

Ethanol blending programme: Meeting target will be tough going

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Although the country has made steady progress in raising the share of ethanol in auto-fuels, having increased it to 8.1% in Ethanol Supply Year (ESY) 2020-21 (December-November) from 5% a year earlier, several issues will need to be addressed if the target of 20% blending by 2025 is to be achieved, experts have said.

Prime Minister Narendra Modi had in June, 2021 advanced the target for achieving 20% ethanol blending to 2025 from 2030 earlier. India imported 185 MT of petroleum at a cost of \$55 billion in FY21. Since most petroleum products are used in transport, a successful E20 (20% ethanol blended petrol) programme can potentially save the country \$4 billion per annum. Around 16-18 MT of petrol sales is expected to be displaced by ethanol blending, analysts at Crisil have said.

For ESY 2021-22, the Union government has set a target of 10% ethanol blending, which would require supply of 459 crore litres. According to a recent report by Brickwork Ratings, distilleries in India supplied 302.30 crore litres of ethanol across the country during ESY 2020-21.

A recent report of the International Energy Agency (IEA) highlighted that the country had tripled ethanol demand to an estimated three billion litres between 2017 and 2021. It added, "India will find it challenging to implement its 20% blending mandate in just five years, but even reaching 11% blending would make it the world's third-largest ethanol market behind the United States and Brazil."

Lack of adequate quality feedstock and sporadic availability of ethanol across the country – as feedstock supply is primarily concentrated in sugar-producing states at present – have been cited by experts as factors limiting the extent of ethanol blending. The incompatibility of vehicular technology with blending is also a challenge.

As per the Niti Aayog's report on 'Roadmap for Ethanol Blending' dated June 2021, use of E20 leads to an estimated loss of 6-7% in the fuel efficiency of four-wheelers originally designed for regular petrol. The Society of Indian Automobile Manufacturers (SIAM) had informed the think tank that with modifications in engines (hardware and tuning), the loss in efficiency due to ethanol blending can be reduced.

Vehicles made in India since 2008 are material compatible with E10 and fuel-efficient compliant with E5. However, according to SIAM, retro-fitment on existing vehicles to make them compatible with higher blends is a challenging task. Developing parts with upgraded material for large volumes of vintage variants with numerous variations in design and then making customers upgrade their vehicles is seen to be "an unrealistic scenario".

Also, 20% blending would require supply of around 1,000 crore litres of ethanol per year. According to analysts at ICRA, such quantities of ethanol would necessitate 16% CAGR in the capacity of molasses-based distilleries and a steep 30% CAGR in the capacity of grain-based distilleries.

To boost the programme, the government has reintroduced an administered price mechanism for ethanol procurement, allowing ethanol production from multiple feedstock like heavy molasses, sugarcane juice, sugar, sugar syrup, damaged foodgrains, maize and surplus rice stocks with the Food Corporation of India. Sugar mills and distilleries are also free to set up ethanol plants after obtaining statutory clearances, with the government notifying an interest subvention scheme to assist companies.

The procurement price of ethanol for ESY 2020-21 was Rs 62.65/litre for sugarcane juice, Rs 51.55/litre for damaged foodgrains, Rs 56.87/litre for rice available with FCI, Rs 51.55/litre for maize and for heavy molasses it is in the range of Rs 45.69-57.61/litre.