support.

2. Hydrogen and Fuel Cell R&D Update

Nothing to report this period.

3. Demonstration and Deployments Update

- **FCV Taxi, Ulsan:** For the Demonstration project of FCV Taxi, a Memorandum of Understanding has been signed between the Ministry of Trade, Industry and Energy, the City of Ulsan, Hyundai Motors, and the Taxi company (Ulsan). Target (Supply of FCVs): in 2016 FCV 10 cars; in 2017 FCV 5 cars

- **FCV Carsharing , Gwangju :** A Car-Sharing Demonstration project of FCV is being promoted by the City of Gwangju.
  Carsharing Project: to date, there are Tucson ix(ix35) FCV 15 Cars, EV 27 Cars supplied. The number of vehicles is expanded to increase through to 2020 with the total of FCV and EV to be 300 cars)

4. Events and Solicitations

Korea Energy Show (www.koreaenergyshow.co.kr)

- Exhibition aiming to promote NRE entailing hydrogen and fuel cells
  Date: Sept 19th to 22nd
  Location: Il-san Kintex.

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

Nothing to report this period.

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Summary Country Update March 2017: Korea

Transportation	Target Number	Current Status	Partnerships, Strategic Approach	Policy Support
Fuel Cell Vehicles[1]	10,000 by 2020	As of [2016] 100		- Incentive for purchase (national & local government initiative, *FCEV deployment and Market activation plan*)
FC Bus	Will be introduced in the next 10yrs			
Fuel Cell Trucks[2]				
Forklifts				
H_2 Refueling Stations	**Target Number**	**Current Status**	**Partnerships, Strategic Approach**	**Policy Support**
70 MPa On-Site Production	100 by 2020 520 by 2030	As of [2017] 11	•	
70 MPa Delivered				

[1] Includes Fuel Cell Electric Vehicles with Range Extenders

[2] As above

35 MPa On-Site Production		As of [2017] 6		
35 MPa Delivered				
Stationary	**Target Number[3]**	**Current Status**	**Partnerships, Strategic Approach**	**Policy Support**
Small[4]	1,190MW by 2029	As of [2015] 177,206kW installed	FCs for home disseminated as a part of Renewable Energy Deployment Project	Incentive for installation
Medium[5]			Fuel cells for building disseminated particularly in public institutions facilitated by the New and Renewable Energy Obligation in Public Institution	
Large[6]			Investment in MCFC (Molten Carbonate Fuel Cell) increased with significant participation of big companies driven by the Renewable Portfolio Standard requirement initiated in 2012	Fuel-cell is included in RPS
District Grid[7]				
Regional Grid[8]				
Telecom backup				

[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)
[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)

H_2 Production	Target[9]	Current Status	Partnerships, Strategic Approach	Policy Support
Fossil Fuels[10]				
Water Electrolysis[11] (PEM, Alkaline, SOEC)				
By-product H_2				
Energy Storage from Renewables	**Target[12]**	**Current Status**	**Partnership, Strategic Approach**	**Policy Support**
Power to Power[13] Capacity				
Power to Gas[14] Capacity				

[9] Target can be by quantity (Nm^3, 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, Alkiline, SOEC)
[12] Can be expressed in MW of Installed Capacity to use the electricity from renewable energy generation, and Annual MWh of stored energy capacity
[13] Operator has an obligation to return the electricity stored through the use of hydrogen back to electricity
[14] Operator has the opportunity to provide the stored energy in the form of hydrogen back to the energy system through multiple channels (e.g., merchant product, enriched natural gas, synthetic methane for transportation, heating, electricity)