

**GOVERNMENT OF INDIA
PETROLEUM AND NATURAL GAS
LOK SABHA**

STARRED QUESTION NO:475

ANSWERED ON:28.04.2005

USE OF HYDROGEN GAS FOR FUEL PURPOSES

Pingle Shri Devidas Anandrao;Sippiparai Shri A. Ravichandran

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

- (a) whether Hydrogen gas mixed with natural gas is being considered for use as automobile fuel;
- (b) if so, the details in this regard;
- (c) the advantages/benefits accruing out of mixture of Hydrogen gas in natural gas and its efficacy as efficient fuel;
- (d) the total investment proposed to be made in this regard;
- (e) whether there is any proposal to take assistance from the private sector for mobilising resources for generation of Hydrogen power; and
- (f) if so, the details thereof?

Answer

MINISTER OF PETROLEUM & NATURAL GAS & PANCHAYATI RAJ (SHRI MANI SHANKAR AIYAR)

(a) to (f) A statement is laid on the table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (f) OF THE LOK SABHA STARRED QUESTION NO. 475 BY SHRI RAVICHANDRAN SIPPIPARAI AND SHRI DEVIDAS PINGLE TO BE ANSWERED ON 28.4.2005 REGARDING USE OF HYDROGEN GAS FOR FUEL PURPOSES

(a) to (f) It has been technically established that a mixture of natural gas and Hydrogen could be used as a transportation fuel. The Ministry of Petroleum and Natural Gas have recently set up a Hydrogen Corpus Fund of Rs 100 crore to support research and development into various aspects of so using Hydrogen. Demonstration projects in the pipeline include using 10% Hydrogen in Compressed Natural Gas (CNG) at the Indian Oil Corporation Research & Development Centre at Faridabad (planned for July 2005), and a similar demonstration project later in Delhi.

Tests suggest that Hydrogen blended natural gas can reduce emissions, particularly, Nitrous Oxide when burnt in Internal Combustion engines without affecting the efficiency and performance of natural gas engines. However, the advantages and problems relating to mixing Hydrogen with natural gas, and its efficacy as a fuel in Indian road conditions can be judged only after the demonstration projects come into operation and sufficient data has been generated.

There is no firm proposal under consideration of the Government to take assistance from the private sector for mobilizing resources for the generation of Hydrogen power. However, the Ministry of Non-Conventional Energy Sources has constituted a National Hydrogen Energy Board, which has high level representation from Government, industry, academic institutions and experts. The Board is providing guidance in the preparation and implementation of the National Hydrogen Energy Road Map, covering all aspects of Hydrogen energy starting from production, storage, transport, delivery, safety to applications. The Road Map will assist in developing specific projects with Public Private Partnership, which would also facilitate generation of resources from the private sector.