

# Sugarcoating the biofuels policy

Spurring ethanol production can help the government smooth the boom-bust cycle of sugar production, address farmer anger over back-payments and cut oil import bills and emissions. But the auto industry urgently needs to cooperate too

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Since the 1973-74 oil crisis triggered by the Yom Kippur war when an Arab oil embargo was targeted at countries supporting Israel, there is always a trade-off between the fossil fuel and ethanol, an environment friendly biofuel, depending on how the prices of oil and sugar behave. To refresh memory, between the start of the embargo in October 1973 and its withdrawal in March 1974, oil prices zoomed from \$3 to \$12 a barrel. Then again, during the 1979 oil crisis linked to Iranian revolution, oil took another giant leap to \$39.50 a barrel, fuelling further the Brazilian interest in ethanol.

The Organisation of Petroleum Exporting Countries (OPEC), a 15-member cartel led by Saudi Arabia, will constantly keep the importing countries on the tenterhooks about its daily crude production that will have a bearing on oil prices. As for the global sugar industry, its fortunes will perennially swing between boom and bust. Because of that, major sugarcane growing countries such as Brazil and India are finding it wise to use a good portion of the crop (in the case of the former) or the sugar by-product molasses to make ethanol, which is what happens in India. Major sugar exporting countries Thailand and Australia, too, have found in making ethanol a way to limit the supply of the sweetener in a bearish market.

Besides sugarcane and its by-product, ethanol is also produced from corn — the US will use as much as 40 per cent of that crop for making the biofuel—sugar beet, wheat, grain and barley. But in terms of efficiency in limiting carbon emissions, ethanol extracted from sugarcane scores over fuel derived from corn. As sugar producers have learnt to limit the supply of the sweetener in times of falling prices, the palm oil industry in Malaysia and Indonesia have found an effective way to limit the downside risk to prices by also using the oil to make biodiesel. Brazil has shown

that ethanol can be used alone or in a blend with petrol in any proportion to power car engine. This also holds good for biodiesel.

For mixing of ethanol and biodiesel with fossil fuel beyond a certain level, vehicle makers will have to play ball since changes are required in engines to accept oil blends with high percentages of biofuels. As an insurance against future high oil prices, New Delhi is now well disposed to the idea of mixing 20 per cent ethanol with petrol. Going a step forward, it has set BIS standards for this level of blending. The government faced the prospect of its current account deficit target going haywire when on September 24, 2018, world oil price hit a four-year high at \$81.20 a barrel. Prices may be low now, but OPEC's goal is to return prices to \$70 by way of supply management in which its allies are sought to be made a party.

The official target to cut crude oil import dependence by 10 per cent in another four years is not making headway. On the contrary, the share of imports in total oil use is on the rise. In the circumstances, it is only natural that attempts will be made to use growing volumes of sugarcane and also sugar by-products to make ethanol. In this journey, the one thing that the government will have to do is to get automobile manufacturers on board who reportedly have some reservations about making changes in the engine to run on 80:20 petrol ethanol blend.

Expressing confidence that the government will be able to prevail upon car-makers to do the necessary tweaking in engines whatever the cost, a sugar industry official says flex-fuel cars in Brazil run on in any gasoline-ethanol blend and also on pure ethanol. In fact, such cars now constitute around 80 per cent of that country's light vehicle fleet. Brazil has remained steadfast at the campaign to decide what proportion of a season's sugarcane crop will be used to make sugar and ethanol depending on the price each will fetch. Sugar output in Brazil during the 2018-19 season took a dip of 8.3 million tonnes

IN TERMS OF EFFICIENCY IN LIMITING CARBON EMISSIONS, ETHANOL EXTRACTED FROM SUGARCANE SCORES OVER FUEL DERIVED FROM CORN



## THE RIGHT MIX

- World oil price hit a four-year high at \$81.20 a barrel in Sep last year
- As an insurance against future high oil prices, India is looking at mixing 20 per cent ethanol with petrol
- It also wants to cut crude oil import dependence by 10 per cent in another four years
- Changes are required in engines to accept oil blends with high percentages of biofuels
- Govt has set BIS standards for this level of blending
- Auto industry has reservations about making changes in the engine to run on 80:20 petrol ethanol blend

(mt) to 30.6 mt. This happened for two reasons. First, low crop yield in central and southern regions, which account for nearly 98 per cent of Brazilian sugarcane production. Second, because of high oil prices prevailing for most of 2018 that led to surging demand for ethanol, Brazilian cane crushing factories used 64 per cent of the crop to make biofuel.

Unarguably, unless Brazil had consciously capped sugar production by committing such a high percentage of the crop for ethanol production, raw sugar prices that sunk to 10.1 cents a pound on August 10, the lowest since June 10, 2008 could have fallen further. That would have put a spanner to the Indian ambition to export 5 mt of sugar in the 2018-19 season (October to September). Even at the current price of around 12.50 cents on US Exchange ICE futures, Indian exporters will need internal transportation subsidy.

The two-year long campaign by Indian Sugar Mills Association piloted by its director general Abinash Verma that deliverance for the crisis-ridden industry would also depend on the government properly incentivising production of ethanol not only from molasses from which sug-

ar is optimally squeezed out but also B heavy molasses which still retains the sweetener and directly from cane juice. Tapping B heavy molasses and cane juice for ethanol reduce sugar production by up to 500,000 tonnes in 2018-19 to the relief of stakeholders. The country has opened this season with huge sugar stocks of 10.7 mt and production this time will once again be big on top of 2017-18 record output of 32.5 mt. The internal sugar demand will at the most be 26 mt and with luck, India will be able to complete the sale of 5 mt in the world market. The end-season stock will, therefore, be a crushing 11.2 mt.

Sugar is a cyclical industry when there will be periods of very high production resulting in low prices as we are seeing in two seasons in a row. Factories pile up losses and in consequence the cane bills of farmers remain unpaid. Farmer anger is directed as much against the industry as the government. This underlines the importance of rapidly enhancing the industry's capacity to make ethanol from cane juice and B heavy molasses. There are some good ideas for India in Brazil's new ethanol related policy RenovaBio designed to expand biofuel market from 26.7 billion litres (lt) in 2018 to 47.1 bl litres in 2028.