

During FY 23, the Company announced capital expenditure of ₹ 175 crore which would lead to increased crushing capacity (from 61,000 TCD to 63,000 TCD), modernisation, refurbishment, debottlenecking and efficiency improvements at various sugar units, to enable cost optimisation. The CapEx will also go into process conversion and a new pharma facility to enhance the refined sugar production.

Following is a summary of the upcoming planned activities:

- Expansion in crushing capacity of Sabitgarh sugar unit by 2000 TCD, thereby increasing the crushing capacity to 9000 TCD
- Process conversion at Milak Narayanpur unit to refinery process (DRP)
- Setting up of another pharma sugar facility at one of the sugar units, besides the existing facilities at the Sabitgarh unit

The proposed increase in distillation capacity to 1,110 KLPD would further enhance the integrated operation capabilities, value additions and profitability for the Company.

To support the financial health of the industry and to ensure timely payments to the farmers, we would look forward to the Government's help in increasing the Minimum Selling Price (MSP) of sugar, as the domestic sugar prices are stagnant and have not been able to offset the increased costs, including sugarcane price increase in SS 2021-22, or another such possible increase in the forthcoming season.

## ALCOHOL BUSINESS

### Indian Ethanol Industry

#### Indian Ethanol Industry Overview

The Central Government has been focussing on reducing the country's dependence on imported crude oil while minimising the environmental impact resulting from pollution and emissions. The Government has been actively promoting the production and blending of fuel ethanol with petrol, and has targeted 20% blending through Ethanol Blended Petrol (EBP) Programme or EBP20 by 2025. EBP20, which was earlier targeted by 2030, was advanced in December 2020, reaffirming the Government's focus and commitment towards biofuels.

EBP20 will lead to numerous benefits, such as saving of ₹ 30,000 crore of foreign exchange per year, lower carbon emissions, self-reliance, use of damaged food grains, increased farmers' incomes, and better investment opportunities.

#### FY 23 Industry – Domestic Outlook:

- Out of the 511.5 crore litres finalised by the OMCs for the Ethanol Supply Year 2022-23 (December 2022 to October 2023) against a total requirement of 600 crore litres, contracts for 505.2 crore litres have been executed
- Out of the 523.5 crore litres finalised by the OMCs for the Ethanol Supply Year 2022-23 (December 2022 – October 2023) against a total requirement of 600 crore litres, contracts for 519.9 crore litres have been executed till May 21, 2023
- Against the above, 268.6 crore litres have been lifted by the OMCs till May 21, 2023
- The total lifted quantity is 52% of the contracted quantity and 51% of the finalised quantity
- The average blending percentage is 11.67% till May 21, 2023





### Raw Material Wise Ethanol Contracted and Supplied Quantities

Raw Material	Total LOI Quantity	% of Total LOI Quantity	Total Contracted Quantity	Receipt Quantity	% of Total Receipt Against Total Contracted Qty
Sugarcane Juice	143.02	27%	136.27	118	87%
B-Heavy Molasses	230.05	44%	235.14	101.16	43%
C-Heavy Molasses	6.29	1%	5.71	3.19	56%
Damaged Food Grains	21.45	4%	18.98	6.7	35%
Surplus Rice	122.73	23%	123.79	39.49	32%
<b>Total</b>	<b>523.54</b>	<b>100%</b>	<b>519.9</b>	<b>268.55</b>	<b>52%</b>

Note: Till May 21, 2023

### Quantity of Ethanol Supplied and Amount of Sugar Diverted from December 2022 to May 2023

- Till May 21, 2023, out of total ethanol supply of 268.55 crore litres, 118 crore litres have been supplied from Sugarcane Juice and 101.16 crore litres have been supplied from B-Heavy Molasses. For 118 crore litres, 17.70 lakh metric tonnes of sugar have been diverted and for 101.16 crore litres, 8.09 lakh metric tonnes of sugar have been diverted.
- Till May 21, 2023, total contracted quantity from Sugarcane Juice and B-Heavy Molasses is 136.27 crore litres and 235.14 crore litres respectively. For 136.27 crore litres, 20.44 lakh metric tonnes of sugar shall be diverted, and for 235.14 crore litres, 18.81 lakh metric tonnes of sugar shall be diverted.

### Indian Ethanol Policy and Market Developments

The Government has been incentivising the industry through supportive ethanol prices under the EBP Programme. There were two major developments on the pricing front in FY 23:

**Ethanol Price Increase by Oil Marketing Companies (OMCs) for ESY 2021-22:** In June 2022, the OMCs have declared monetary relief on despatch of ethanol for supplies made between June 1, 2022 and November 30, 2022 as below. This was to compensate for high energy costs and to boost biofuel production, and was in addition to previously declared ethanol prices by the Government.

Feedstock	Relief Amount (₹/KL)
Sugarcane Juice/Sugar/Sugar Syrup based Ethanol	1604
B-Heavy Molasses based Ethanol	1493
C-Heavy Molasses based Ethanol	1179
Damaged Food Grain based Ethanol	2337
Surplus Rice based Ethanol	1437

**Ethanol Price Increase by the Government for ESY 2022-23:**

In November 2022, the Government announced higher ethanol prices under the EBP Programme for ESY 2022-23 as shown below. While prices have been increasing over the years, we believe that to meet the aggressive Ethanol Blended Petrol (EBP) target of 20%, the Government may need to rectify prices of ethanol produced from sugarcane juice and grain, to improve project viability to facilitate further additions in capacities.

Ethanol Supply Year (ESY) was also redefined as a period of ethanol supply from November 1 of a year to October 31 of next year, with effect from November 1, 2023. In view of the above change in ESY period, the ESY 2022-23 period will be considered from December 1, 2022 to October 31, 2023, i.e. 11 months

Feedstock	ESY 22-23 Basic Rate for Ethanol (₹ Per Ltr)	ESY 21-22 Basic Rate for Ethanol (₹ Per Ltr*)
Sugarcane Juice/Sugar/ Sugar Syrup based Ethanol	65.61	63.45
B-Heavy Molasses based Ethanol	60.73	59.08
C-Heavy Molasses based Ethanol	49.41	46.66
Damaged Food Grain based Ethanol	55.54	52.92
Maize based Ethanol	56.35	53.45
Surplus Rice based Ethanol (Sourced from FCI)	58.50	56.87

\* ESY 21-22 Basic Rates do not include relief amount

**Incentives for maize production**

In view of the limited scope for expansion of sugar and grain sectors to achieve the target of 20% ethanol blending and the decline in sugar production in SS 2022-23, the Government is also planning incentives for maize production. The Ministry of Agriculture, in collaboration with the Indian Institute of Maize Research, will boost maize production through the development of high-yielding varieties that have higher ethanol recovery. The distillery will work with farmers for assured procurement of maize on the lines of the sugar industry.

**Automobile Sector updates on E20 and Flexible Fuel Vehicles (FFVs)**

The progress and updates in the key end-user industry, i.e. automobiles, are important for achieving the targets of the Ethanol Blended Petrol (EBP) programme in a timely manner. Ethanol can be used in vehicles calibrated to that particular degree of ethanol blending (e.g., E20) or in Flexible Fuel Vehicles (FFVs) that can run on pure fossil fuel or fossil fuels blended with any degree of biofuels.

In India, with the adoption of BS6 Phase II norms, vehicles sold in the country need to be compatible with E20 fuel. The commercial launch of FFVs is expected to happen in the coming years. E20 dispensing commenced at more than 1,000 outlets in specified states from/before April 1, 2023, which will raise the demand further. There is an increased R&D investment in FFVs that are likely to roll over by 2025.

In India, new projects have commenced which will boost the demand for ethanol, such as FFVs, Ethanol Chulhas (Gas Stove), Ethanol Based Diesel Generators (DGs), Opening of Energy Hubs, Charging stations, Hydrogen, CBG, among others.



## TRIVENI ALCOHOL BUSINESS AT A GLANCE

Our long-term strategy for growing the Alcohol business, and to be an active partner in India's E20 programme and self-reliance journey, is driven by our passion for manufacturing premium quality products at all our manufacturing facilities.

With an overall capacity of 660 Kilo Litre Per Day (KLPD), the Company has state-of-the-art distilleries spread across Muzaffarnagar (MZN) – two facilities with an aggregate of 260 KLPD capacity, a 200 KLPD facility at Sabitgarh (SBT) and another 200 KLPD facility at Milak Narayanpur (MNP) in Uttar Pradesh.

SBT distillery produces high quality ethanol from molasses, the distillery at MNP is a multi-feed stock plant having the ability to use molasses and sugarcane juice/syrup, as well as grains to produce high-quality ethanol. This distillery at MNP is among the largest new multi-feed distilleries being set up in India.

MZN houses two facilities, with the latest being a grain-based distillery. The existing 200 KLPD distillery at MZN boasts of flexible product manufacturing capability - Ethanol, Extra Neutral Alcohol (ENA), Rectified Spirit (RS) and Denatured Spirit (SDS) from molasses, while the recently commissioned 60 KLPD grain-based facility at MZN produces both Ethanol and ENA. Dried Distillers Grain with Solubles (DDGS), a by-product produced in grain plants, is sold to premium institutions and has been well accepted in market. The Company also manufactures Indian Made Indian Liquor (IMIL) at this complex.

In FY 23, the Company embarked on capacity expansion and enhanced the total distillation capacity from 320 KLPD to 660 KLPD through augmentation of capacity at Sabitgarh distillery to 200 KLPD Ethanol, commissioning of the 200 KLPD Multi Feed Distillery at Milak Narayanpur (MNP) and a 60 KLPD grain-based distillery at Muzaffarnagar Distillery complex, where superior quality Ethanol / ENA is produced.

In the next phase of expansion, overall capacity will be further enhanced through two new dual-feed stock distilleries with an aggregate capacity of 450 KLPD (each having 225 KLPD capacity), at Rani Nangal and Sabitgarh, U.P, at a cost of ₹ 460 crore. This will take the total distillation capacity up to 1,110 KLPD. Accordingly, the Company has started setting up a 225 KLPD Multi-feed distillery unit in its Rani Nangal sugar complex and the second 225 KLPD distillery is proposed to be set up in its Sabitgarh distillery complex, for which the process of obtaining clearances is underway.

**SBT distillery produces high quality ethanol from molasses, the distillery at MNP is a multi-feed stock plant having the ability to use molasses and sugarcane juice/syrup, as well as grains to produce high-quality ethanol.**

We are also producing Indian Made Indian Liquor (IMIL) at its bottling facility in the distillery complex at Muzaffarnagar, Uttar Pradesh, to effectively use molasses that are reserved to be sold to country liquor units at a price much lower than the market price, and to facilitate forward integration of its distillery operations.

While ethanol is currently produced using grains as feedstock at the distillery at Milak Narayanpur, all the distilleries, except the 60 KLPD distillery at Muzaffarnagar which exclusively operates on grain, have assured access to a consistent supply of captive raw material derived from sugarcane.

As an environmentally conscious and responsible corporate, we follow the highest standards in Environment, Health, and Safety (EHS), with stringent compliance to environmental and pollution norms. We have set up concentrated spent wash (termed SLOP) fired incineration boilers at all the distilleries, as per the prescribed directives and guidelines for effluent treatment, ensuring Zero Liquid Discharge (ZLD).

## OUR ALCOHOL BUSINESS PERFORMANCE

- Achieved highest-ever production of 18.12 crore litres & sales of 18.04 crore litres during FY 23, growing significantly year-on-year by 68.4% and 53.1% respectively.
- Additional capacities of 340 KLPD, new as well expansion, as commissioned in FY 23 resulted in increased sales volumes - aggregate distillation capacity 660 KLPD.
- During the year, revenues from the distilleries contributed 21% of TEIL's net turnover and it will further rise with our proposed increase in distillery capacity from the present 660 KLPD to 1,110 KLPD.
- Higher average realisation due to increase in ethanol prices prescribed by the Government as well as Oil Marketing Companies (OMCs).

- Ethanol constituted 93% of alcohol sales during FY 23.
- Sale of Ethanol / ENA produced from sugarcane-based feedstocks (majorly B-heavy) constituted 75% of the total alcohol sales for FY 23, while Ethanol / ENA produced from grain contributed to the balance 25%.

#### Our Ethanol business highlights in FY 23

- Milak Narayanpur (MNP) distillery unit was commissioned in time, and the production capacity ramped up to 100% in a short span of time.
- MNP grain plant was also commissioned in time and the capacity was augmented in a very short span of time.
- MNP distillery was operated with all feedstocks – B-heavy Molasses, Syrup, Grains, in FY 23.
- MZN grain distillery has been producing ENA and Ethanol. MZN grain distillery has been approved by UP Excise to produce 75% Ethanol and 25% ENA out of its total production capacity.
- MZN grain distillery manufactured superior quality ENA, which was supplied to IMFL manufacturers across UP besides being utilised for captive consumption.
- Efficient supply chain logistics were established for the procurement of grain from open market as well as from FCI, which helped accelerate the production targets and streamline the plant operations in multi-feed sector.
- The Triveni DDGS quality is well accepted in the market and is being sold to marquee institutional customers contributing to 25% of sales volumes.
- Efficient water treatment & recycle system reduced our ground water consumption far below the norms
- Zero Liquid Discharge & meeting stringent Environmental norms at distilleries.

#### Outlook for Ethanol Industry and our Alcohol Business

OMCs have started E20 at more than 1,000 outlets across the country from April 1, 2023. We believe the continued enhancement in ethanol blending percentages will lead to robust demand.

According to the Food and Consumer Affairs Ministry, the ethanol production capacity in India currently is ~1,000 crore litres, which is expected to go up by 25% to 1,250 crore litres by the end of 2023. In order to achieve the target of 20% blending by 2025, ~1,000+ crore litres of ethanol will be required. With ~300+ crore litres for other usage, there is need to create capacity of ~1,700 crore litres, assuming plants operate at 80% efficiency. This provides visibility to the industry for incremental investments in distillation capacities.



The Ethanol Blended Petrol programme would also have the following impact on the economy:

- It would benefit maize and paddy farmers, addressing their surplus grain problem; about 16.5 million tonnes of grains will be utilised
- Diversion of sugar to the production of ethanol would help in mitigating surplus sugar situations, bring down dependence on imported crude, provide stability in sugar prices, improve financials and liquidity of sugar mills, and ensure timely payment of sugarcane dues to farmers
- It will bring new investment opportunities to set up new distilleries in rural areas and help in job creation in villages
- It will lead to improvement in air quality by reducing Carbon Monoxide emission by 30-50% and Hydrocarbon by 20%
- It would help save foreign exchange on account of crude oil import bill and would reduce dependence on imported fossil fuel, thus helping in achieving the goal of Atmanirbhar Bharat in the Petroleum sector

At Triveni, we expect to produce ~21 crore litres of alcohol in FY 24. Of the two new dual-feedstock distilleries, we expect the Rani Nangal distillery to be commissioned by Q4 FY 24 and the Sabitgarh distillery thereafter. The Company has decided to commission these sequentially, and this also meets the strategic objectives of the business where the Company retains some flexibility based on the relative pricing and margins of each of its raw material. Depending on the timing of the Sabitgarh distillery, the Company expects production ranging between 28-32 crore litres in the following year, i.e. FY 25.