

LOK SABHA  
UNSTARRED QUESTION NO. 1926  
TO BE ANSWERED ON 28<sup>th</sup> JULY, 2022

**Use of Hydrogen**

†1926. SHRI HEMANT SRIRAM PATIL:  
SHRI DULAL CHAND GOSWAMI:

**पेट्रोलियम और प्राकृतिक गैस मंत्री**

Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

- (a) whether the Government proposes to develop Hydrogen as an eco-friendly fuel in the place of petroleum, diesel and Compressed Natural Gas (CNG) and if so, the details thereof;
- (b) whether any research has been initiated in the country by the Government to introduce any new way of hydrogen manufacturing;
- (c) if so, the details thereof;
- (d) the time by which the use of hydrogen as an eco-friendly fuel is likely to be started in the country;
- (e) whether research and development projects for the use of internal combustion engines, hydrogen based CNG and diesel in the field of hydrogen and development of hydrogen-powered vehicles are being initiated and if so, the details thereof; and
- (f) whether hydrogen fuel based motorcycle and three wheeler scooters are manufactured and demonstrated and if so, the details thereof?

ANSWER

**पेट्रोलियम और प्राकृतिक गैस मंत्रालय के राज्य मंत्री (श्री रामेश्वर तेली)**

MINISTER OF STATE IN THE MINISTRY OF PETROLEUM AND NATURAL GAS (SHRI RAMESWAR TELI)

- (a) Government has announced a National Hydrogen Mission (NHM) in 2021, which *inter alia* includes development of Hydrogen as a fuel for transportation.

(b) and (c) Green Hydrogen can be produced through different pathways such as from electrolysis of water using renewable power, from Bio-methane and from Biomass gasification. Various Research and Development (R&D) activities on Hydrogen are also undertaken by Oil and Gas PSUs (OGPSUs). Further, OGPSUs have formed a Hydrogen Corpus Fund to fund R&D on various facets of Hydrogen including its application as an automotive fuel.

(d) Offtake and popularity of hydrogen as a fuel is contingent upon comprehensive processes and developments in technology for production as well as consumption. Few R&D projects undertaken by OGPSUs use green hydrogen for fuel cell based mobility.

(e) and (f) Government has supported projects involving Research, Development & Technology Demonstration. Some of these projects are Hydrogen fuel based two wheelers have been developed and demonstrated by Banaras Hindu University whereas Hydrogen fuel based three wheelers have been developed and demonstrated by Banaras Hindu University, IIT Delhi and Mahindra & Mahindra. However, these vehicles are not manufactured commercially. Indian Oil Corporation Limited (IOCL) patented HCNG (Hydrogen Spiked Compressed Natural Gas) technology has been demonstrated at Rajghat Bus depot on 50 BS-IV compliant commercial CNG buses as part of joint study with M/s. Indraprastha Gas Limited.

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