

## IPHE Country Update

<b>Member</b>	<b>India</b>
<b>Name</b>	<b>Mr. Upendra Tripathy, Secretary, Ministry of New and Renewable Energy</b>
<b>Contact Information</b>	<a href="mailto:secy-mnre@nic.in">secy-mnre@nic.in</a>
<b>Covered Period</b>	<b>1 April 2015 to 31 October 2015</b>

### 1. New Policy Initiatives on Hydrogen and Fuel Cell

The Ministry constituted a Steering Committee on Hydrogen Energy and Fuel Cells in May, 2012 to advise the Ministry and steer the overall activities of Hydrogen Energy and Fuel Cells in the country. Based on the recommendations of the Steering Committee, five Sub-Committees on different aspects of Hydrogen Energy and Fuel Cells have been constituted. The progress achieved in the country in the area of Hydrogen Energy and Fuel Cells, after preparation of the National Hydrogen Energy Roadmap in 2006, has been reviewed by the Steering Committee on Hydrogen Energy & Fuel Cells. The Report of the Steering Committee on Hydrogen Energy & Fuel Cells is expected to be submitted by December, 2015.

### 2. Hydrogen and Fuel Cell R&D Update

Several R&D projects on different aspects of hydrogen energy and fuel cell technologies are under implementation during the year 2015-16 with funding from the Ministry of New and Renewable Energy.

Seven new R&D projects in the area of Hydrogen Energy are going to be sanctioned shortly during 2015-16. Some more R&D projects in the area of hydrogen production, its storage and applications are expected to be sanctioned by 31 March, 2016.

### 3. Demonstration Project Update

A 5 Nm<sup>3</sup>/h hydrogen production facility through electrolysis of water and powered by electricity generated by a solar photovoltaic array of 120 kW<sub>p</sub>

along with associated compressor, storage and dispensing facilities has been established in the campus of National Institute of Solar Energy, Gwalpahari, Gurgaon (near New Delhi). This facility is being used for refueling of five hydrogen-diesel dual fuel vehicles developed by Mahindra & Mahindra under a project supported by the Ministry of New & Renewable Energy.

Another 30 Nm<sup>3</sup>/h hydrogen production facility for dispensing hydrogen has been established by R&D Centre of Indian Oil Corporation Ltd. at Faridabad with partial financial support from the Ministry of New & Renewable Energy. This facility is going to be used for refueling of hydrogen fuelled buses using both IC engine as well as fuel cell technologies.

15 numbers of hydrogen fuelled three wheelers are undergoing field trials/demonstration in Pragati Maidan, New Delhi. These vehicles use IC engine technology and have been manufactured by Mahindra & Mahindra in collaboration with IIT Delhi. The refueling facility for these vehicles is managed by Air Products (India).

#### **4. Government Hydrogen and Fuel Cell R&D&D Funding**

The Ministry of New and Renewable Energy has provided RD&D funding for hydrogen energy and fuel cell activities (in US dollars).

2013-14*	2.44 M	2014-15	1.66 M	2015-16#	1.54 M
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\* Financial year in India is from 1 April to 31 March of the next calendar year.

# Budgetary provision for the period 1 April 2015 to 31 March 2016.