

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

STARRED QUESTION NO:597

ANSWERED ON:07.05.2002

USE OF HYDROGEN AS FUEL FOR TRANSPORTATION

NANDIPAKU VENKATASWAMY;VILAS BABURAO MUTTEMWAR

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether hydrogen has been accepted as a safe, clean and non polluting fuel all over the world;
- (b) if so, whether the Union Government have examined the possibility of its use, particularly for the transportation purpose so as to reduce the consumption of Compress Natural Gas (CNG);
- (c) if so, the details thereof;
- (d) whether any research organization/company has proposed the use of hydrogen as an alternative fuel in the country; and
- (e) if so, the details thereof?

Answer

MINISTER OF STATE FOR SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT)

(a) to (e) A statement is laid on the Table of the House.

STATEMENT REFERRED IN REPLY TO PARTS (a) TO (e) OF LOK SABHA STARRED QUESTION NO. 597 FOR 07.05. REGARDING USE OF HYDROGEN AS FUEL FOR TRANSPORTATION

Hydrogen has the potential of a safe, clean and non-polluting fuel, which can be used for transportation and other applications. Government is aware of the developments regarding applications using hydrogen as a source of energy for transportation. With special safety features, hydrogen can be used as an environment-friendly fuel for direct use in vehicles based on internal combustion (IC) engines. Hydrogen can also be used in conjunction with fuel cells, to propel automobiles. Several prototypes have been put on trials in some countries using these methods. Technical feasibility in some of these cases appears to have been fairly established. However, at present, these are not economically viable for use in transportation due to the high costs involved.

A few research organizations, academic institutions and industrial R&D centres in the Country are working on various technologies leading towards different applications using hydrogen as a source of energy, which include hydrogen powered engines and vehicles. These research activities are at various stages of laboratory and pilot scale development and can provide a strong base for necessary capacity building in future. Some of the institutions involved in R&D in this area are: BHU - Varanasi, IIT- Delhi, IIT-Madras, R.V.College of Engineering, Bangalore, SPIC Science Foundation, Chennai, Shri AMM Murugappa Research Centre, Chennai an BHEL R&D.