

GOVERNMENT OF INDIA
MINISTRY OF PETROLEUM AND NATURAL GAS

RAJYA SABHA
UNSTARRED QUESTION No. 2224
ANSWERED ON 20.03.2023

EXPECTED BENEFITS FROM E10 AND E20 PETROL ADOPTIONS

2224. SHRI SUSHIL KUMAR MODI:

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

- (a) the estimated decrease in import dependency and saving in foreign exchange reserves associated with 10 per cent ethanol blended petrol (E10);
- (b) the details of States and cities participating in the 20 per cent ethanol blended petrol (E20) pilot-project;
- (c) the expected decrease in imported dependency and saving in forex reserves to be achieved through E20 adoption;
- (d) the vehicle-related fuel efficiency and carbon emissions reduction achieved using E10 and the one expected to be achieved through E20 adoption;
- (e) the amount given to farmers for raw material used for producing E10; and
- (f) whether the current ethanol production capacity is sufficient to meet domestic fuel demand?

ANSWER

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

(SHRI RAMESWAR TELI)

(a): As one litre of ethanol displaces one litre of petrol on volumetric basis equivalent quantity of petrol is saved due to ethanol blending. Accordingly, Public Sector Oil Marketing Companies (OMCs) have saved 433.6 crore litres of petrol on account of ethanol blending during the Ethanol Supply Year (ESY) 2021-22 with an approximate savings of more than Rs. 20,000 crore of foreign exchange.

(b): The details of locations dispensing E20 are at **Annexure**.

(c): The Roadmap for Ethanol Blending in India 2020-25, published in 2021, has estimated an ethanol demand of 1016 crore litres for 20% blending of ethanol with petrol by ESY 2025-26. This will lead to commensurate decrease in imports. The Roadmap anticipates a saving of about Rs. 30,000 crore per annum of foreign exchange at 20% blending of ethanol.

(d): A joint study by Indian Institute of Petroleum (IIP) Dehradun, Automotive Research Association of India (ARAI), Pune and Indian Oil Corporation Limited (IOCL) R&D on E20 as fuel with existing vehicles was undertaken under the aegis of Ministry of Heavy Industries (MHI). The study indicated that E-10 ethanol-blended fuel is not only environment friendly but also has

higher Research Octane Number (RON) due to addition of ethanol. Ethanol is added as oxygenate and hence increases oxygen content for combustion, leading to enleanment of combusted mixture. The findings indicated that the un-burnt hydrocarbon and carbon monoxide emissions decreased by about 20% with E-10 compared to E-0 (neat petrol) on both two wheelers and passenger cars. It also indicated that no clear trend of fuel economy change on account of blending of ethanol was observed during the mileage build-up for E-10 blend.

Further, the Roadmap for Ethanol Blending in India 2020-25, prepared by an inter-Ministerial Committee has estimated 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 by 20% in both two wheelers and passenger cars.

(e): Ethanol Blended Petrol (EBP) Programme has resulted in expeditious payment to the farmers. Though, the Government does not transfer funds directly to the farmers, farmers are being benefited as sugar mills and distilleries participating in the EBP Programme are supported to pay the dues to the farmers expeditiously from the revenues generated from the sale of ethanol to Oil Marketing Companies (OMCs).

(f): The current ethanol production capacity in the country is about 1040 crore litres which is sufficient to meet the blending target of 12% in current ESY.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF RAJYA SABHA UNSTARRED QUESTION No. 2224 FOR 20.03.2023 REGARDING EXPECTED BENEFITS FROM E10 AND E20 PETROL ADOPTIONS.

Details of locations dispensing E20:

Sl. No.	State/UTs	City
1	Bihar	i) Patna
2	Dadra & Nagar Haveli & Daman Diu	i) Vasona, ii) Dadra, iii) Daman, iv) Naroли (Silvassa)
3	Delhi	i) New Delhi
4	Goa	i) Vasco
5	Haryana	i) Ballabhgarh, ii) Faridabad, iii) Gurgaon, iv) Khizrabad, v) Panipat, vi) Radur
6	Himachal Pradesh	i) Shimla
7	Karnataka	i) Bangalore
8	Maharashtra	i) Auranagabad, ii) Mumbai, iii) Nagpur, iv) Pune, v) Thane, vi) Vaizapur, vii) Vashi
9	Punjab	i) Amritsar, ii) Fazilka, iii) Ferozepur Cantt., iv) Ludhiana, v) Mohali
10	Uttar Pradesh	i) Ghaziabad, ii) Greater Noida, iii) Kanpur, iv) Lucknow, v) Sirsaganj, vi) Varanasi
11	Uttarakhand	i) Dehradun
