

GOVERNMENT OF INDIA
MINISTRY OF PETROLEUM AND NATURAL GAS
RAJYA SABHA
UNSTARRED QUESTION NO - 136
ANSWERED ON - 01/12/2025

EFFECT OF E20 FUEL ON VEHICLES

136. SHRI MOHAMMED NADIMUL HAQUE:

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

- (a) the average percentage of ethanol blending achieved under Ethanol Blended Petrol (EBP) programme as on 31st October, 2025;
- (b) the number of consumer or vehicle-related complaints received by oil marketing companies or Ministry since E20 rollout (1st April 2023) regarding engine malfunction, mileage loss or quality issues;
- (c) whether Government has assessed the compatibility of vehicles manufactured before 2023 with E20 fuel;
- (d) any assessment on the compatibility of environmental and fiscal impact (foreign-exchange savings, carbon-emission reduction) achieved from ethanol blending till date; and
- (e) if so, the year and findings of such assessments?

ANSWER

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

(a): Government have been promoting blending of ethanol in petrol under the Ethanol Blended Petrol (EBP) Programme. The National Policy on Biofuels – 2018, as amended in 2022, inter-alia advanced the target of 20% blending of Ethanol in petrol from 2030 to Ethanol Supply Year 2025-26 (ESY- 1st November, 2025 to 31st October, 2026). Public Sector Oil Marketing Companies (OMCs) achieved the target of 10% Ethanol blending in petrol in June 2022 i.e. five months ahead of the target during ESY 2021-22, 12.06% in ESY 2022-23 and 14.60% in ESY 2023-24. During Ethanol Supply Year (ESY) 2024-25, more than 1000 crore litres of ethanol have been blended thereby achieving an average blending of 19.24% ethanol in Petrol. In the month of October, 2025, ethanol blending of 19.97% has been achieved.

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.

(b) to (e): Government and OMCs have noticed certain media reports/social media postings and concerns relating to the use of E20 fuel. The Inter-Ministerial Committee (IMC) constituted on 26.12.2020 under NITI Aayog had, inter-alia, examined various aspects of vehicle compatibility and mileage. This assessment was also supported by research studies conducted by Indian Oil Corporation Limited (IOCL), the Automotive Research Association of India (ARAI), and the Society of Indian Automobile Manufacturers (SIAM). Extensive field trials on vehicles with E20 fuel did not indicate any compatibility issue or any negative effect of E20. These studies have confirmed that even legacy vehicles do not exhibit any significant variations in performance, nor do they show abnormal wear-and-tear when operated with E20 fuel. No issues were reported in parameters such as drivability, startability, metal compatibility, and plastic compatibility. Only in case of certain older vehicles, some rubber parts and gaskets may require replacement earlier than in case non blended fuel was used. This replacement is inexpensive and can be easily managed during routine servicing. It may need to be done once in the life time of the vehicle and is a simple process to be carried out at any authorized workshop.

With regard to the concern of vehicle mileage due to the use of E20 fuel, Press Release dated 12.08.2025 issued by the Government and a Joint Press Release dated 30.08.2025 issued by the Society of Indian Automobile Manufacturers, the Automotive Research Association of India, and the Federation of Indian Petroleum Industry (ARAI-FIPI-SIAM) have clarified that vehicle mileage is influenced by a variety of factors beyond just fuel type. These include driving habits, maintenance practices such as oil changes and air filter cleanliness, tyre pressure and alignment, and even air conditioning load. The efficiency drop (if any) in E 10 vehicles has been marginal. For some manufacturers, vehicles have been E 20 compatible from as far back as 2009.

As per the Joint Statement dated 30.08.2025 released by ARAI, FIPI and SIAM, the use of E20 fuel gives better acceleration, better ride quality and most importantly, lowers carbon emissions by approximately 30% as compared to E10 fuel. Ethanol's higher-octane number makes ethanol-blended fuels 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.
