GOVERNMENT OF INDIA
MINISTRY OF PETROLEUM AND NATURAL GAS
RAJYA SABHA
UNSTARRED QUESTION No.920
ANSWERED ON 27/07/2026

IMPACT ASSESSMENT OF THE ETHANOL BLENDED PETROL PROGRAMME

920. SMT. JEBI MATHER HISHAM:

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

(a) whether Government has conducted independent studies on the impact of higher ethanol blends on vehicle engine life and fuel efficiency, the details thereof;

(b) whether Government has scientifically and comprehensively evaluated the impact of diversion of sugarcane and maize for ethanol production on food security, crop prices and groundwater resources, details thereof;

(c) whether a cost-benefit analysis has been undertaken comparing expenditure on the Ethanol Blended Petrol Programme with investment in electric mobility, details; and

(d) whether Government has prescribed consumer protection measures, including disclosure of ethanol blend percentage at fuel stations and vehicle compatibility guidelines, the details thereof?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF PETROLEUM & NATURAL GAS

(SHRI SURESH GOPI)

(a): The Ethanol Blended Petrol (EBP) Programme has been implemented through a phased, scientifically validated and consultative process involving NITI Aayog, automobile manufacturers, Oil Marketing Companies (OMCs), Automotive Research Association of India (ARAI), Society of Indian Automobile Manufacturers (SIAM), Indian Institute of Petroleum (IIP) and other technical institutions.

Extensive laboratory studies and field trials conducted by ARAI, SIAM, IOCL, IIP and automobile manufacturers covering parameters such as engine durability, drivability, startability, corrosion resistance, material compatibility, emissions and fuel efficiency have confirmed that E20 is safe for use under prescribed standards.

These studies also established that legacy vehicles do not exhibit any significant variation in performance or abnormal wear and tear due to E20.

These extensive laboratory studies, field validation and real-world operating experience have not established any widespread adverse impact on vehicle performance due to E20 fuel.

E15+ blended petrol has been in widespread use across the country for over three-and-a-half years and E19–E20 fuel for over two-and-a-half years. More than 20 crore two-wheelers and over 3 crore petrol cars have been operating on these blends without any verified evidence of widespread engine failure or abnormal wear attributable to E20 fuel.

With regard to mileage it depends on driving habits, tyre pressure, servicing and AC load far more than fuel type. Government, automobile manufacturers and vehicle testing agencies have clarified that fuel efficiency depends on several factors, including driving habits, vehicle maintenance, tyre pressure, wheel alignment and air-conditioning load. Any reduction in fuel economy in certain E10-designed vehicles is generally marginal (around 3–5%).

At the same time, E20 provides higher octane, better anti-knock performance, improved combustion characteristics, smoother acceleration and lower emissions, contributing to cleaner and more efficient engine operations emissions, fuel systems and material compatibility have confirmed that E20 fuel does not cause abnormal wear and tear or compatibility issues.

(b): Under the National Policy on Biofuels, ethanol is produced from a diversified basket of feedstocks, including sugarcane-based feedstocks, maize, damaged foodgrains, broken rice, foodgrains unfit for human consumption, surplus foodgrains approved by the National Biofuel Coordination Committee (NBCC) and other approved agricultural feedstocks.

This diversified approach reduces dependence on any single crop while improving feedstock resilience (contribution of maize towards ethanol blending has improved from 0% in ESY 21-22 to around 37% in ESY 25-26).

The Government is promoting crop diversification towards comparatively less water-intensive feedstocks such as maize. An Expert Committee constituted by the Ministry of Agriculture & Farmers Welfare in 2024 examined the water requirement of various ethanol feedstock crops, and its recommendations are being considered while implementing the programme.

Water-use efficiency is also being enhanced through micro-irrigation, drip irrigation and other water conservation measures under the *Per Drop More Crop* component of the Pradhan Mantri Krishi Sinchayee Yojana. Many sugar mills are also encouraging farmers to adopt water-efficient cultivation practices.

(c) The Oil Marketing Companies have not undertaken any cost-benefit analysis comparing the expenditure on the Ethanol Blended Petrol (EBP) Programme with investments in electric mobility. The EBP Programme and Electric Mobility are complementary initiatives aimed at reducing dependence on fossil fuels, lowering greenhouse gas emissions, and enhancing India's energy security. The EBP Programme primarily focuses on decarbonising the existing internal combustion engine vehicle fleet through blending domestically produced ethanol with petrol, while electric mobility promotes the gradual transition to zero-tailpipe-emission vehicles.

(d): In accordance with the Government's policy for implementation of the Ethanol Blended Petrol (EBP) Programme, Oil Marketing Companies have been directed to supply Ethanol Blended Motor Spirit containing up to 20% ethanol, conforming to the relevant Bureau of Indian Standards (BIS) specifications, across all States and Union Territories.

Further, with effect from 1 April 2026, Ethanol Blended Motor Spirit with a minimum Research Octane Number (RON) of 95 has been notified under the relevant statutory provisions.

The Government's policy is to progressively transition towards cleaner, more efficient and environmentally sustainable fuels in line with the National Policy on Biofuels and India's energy security and emission reduction objectives.

Moreover, E85 fuel (containing 85% ethanol and 15% petrol) has been introduced exclusively for use in Flex Fuel Vehicles (FFVs) designed and certified for such fuel (E85). At locations where E85 is marketed, the dispensing units are prominently labelled to indicate the fuel grade, in accordance with the applicable guidelines. Public Sector Undertakings Oil Marketing Companies (OMCs) have informed that currently normal petrol sold at their retail outlets across the country is E20, hence no display and label have been put up.

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