



PRESS INFORMATION BUREAU
(Research Unit)
Ministry of Information and Broadcasting
Government of India



Budget Series #9

ENCOURAGING ETHANOL BLENDING

Union Budget 2022-23 gives further boost to blending through tax on unblended fuel

(Ministry of Petroleum & Natural Gas)

February 27, 2022

“Ethanol was rarely discussed in the country about 7-8 years ago. But now ethanol has become one of the major priorities of 21st century India. The focus on ethanol is having a better impact on the environment as well as on the lives of farmers.”

- [Prime Minister Narendra Modi](#)

Union Budget 2022-23: Proposal to encourage ethanol-blended fuel

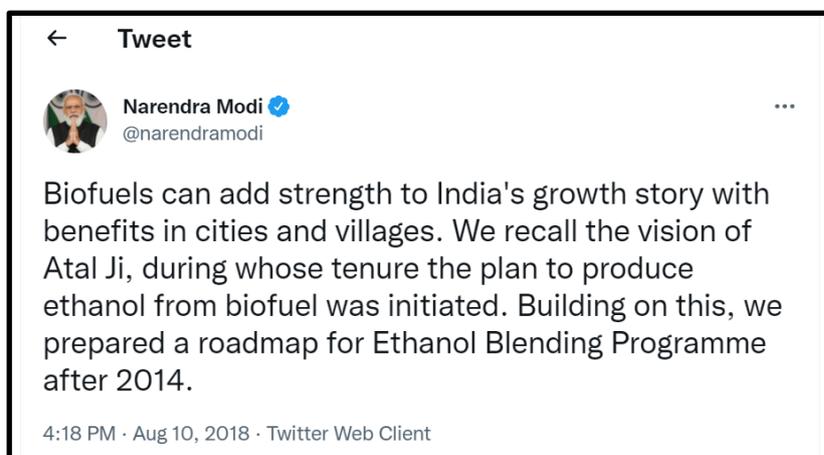
In India’s quest for a clean energy future and to keep up with its commitment to the Sustainable Development Goals (SDGs), the Government of India has been increasingly promoting the use of ethanol-blended fuel in the country. To further encourage the blending of fuel, the [Union Budget 2022-23](#) has announced an **additional differential excise duty of Rupees Two per litre on unblended fuel from the 1st day of October 2022.**

The decision comes as an attempt to prompt retailers, especially private oil companies, to switch to **ethanol-blended fuel** across the country to achieve energy security and a transition into a thriving low carbon economy which is critical for a growing nation like India. This step will also help bring down India’s petroleum imports.

What is Ethanol? Why is it necessary as an alternative fuel?

The energy demand in our country is rising due to an expanding economy, growing population, increasing urbanization, evolving lifestyles and rising spending power. About 98 per cent of the fuel requirement in the road transportation sector is currently met by fossil fuels and the remaining 2 per cent by bio-fuels.

- Ethanol is one of the principal bio-fuels, which is naturally produced by the fermentation of sugars by yeasts or via petrochemical processes such as ethylene hydration. It is used as a chemical solvent and in the synthesis of organic compounds, apart from being an alternative fuel source.
- Domestic bio-fuels provide a strategic opportunity to the country, as they reduce the nation's dependence on imported fossil fuels.
- In addition, when utilized with appropriate care, bio-fuels can be environmentally friendly, sustainable energy sources.
- They can also help generate employment, promote Make in India, Swachh Bharat, doubling of farmers' incomes and promote Waste to Wealth generation.



Ethanol Blending Programme¹

The Ethanol Blended Petrol (EBP) Programme was launched in January 2003 with the sale of **5% ethanol blended petrol** in nine States and four UTs. In 2006, the [Ministry of Petroleum and Natural Gas](#) extended the sale of 5% Ethanol Blended Petrol to 20 states and four UTs of the country. However, the performance of the programme remained limited due to challenges such as non-inclusion of conversion of grain to ethanol, high taxation of ethanol, limited availability of feedstock and infrastructure, among others.

The Government under the leadership of Prime Minister Narendra Modi, in line with its Energy security, climate change and rural economy enhancement goals, has initiated multipronged reforms to boost Ethanol usage in the country. Under the Ethanol Blended Petrol (EBP) Program, an indicative target of 20% blending of ethanol in petrol by 2030 was laid out. Subsequently, **the target year for achieving 20% ethanol blending in petrol was also advanced to 2025** by 'The Cabinet Committee on Economic Affairs' (CCEA) in 2020.

Ethanol Blending Programme- Progress Timeline

Since the inception of the Ethanol Blending Programme (EBP), there have been significant measures taken by the Central Government to increase the production and utilization of

¹<https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/oct/doc202110441.pdf>
https://www.niti.gov.in/sites/default/files/2021-06/EthanolBlendingInIndia_compressed.pdf

ethanol which are mentioned in the give below.

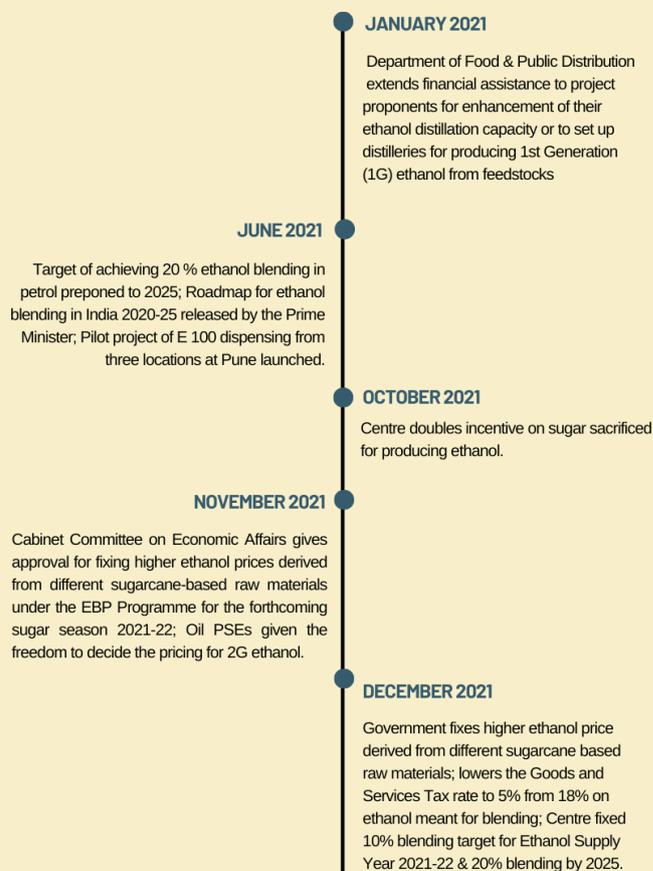
A BRIEF TIMELINE

ETHANOL BLENDING PROGRAMME



DEVELOPMENTS IN 2021

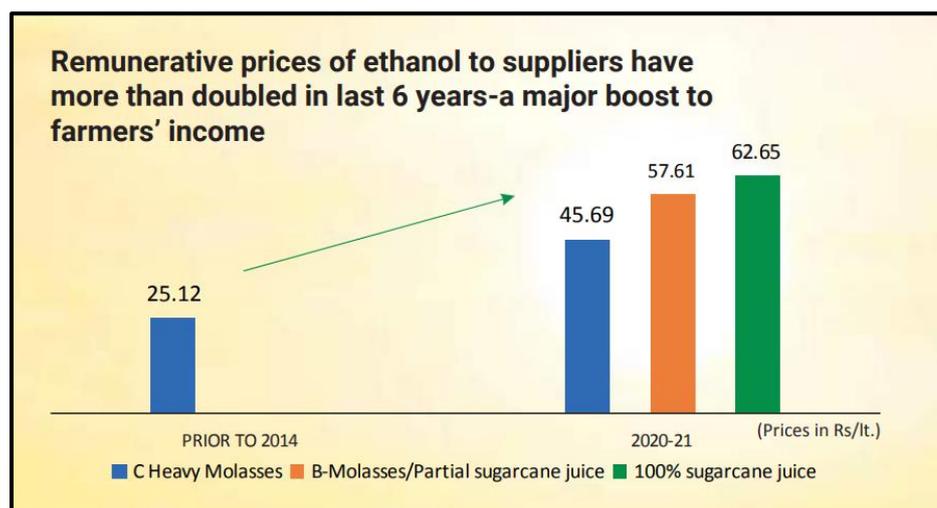
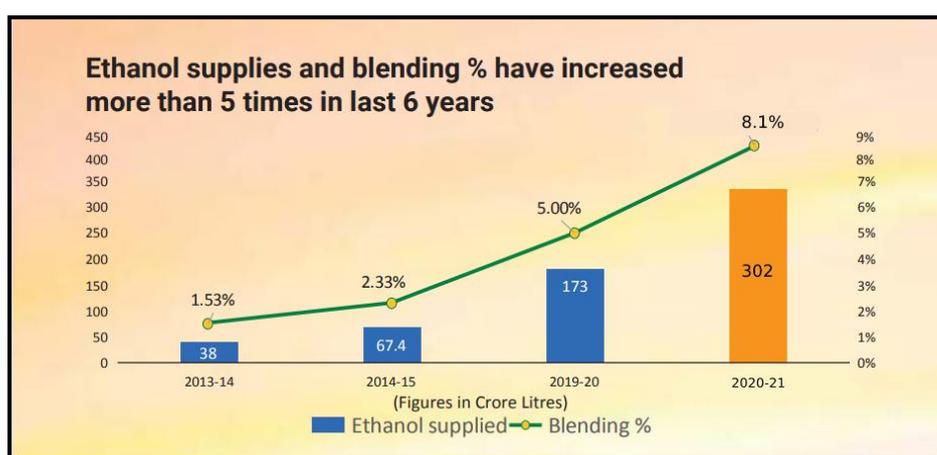
ETHANOL BLENDING PROGRAMME



Significant Outcomes²

The results from these landmark reforms have had positive effects not only on the country's economy but also on the income of the farmers, and they are also geared up to recharge the rural economy. Some of the significant outcomes from these reforms are:

- **Ethanol supplies and blending percentage have increased** more than five times in last six years. While 38 crore litres of Ethanol was procured during the year 2013-14, in 2020-21 this jumped nearly eight times to 322 crore litres.
- Remunerative prices of ethanol to suppliers have more than doubled in last six years—a major boost to farmers' income. **An eight-fold jump in procurement in last six years and the price of procurement going up by nearly 2.5 times, has led to a significant jump in the income of farmers.**



- Ethanol **distillation capacities have almost doubled** and number of distilleries increased by 40 per cent in five years.
- The decision to allow diversion of B heavy molasses, sugarcane juice / sugar / sugar syrup for ethanol production in 2018-19 enabled **reliable supply of feedstock and the price stability of sugar.**

²<https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/oct/doc202110441.pdf>

- Under EBP, OMCs (Oil Marketing Companies) have paid sugar mills nearly Rs. 42,000 crore for ethanol supplies in the last seven years, which has **helped mills to clear farmers' dues**. Additionally, decision has been taken to buy damaged and surplus food grains for ethanol production, ensuring price value for surplus grain stock as well as accommodating the fresh season crop to meet EBP target.
- The cumulative **foreign exchange impact** due to EBP Programme is estimated over Rs. 26,509 crores during the period ESY 2014 to 2021 (up to July 2021).
- One crore litre of ethanol-blended petrol can save around 20000 tons of carbon dioxide emission. **Greenhouse gas emissions due to the EBP Programme were lowered by 192 lakh tons from 2014 to 2021** (up to July 2021).
- The IDR Act implementation enabled the state governments to avoid complicated documentation procedures and conduct pro-business activities like-approvals, online permits, electronic locking, GPS tracking of vehicles carrying ethanol etc.



Hardeep Singh Puri ✓
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“Target date for achieving 20% ethanol-blending with petrol advanced by 5 years to 2025 from 2030. Will cut pollution & reduce import dependence. Besides helping the environment, focus on ethanol will also benefit farmers.”

Roadmap for Ethanol Blending in India 2020-25

On the occasion of World Environment Day 2021, Prime Minister Narendra Modi released the “[Report of the Expert Committee on Roadmap for Ethanol Blending in India 2020-2025](#)”. The report suggested: (i) an annual roadmap for production and supply of ethanol till 2025-26, and (ii) systems for countrywide marketing of ethanol.

#IndiasGreenFuture
Impetus to Ethanol Blending in Petrol Program

Promoting Waste-to-Wealth
Aatmanirbhar Kisan
Aatmanirbhar Bharat

- PM Modi to release report of Expert Committee on Roadmap for ethanol blending in India 2020-25.
- Pilot project for E100 dispensing from 3 locations at Pune launched.
- These initiatives will bring all stakeholders together and will act as a stepping stone in achieving the target of E20 by 2025-2026.
- Impetus to advanced biofuels, fillip to alternative low-carbon transport fuels, boost to distillation capacities, big boost to farmers' income & welfare.

Key observations and recommendations from the Report:³

- **Fuel ethanol demand projection:** India's requirement of ethanol for petrol blending will increase **from 173 crore litres in 2019-20 to 1,016 crore litres in 2025-26**. To enable roll out of ethanol production across India, ethanol may be supplied from surplus to deficit states based on the requirements to ensure uniform availability of ethanol blends in the country.
- **Ethanol blending roadmap:** The Report recommends the Ministry of Petroleum and Natural Gas to notify a plan for availability of **E10 fuel (blend of 10% ethanol and 90% petrol) by April 2022**. Further, the Ministry is to notify a plan for the continued availability of the fuel for older vehicles. Fuel blended with 20% ethanol (E20) should be launched in a phased manner from April 2023 to ensure the availability of E20 by 2025. The rollout of higher ethanol blends may be done in phased manner, starting with the states with surplus production of ethanol.
- **Expediting regulatory clearances:** The report recommends measures to expedite regulatory clearances for ethanol production such as expediting the issuing of consent to establish distilleries by state governments. Further, a single window system may be formulated by the [Department for Promotion of Industry and Internal Trade](#) to facilitate speedy clearances for new projects and expansion of current projects for ethanol production.
- **Environmental Impact:** One litre of ethanol from sugar requires about 2,860 litres of water. In view of the need for water conservation, the report recommended that suitable incentives should be used to (i) source ethanol from less water-intensive crops, and (ii) promote production from maize and second-generation sources.
- **Ethanol compatible vehicles:** The Committee highlights that in order to use higher ethanol blends, vehicles need to be designed holistically to prevent engine failure and low fuel economy. To ensure production of ethanol-blended petrol compatible vehicles in the future, the Committee recommended that: (i) E20 material compliant and E10 tuned engine vehicles may be rolled out across the country from April 2023, and (ii) vehicles with E20 tuned engines can be rolled out from April 2025.
- **Unrestricted movement of denatured ethanol:** The report noted that ethanol used for blending purposes is denatured ethanol (unfit for human consumption). It further noted that state governments are empowered to legislate, control, and levy taxes and duties on liquor meant for human consumption. The report recommended that movement of denatured ethanol across India should not be under the control of states, but maybe controlled only by the central government to ensure unrestricted movement across India.

³https://www.niti.gov.in/sites/default/files/2021-06/EthanolBlendingInIndia_compressed.pdf

References:

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<https://pib.gov.in/PressReleasePage.aspx?PRID=1782275>

Further Reading:

http://petroleum.nic.in/sites/default/files/AR_2018-19.pdf
<https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/oct/doc202110441.pdf>

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