

Preference in Purchase of Ethanol to Cooperative Sugar Mills and Establishment of Cogeneration Power Plants

Mahesh Kadam¹ and Amit Borkar²

¹Associate Professor, Vaikunth Mehta National Institute of Cooperative Management, Pune, (M.S.)

²Assistant Professor, Vaikunth Mehta National Institute of Cooperative Management, Pune, (M.S.)

SUMMARY

India, the world's second-largest sugar producer, has started to turn its surplus into bioethanol as it strives to lower energy costs and meet climate pledges. Ethanol is a clean fuel produced from renewable resources, and Cooperative Sugar Mills play a crucial role in its production. In addition to producing ethanol, sugar mills can also set up Cogeneration Power Plants. The article gives the overview, process, road map and implementation procedures for the Preference in Purchase of Ethanol to Cooperative Sugar Mills and Establishment of Cogeneration Power Plants.

INTRODUCTION

India imports fuel in large quantities: 185 million tonnes of petrol in 2020-21, costing USD 55 billion, according to a report by NITI Aayog, the government's think tank. Blending ethanol with petrol is therefore proposed as a way to use sugar not consumed domestically while achieving energy independence. NITI Aayog estimates that a 20-80 blend of ethanol and petrol will save the country at least USD 4 billion a year by 2025. Last year, India used 3.6 million tonnes (about 9%) of its sugar to make ethanol; in 2022-23 it aims for this to reach 4.5-5 million tonnes. Ethanol Blending in India 2020-25, prepared by an inter-ministerial committee, estimated an ethanol requirement of 1,016 crore liters to achieve 20 per cent blending targets in ESY 2025-26. In line with the roadmap, oil marketing companies have achieved 10 per cent ethanol blending during 2021-22 and 12 per cent during 2022-23. Growth of ethanol as biofuel sector in last 5 years has amply supported the sugar sector as diversion of sugar to ethanol has led to better financial positions of sugar mills due to faster payments, reduced working capital requirements and less blockage of funds due to less surplus sugar with mills. During 2021-22, revenue of more than ₹ 20,000 crore has been made by sugar mills/distilleries from sale of ethanol which has also played its role in early clearance of cane dues of farmers.

Ethanol production capacity of molasses/sugar-based distilleries has increased to 700 crore litres per annum and the progress is still continuing to meet targets of 20% blending by 2025 under Ethanol Blending with Petrol (EBP) Programme. In new season, the diversion of sugar to ethanol is expected to increase from 36 LMT to 50 LMT which would generate revenue for sugar mills amounting to about ₹ 25,000 crores. The Ethanol Blending Programme has saved foreign exchange as well as strengthen energy security of the country. By 2025, it is targeted to divert more than 60 LMT of excess sugar to ethanol, which would solve the problem of high inventories of sugar, improve liquidity of mills thereby help in timely payment of cane dues of farmers and will also generate employment opportunities in rural areas. To achieve blending targets, Government is encouraging sugar mills and distilleries to enhance their distillation capacities for which Government is facilitating them to avail loans from banks for which interest subvention @ 6% or 50% of the interest charged by the banks whichever is lower is being borne by Government. This will bring an investment of about ₹ 41,000 crore. In past 4 years, loans of about ₹ 20,343 crore have been sanctioned to 243 project proponents out of which loans of about ₹ 11,093 cr have been disbursed to 210 project proponents. Sympony of Government policies, State Government and Sugar mills have led to promotion of interest of farmers, consumers as well as workers in sugar sector affecting livelihood of more than 5 crore persons directly and all the residents of the country indirectly by making sugar affordable for one and all.

The Cooperative Sugar Mills

Overview

Cooperative Sugar Mills are community-owned organizations that produce sugar, ethanol, and other products from sugarcane. They provide a livelihood for farmers in the area.

Process

Sugarcane is crushed to extract juice, which is then boiled to produce sugar. The remaining molasses can be fermented and distilled to produce ethanol.

Growth

The cultivation of sugarcane provides numerous benefits, such as soil conservation, carbon sequestration, and the generation of oxygen. It also supports a rural economy.

Establishment of Cogeneration Power Plants**What is Cogeneration?**

Cogeneration is the simultaneous production of electricity and useful heat from the same energy source. It is a highly efficient method of energy conversion.

Benefits of Cogeneration

Cogeneration power plants can reduce greenhouse gas emissions, decrease energy costs, and improve energy security. They can also be used to generate additional income streams for sugar mills.

Role of sugar mills

Sugar mills can leverage their experience with power generation and steam production to set up cogeneration power plants. They can also use the waste products from sugar production as fuel for the cogeneration plants.

Preference in Purchase of Ethanol to Cooperative Sugar Mills**Factors Influencing Preference**

The primary factors influencing the preference in purchasing ethanol from Cooperative Sugar Mills are price, quality, and sustainability. Ethanol from sugar mills is often of higher quality than that produced by other methods.

Advantages of sourcing ethanol from Cooperative Sugar Mills

By sourcing ethanol from Cooperative Sugar Mills, buyers can support local farmers and promote sustainable development. They also benefit from a more transparent and reliable supply chain.

The Importance of Ethanol in the Renewable Energy Sector**Renewable Fuel Standard (RFS)**

The Renewable Fuel Standard (RFS) mandates the use of renewable fuels in the transportation sector. Ethanol is an important component of this policy, as it is the most widely used biofuel in the United States.

Reducing Greenhouse Gas Emissions

Replacing gasoline with ethanol can lead to significant reductions in greenhouse gas emissions. Ethanol is also an oxygenate, which helps gasoline burn more cleanly and reduces harmful emissions.

Economic Benefits

The production and use of ethanol generates economic benefits such as jobs, industry growth, and rural development. In addition, ethanol production helps to reduce dependence on foreign oil.

CONCLUSION

Cooperative Sugar Mills are community-owned organizations that produce sugar, ethanol, and other products from sugarcane. They provide a livelihood for farmers in the area. Sugarcane is crushed to extract juice, which is then boiled to produce sugar. The remaining molasses can be fermented and distilled to produce ethanol. The cultivation of sugarcane provides numerous benefits, such as soil conservation, carbon sequestration, and the generation of oxygen. It also supports a rural economy.

REFERENCES:

<https://old.ptinews.com/news/national/centre-should-reconsider-its-decision-on-ethanol-co-operative-sugar-mills-federation-official/703370.html>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1904637>

<https://www.chinimandi.com/maharashtra-state-co-operative-sugar-factories-federation-urges-govt-to-increase-ethanol-prices-amid-procurement-concern/>

<https://www.thethirdpole.net/en/energy/indias-push-to-use-sugar-for-ethanol-may-create-problems/>