

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 1578
ANSWERED ON 20.12.2022

RESEARCH IN HYDROGEN BASED TECHNOLOGY

1578. SHRI VINAY DINU TENDULKAR

Will the Minister of New and Renewable Energy be pleased to state:

- (a) whether there is a research program going on to run vehicles through hydrogen cells instead of petrol and diesel in order to reduce the carbon emissions generated by vehicles in the country;
- (b) the changes that will have to be made in the vehicles and by when this technology will be available to the general public;
- (c) the cost estimate of this industry if someone desires to set up the industry after obtaining guidelines and available technology for hydrogen cell production; and
- (d) if the research work is not going on, the reasons therefor?

ANSWER

THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER

(SHRI R.K. SINGH)

(a) to (d) The Ministry of New and Renewable Energy has been supporting Research, Development and Demonstration (RD&D) projects through research institutions and industry *inter alia* for development of vehicles that run on hydrogen fuel. Council for Scientific and Industrial Research (CSIR) through National Chemical Laboratory (NCL) has also undertaken RD&D projects on hydrogen fuel cell vehicles.

Hydrogen can be used as a fuel for vehicles through fuel cells which convert chemical energy of hydrogen to electricity or through modified internal combustion engines that can use hydrogen. Since both technologies are at pilot stage of development by the industry and not commercially tested in India, cost estimates and timelines of setting up this industry are presently not available.
