

Voluntary Report – Voluntary - Public Distribution

Date: February 03, 2022

Report Number: IN2022-0013

Report Name: India Accelerates Initiatives to Enhance Grain-based Ethanol Production

Country: India

Post: New Delhi

Report Category: Agriculture in the News, Biofuels, Policy and Program Announcements, Agriculture in the Economy, Trade Policy Monitoring

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Report Highlights:

Since January 2021, the Indian government has agreed, in principle, to install or upgrade nearly 200 grain-based ethanol production facilities. Cumulatively, these projects would potentially contribute an additional 8.59 billion liters in ethanol capacity per year, supporting India's blending mandates while simultaneously diversifying its biofuel feedstocks. However, the number of projects that will become operational remains to be seen. India achieved a record 8.1 percent ethanol blending ratio with petroleum in ethanol supply year 2021 (December-November), largely propelled by the government's November 2021 decision to divert stocks of extra neutral alcohol from potable liquor production toward ethanol.

REPORT OVERVIEW

To achieve the Modi Administration's E-20 blending goal by ethanol supply year (ESY) (December-November) 2025, India would need to procure approximately 11 billion liters (BL) of ethanol for blending with petroleum. As of November 2021, India's concentrated ethanol production capacity totaled slightly above six billion liters. Of that amount, approximately 5.25 BL (88 percent share) is ascribed to distillation units (projects) which use sugar and molasses feedstocks. Conversely, current grain-based (e.g., corn) distillation capacity consists of 750 million liters. To address the production gap, the government has looked to increase India's grain-based ethanol unit capacity by 5-5.5 billion liters.

Since 2021, the Department of Food and Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution, has agreed, in principle, to establish 196 grain-based ethanol plants. The additional production capacity, if fully utilized, would result in an additional annual volume of 8.59 BL of ethanol for use in the government's ethanol blended petroleum (EBP) program. Despite easing environmental impact assessment requirements, government subsidies (interest subvention scheme), and the Modi Administration's efforts to fast-track construction, the ethanol units remain subject to additional EBP requirements (See: [Gazette of India, Ministry of Environment, Forest and Climate Change Notification](#)). While it remains unknown how many projects will become fully operational, the projects' endorsements demonstrate the Indian government's apparent intent to meet its blending goals.

State Production Capacity

The number of new grain-based ethanol projects vary by state. At present, Punjab has 16 grain-based ethanol plants, the largest amount, with an installed capacity of 620 million liters. Since January 2021, roughly 35 projects have been approved in Maharashtra which would increase the state's annual capacity by 1.07 BL, according to Post sources. Additionally, 29 projects were approved in Uttar Pradesh with an additional estimated annual capacity of 1.08 BL, while 20 new projects totaling 1.02 BL of potential capacity were approved in Chhattisgarh. An additional 26 various projects are approved throughout Bihar, Odisha, and West Bengal. To achieve the estimated 8.59 BL of ethanol produced annually through the new plants, India would need to balance interests for procuring additional surplus grain stocks for fuel against feed/human consumption.

Extra Neutral Alcohol (Potable Liquor)

According to the All-India Distillers Association (AIDA), India currently has 113 grain-based distilleries (Table 1) with a cumulative annual capacity of 2.58 billion liters (Table 1). More than half of these units produce potable liquor (i.e., spirits), which is also among the top tax revenue streams for state governments across India.

Table 1. India: Installed Capacity of Grain-based Distilleries

State	Number of Distilleries	Annual Capacity (Million Liters)
Punjab	16	620
Maharashtra	28	430
Andhra Pradesh	15	390
Haryana	13	360
Madhya Pradesh	8	180
Bihar	4	130
Rajasthan	8	120
Rest of India	21	350
Total	113	2,580

Data source: AIDA. Note: Annual capacity is based on 340 operational days.

For sugar/molasses-based ethanol production, the Indian government approved an additional 70-75 new projects, which, if fully functional, would increase the cumulative annual capacity by 1.88 BL of ethanol. In ESY 2020/21, India's overall sugar and molasses-based capacity was approximately 5.25 BL from 239 projects. Furthermore, on February 2, 2022, the Ministry of Finance introduced an additional excise duty of \$0.0267 per liter (Indian rupee 2.0/liter) on unblended fuels, to go into effect October 1, 2022. The move intends to decrease India's dependence on crude oil imports (Source: [The Economic Times](#)).

Attachments:

No Attachments.