INTERNATIONAL PARTNERSHIP FOR
HYDROGEN AND FUEL CELLS IN THE ECONOMY

IPHE Country Update April 2019: South Africa

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Covered Period	December 2018 to March 2019

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

Nothing new to report.

2. Hydrogen and Fuel Cell R&D Update

No major developments during the period.

3. Demonstration, Deployments, and Workforce Developments Update

The integration of a fuel cell unit in a battery electric scooter as a range extender was completed in three scooters.

4. Events and Solicitations

A South African delegation travelled to India for a bilateral workshop on renewable energy during the week of 18 to 23 March 2019. The workshop also discussed potential collaboration on hydrogen production, storage and distribution.

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

Funding level will be confirmed during the month of April 2019.

6. Regulations, Codes & Standards, and Safety Update

None during the reporting period.

Summary Country Update April 2019: South Africa

Transportation	Target Number	Current Status	Partnerships, Strategic Approach	Support Mechanism
Fuel Cell Vehicles[1]	No target	0 as of 31/03/19	• N/A	• General incentives exist within the Department of Trade and Industry
FC Bus	4 by 2020	0 as of 31/03/19	National and provincial government	• Specific subsidies may be developed
Fuel Cell Trucks[2]	No target	0 as of 31/03/19	N/A	• General incentives exist within the Department of Trade and Industry
Forklifts	No target	1 as of 31/03/19	National and mining companies as well as development finance institutions	• No support policy
Electric Scooters	No target	3 as of 31/03/19	National government and state owned companies	• No support policy
H_2 Refueling Stations	**Target Number**	**Current Status**	**Partnerships, Strategic Approach**	**Support Mechanism**
70 MPa On-Site Production	No target	0 as of 31/03/19	N/A	• No Subsidy for operation
70 MPa Delivered	No target	0 as of 31/03/19	N/A	No Subsidy for installation • Subsidy for operation
35 MPa On-Site Production	No target	0 as of 31/03/19	N/A	• Subsidy for installation through a tax measure of an annual 50% capital expenditure write-off

[1] Includes Fuel Cell Electric Vehicles with Range Extenders

[2] As above

35 MPa Delivered	No target	0 as of 31/03/19	N/A	
Stationary	**Target Number[3]**	**Current Status**	**Partnerships, Strategic Approach**	**Support Mechanism**
Small (≤ 5kW)[4]	No target	5 as of 31/03/19	N/A	None
Medium(100kW)[5]	No target	1 as of 31/03/19	N/A	None
Large[6]	No target	0 as of 31/03/19	N/A	None
District Grid[7]	No target	0 as of 31/03/19	N/A	None
Regional Grid[8]	No target	0 as of 31/03/19	N/A	None
Telecom backup	500 by 31/03/2020	300 as of 31/03/19	Private Sector based on business case	None
H_2 Production	**Target[9]**	**Current Status**	**Partnerships, Strategic Approach**	**Support Mechanism**
Fossil Fuels[10]	No target	0 as of 31/03/19	N/A	None
Water Electrolysis[11]	No target	0 as of 31/03/19	N/A	None

[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)
[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, Alkaline, SOEC)

(PEM, Alkaline, SOEC)				
By-product H_2				
Energy Storage from Renewables	**Target[12]**	**Current Status**	**Partnership, Strategic Approach**	**Support Mechanism**
Power to Power[13] Capacity	No target	0 as of 31/03/19	N/A	None
Power to Gas[14] Capacity	No target	0 as of 31/03/19	N/A	None

[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)