

GOVERNMENT OF INDIA
MINISTRY OF PETROLEUM AND NATURAL GAS

RAJYA SABHA
STARRED QUESTION No. 184
ANSWERED ON 07.08.2023

PROMOTION OF USE OF ADVANCED BIOFUELS

*184. SHRI ABIR RANJAN BISWAS:

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

- (a) the efforts made by Government to promote the use of advanced biofuels, such as third-generation biofuels and algae-based fuels and the details thereof;
- (b) the progress made in their adoption and commercialization in the country;
- (c) the specific plans and initiatives to promote the use of biofuels in sectors beyond transportation, such as power generation, industrial processes, and residential heating; and
- (d) the potential impact of such diversification on reducing carbon emissions and promoting sustainable energy practices?

ANSWER

THE MINISTER OF PETROLEUM & NATURAL GAS

(SHRI HARDEEP SINGH PURI)

(a) to (d) A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PART (a) TO (d) OF THE RAJYA SABHA STARRED QUESTION No. 184 TO BE ANSWERED ON 07.08.2023 REGARDING 'PROMOTION OF USE OF ADVANCED BIOFUELS' ASKED BY SHRI ABIR RANJAN BISWAS.

(a) & (b): The Government is promoting biofuels with the broader objectives of reducing import dependency, generating employment, providing better remuneration to farmers, for associated environmental benefits, promoting better waste management practices, etc. The National Policy on Biofuels (NPB) aims to bring in renewed focus taking into context the international perspectives and National scenario primarily by utilization of indigenous feedstock for production of biofuels. This Policy promotes exploration of domestically available feedstock by utilizing the country's biodiversity in addition to the development of next generation biofuel conversion technologies required for expansion of new feedstock. Advanced Biofuels consist of Second Generation (2G) and Third Generation (3G) biofuels. Second Generation biofuels are biofuels produced from waste materials viz. agricultural and forestry residues such as rice & wheat straw, corn cobs & stover, woody biomass, etc. Third Generation biofuels are biofuels produced from microorganisms such as algae, yeasts, bacteria, etc. Ethanol produced from paddy straw, bamboo, etc., Compressed Biogas (CBG) produced from waste / bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, etc. and Biodiesel produced from Used Cooking Oil (UCO) are examples of advanced biofuels.

One 33 Thousand Metric Tons (TMT) per annum capacity 3G ethanol plant of IOCL at Panipat refinery from refinery-off gases as feedstock is under advanced stage of construction.

Government has taken various steps to promote the use of advanced biofuels. In March, 2019, Government has notified the "Pradhan Mantri JI-VAN (Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran) Yojana" for providing financial support for setting up Second Generation (2G) bioethanol projects in the country using lignocellulosic biomass and other renewable feedstock. Under this scheme, the maximum financial assistance of upto Rs.150 crore per project for commercial projects and upto Rs.15 crore per project for demonstration projects has been envisaged for enhancing commercial viability as well as promoting R&D for development and adoption of technologies in the field of production of 2G ethanol. So far, under this scheme, financial assistance of Rs. 880 crore has been approved to Public and Private Sector Oil Marketing Companies (OMCs) for six commercial Second Generation (2G) bio-ethanol projects in Punjab, Haryana, Odisha, Assam and Karnataka and two demonstration 2G ethanol projects one each in Haryana and Andhra Pradesh.

Under Sustainable Alternative Towards Affordable Transportation (SATAT) initiative, Oil and Gas Marketing Companies (OGMCs) viz. IOCL, HPCL, BPCL, GAIL and IGL invite Expression of Interest (EOI) from the entrepreneurs for procurement of Compressed Bio Gas (CBG) for further marketing. Forty Eight CBG/biogas plants have been commissioned which utilise various waste/biomass to produce CBG.

Oil PSUs have identified Mangalore & Panipat for setting up of Sustainable Aviation Fuel (SAF) plants to start production of SAF in the country.

(c): To promote utilisation of Biofuels in sectors other than transportation, Government has notified BIS standards for use of biodiesel as a blend-stock in diesel for use in compression

ignition engines, use as stand-alone fuel in engines designed for the purpose, heating applications ,industrial engines, etc.,

The Government has issued guidelines for synchronisation of CBG produced by plants under SATAT scheme in the City Gas Distribution (CGD) network. SATAT scheme encourages entrepreneurs to set up CBG plants which will produce & supply CBG to OMCs for sale as automotive & industrial fuels.

(d): The Roadmap for Ethanol Blending in India 2020-25, prepared by an inter-Ministerial Committee, estimates a reduction of carbon monoxide emissions by about 50% in two wheelers and about 30% in four wheelers by using E20 (20% ethanol blending in petrol) compared to E0 (neat petrol). Hydrocarbon emissions are estimated to reduce 20% in both two wheelers and passenger cars.
