

LOK SABHA
UNSTARRED QUESTION No.722
TO BE ANSWERED ON 04th December, 2025

ETHANOL BLENDED PETROL PROGRAMME

722. SHRI MUKESHKUMAR CHANDRAKAANT DALAL:

DR. VINOD KUMAR BIND:

SHRI SHANKAR LALWANI:

SHRI SUKHJINDER SINGH RANDHAWA:

SHRI BASAVARAJ BOMMAI:

SHRI ARUN GOVIL:

SHRI PRADEEP KUMAR SINGH:

SHRI AMAR SHARADRAO KALE:

SHRI RAHUL SINGH LODHI:

DR. BHOLA SINGH:

SHRI SHIVMANGAL SINGH TOMAR:

SHRI BALWANT BASWANT WANKHADE:

SHRI MANOJ TIWARI:

SHRI PRATAP CHANDRA SARANGI:

SHRI SUNIL KUMAR:

SHRI ANIL FIROJIYA:

SMT. KAMALJEET SEHRAWAT:

SHRI ASHISH DUBEY:

DR. SANJAY JAISWAL:

SHRI TRIVENDRA SINGH RAWAT:

SHRI KHAGEN MURMU:

पेट्रोलियम और प्राकृतिक गैस मंत्री

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

- (a) the progress made so far under the Ethanol Blended Petrol Programme and the current level of ethanol blending in the country;
- (b) the measures taken to ensure consistent availability of feedstock and infrastructure for ethanol production;
- (c) whether the Government has conducted any study to assess the impact of E20 fuel on vehicle performance, efficiency and environmental sustainability, if so, the details thereof;
- (d) the steps taken to ensure that the transition to higher ethanol blending benefit both farmers and consumers and to maintain fuel quality standards for alleviating the concerns of the people; and
- (e) whether the Government proposes to set up any ethanol plant in Paschim Champaran district of Bihar which has four sugar mills, ample availability of raw materials, land and the presence of all favourable conditions required for setting up of an ethanol plant and if so, the details thereof?

ANSWER

पेट्रोलियम और प्राकृतिक गैस मंत्रालय में राज्य मंत्री
(श्री सुरेश गोपी)

**MINISTER OF STATE IN THE MINISTRY OF PETROLEUM & NATURAL GAS
(SHRI SURESH GOPI)**

(a): The Government has been promoting blending of ethanol in petrol under the Ethanol Blended Petrol (EBP) Programme wherein Public Sector Oil Marketing Companies (OMCs) sell ethanol blended with petrol. Under Ethanol Blended Petrol (EBP) Programme, ethanol blending in petrol has increased from 38 crore litres in Ethanol Supply Year (ESY) 2013-14 to more than 1000 crore litres in ESY 2024-25, thereby achieving an average blending of 19.24% ethanol in Petrol during ESY 2024-25. During the month of October, 2025, Ethanol blending of 19.97% has been achieved.

(b): In order to ensure consistent availability of feedstock and infrastructure for ethanol production in India to achieve 20% Ethanol blending target by the Ethanol Supply Year (ESY) 2025-26 under Ethanol Blended Petrol (EBP) Programme, Government have taken several steps to promote ethanol production in India which *inter-alia* includes expansion of feedstock for Ethanol production, administered price mechanism for Ethanol procurement under the Ethanol Blended Petrol (EBP) Programme, lowered GST rate to 5% for Ethanol for EBP Programme, introduction of various Ethanol Interest Subvention Schemes (EISS) during 2018-22, a dedicated subvention scheme for Cooperative Sugar Mills to convert existing sugarcane-based distilleries into multi-feedstock plants for ethanol production from molasses as well as grains, signing of 233 Long Term Offtake Agreements (LTOAs) between OMCs and Dedicated Ethanol Plants which has increased the country's annual ethanol distillation capacity to more than 1950 crore litres, approval by Government for allocation of 52 Lakh Metric Tonne (LMT) of surplus Food Corporation of India (FCI) rice for ethanol production, each for the ESY 2024-25 (from 1st November 2024 to 31st October 2025) and ESY 2025-26, diversion of 40 LMT of sugar for ethanol production for the ESY 2024-25 and unrestricted production of ethanol from sugarcane juice/sugar syrup, B-Heavy Molasses as well as C-Heavy Molasses for ESY 2025-26, notified the "Pradhan Mantri JI-VAN (Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran) Yojana" to provide financial assistance for setting up Advanced Biofuels projects in the country using lignocellulosic biomass and other renewable feedstock, multimodal transportation of ethanol to enhance availability of ethanol and increasing ethanol storage capacity along with other allied infrastructure for handling of higher blends of ethanol.

(c) & (d): According to the Roadmap for Ethanol Blending in India 2020-25, prepared by an inter-ministerial committee, using 20% ethanol-blended petrol (E20) results in marginal reduction in fuel efficiency for four-wheelers designed for E10 and calibrated for E20. The Society of Indian Automobile Manufacturers (SIAM) had informed the committee that with modifications in engine hardware and tuning, the efficiency loss due to blended fuel can be reduced. The Roadmap for Ethanol Blending in India 2020-25 has not identified any negative impact on engine health due to blending of ethanol in petrol up to E20. A study on life cycle emissions of Ethanol done by NITI Aayog has said that GHG emissions in case of use of sugarcane and maize based Ethanol are less by 65% and 50%, respectively than those of petrol.

The use of E-20 gives better acceleration, better ride quality and most importantly, lowered carbon emissions by approximately 30% as compared to E10 fuel. Ethanol's higher-octane number (~108.5 compared to petrol's 84.4) makes Ethanol-blended fuel a valuable alternative for higher-octane requirements that is crucial for modern high-compression engines. Vehicles tuned for E20 deliver better acceleration which is a very important factor in city driving conditions. Additionally, Ethanol's higher heat of vaporization reduces intake manifold temperatures, increasing air-fuel mixture density and boosting volumetric efficiency. Further, E20 results in better anti knocking properties and performance. Also, safety standards for E20 are well established through BIS specifications and Automotive Industry Standards. In most parameters including drivability, startability, metal compatibility, plastic compatibility, there are no issues.

The concerns associated to the usage of E20 fuels have been duly addressed through appropriate channels in line with this Ministry's response issued through the PIB release dated 12.08.2025 and the Joint Press Release issued by the Society of Indian Automobile Manufacturers, the Automotive Research Association of India, and the Federation of Indian Petroleum Industry on 30.08.2025.

EBP Programme has resulted in expeditious payment to farmers to a tune of over Rs. 1,36,300 crores from Ethanol Supply Year (ESY) 2014-15 up to October 2025, besides savings of more than Rs. 1,55,000 crore of foreign exchange, net CO2 reduction of approximately 790 lakh metric tonne and substitution of more than 260 lakh metric tonnes of crude oil.

(e) Bharat Petroleum Corporation Limited (BPCL) has informed that there are 19 ethanol plants of capacity 3100 kilo litre per day (KLPD) located in the State of Bihar who are registered with Public Sector OMCs for supply of denatured ethanol under the EBP Programme. Out of these, 3 ethanol plants of capacity 360 KLPD are situated in Paschim Champaran district and all of them can utilize sugarcane-based feedstocks for ethanol production. Additionally, one more 60 KLPD capacity sugarcane-based ethanol plant of Hindustan Biofuels Limited (HBL – wholly owned subsidiary of Hindustan Petroleum Corporation Limited) is also located in Paschim Champaran.
