

**GOVERNMENT OF INDIA
NEW AND RENEWABLE ENERGY
LOK SABHA**

UNSTARRED QUESTION NO:5158
ANSWERED ON:14.08.2014
ALTERNATIVE FUELS FOR SURFACE TRANSPORTATION
Muddahanumegowda Shri S.P.

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) whether the Government is taking any steps in coordination with academic institutions on development and promotion of cutting edge new and renewable energy technologies like fuel cell, hydrogen and alternative fuels for surface transportation;
- (b) if so, the details thereof;
- (c) whether the Government is considering to invite foreign companies to help in its efforts;
- (d) if so, the details thereof; and
- (e) the time by which a final decision in this regard is likely to be taken by the Government?

Answer

THE MINISTER OF STATE FOR POWER, COAL & NEW AND RENEWABLE ENERGY (INDEPENDENT CHARGE) (SHRI PIYUSH GOYAL)

(a): Yes, Madam. The Ministry of New and Renewable Energy under its broad based Research, Development and Demonstration programme has been supporting projects at academic institutions, research & development organizations and industry on hydrogen production, its storage and applications; fuel cell technologies; and alternative fuels for surface transportation.

(b): A total of 40 research & development projects are presently under implementation in the areas of production of hydrogen by splitting of water using solar energy, through fermentation of biological wastes, gasification of biomass, decomposition of hydrogen sulphide and reformation of biomass derived glycerol; storage of hydrogen in hydrides, carbon materials and liquid organic hydrides; development and demonstration of engines/vehicles for use of hydrogen and hydrogen blended fuels; development of fuel cells including materials and components; development and demonstration of battery operated vehicles; and on different aspects of production of biofuels from the second generation feed-stocks such as ligno-cellulosic wastes and residues.

(c): At present there is no proposal under consideration of the Government to invite foreign companies to help the country in the areas of hydrogen, fuel cells and alternative fuels for surface transportation. However, Indian companies, academic institutions and research organisations can collaborate with foreign companies or institutions for development of technologies in these areas.

(d)&(e): Do not arise.