

GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS
RAJYA SABHA
UNSTARRED QUESTION NO-886
ANSWERED ON- 09/02/2022

HYDROGEN FUEL FOR VEHICLES

886. SHRI VINAY DINU TENDULKAR:

Will the Minister of ROAD TRANSPORT AND HIGHWAYS be pleased to state:

- (a) whether any research programme is underway in the country in order to reduce the carbon emission generated by vehicles and to make the vehicles run with hydrogen fuel instead of petrol and diesel;
- (b) the details of the modifications needed to be brought in the vehicles and by when this technique would be available to the common man;
- (c) the guidelines formulated by Government for establishing a hydrogen cell manufacturing industry after the acquisition of technical know-how by an entity and the estimated cost thereof; and
- (d) the reasons responsible, if no research work is being conducted, in this regard?

ANSWER

THE MINISTER OF ROAD TRANSPORT AND HIGHWAYS

(SHRI NITIN JAIRAM GADKARI)

(a) to (d) Ministry of Road Transport and Highways has notified G.S.R. 889(E) dated 16th September, 2016, for use of Hydrogen as an automotive fuel in the country. The specifications for Hydrogen for Internal Combustion Engine have been specified in Annexure IV-W of the said notification. 18% blend of Hydrogen with CNG (HCNG) has been notified by this Ministry vide G.S.R. 585(E) dated 25th September, 2020. This Ministry vide G.S.R. 579(E) dated 23rd September, 2020 has notified safety norms regarding hydrogen fuel cell vehicles and its components.

Ministry of New and Renewable Energy is implementing Renewable Energy Research and Technology Development programme to support research in various aspects of renewable energy including inter-alia hydrogen based transportation and fuel cell development. The ongoing R&D projects on hydrogen and fuel cells are as under:-

- i. Indian Institute of Science, Bangalore has established a production plant for high purity hydrogen generation through biomass gasification.
- ii. ARCI Centre for Fuel Cell Technologies, Chennai is setting up an integrated automated manufacturing line for producing 20 kW PEM Fuel Cell stacks.
- iii. Dayalbagh Educational Institution has developed novel materials for Hydrogen production through Photo electrochemical splitting of water. Two patents were granted for materials developed under the project in 2021.
- iv. National Institute of Solar Energy, Gurgaon, under the project to establish a Centre of Excellence on Hydrogen Energy, have procured electrolyzer and other equipment for augmenting the Green Hydrogen production capacity to demonstrate various applications including hydrogen fuelled vehicles.
