

## SUGAR

### **PepsiCo sets global target for sugar reduction: Indian operations to reduce sugar content across beverages**

Beverages and snacks maker PepsiCo will reduce sugar content in its beverages across world markets, the firm's chief executive Indra Nooyi said on Monday. The calorie reduction will happen across all markets including India.

The step-up on zero or lower-calorie products will include close to two-thirds of the company's beverages having 100 calories or less per 12-ounce servings by the year 2025.

PepsiCo, which makes 7Up, Mountain Dew and Pepsi fizzy drinks, made the first move at sugar reduction in India when, in August, it began testing its lime lemon drink 7Up with plant-based sweetener stevia instead of sugar. The move has led to reduction of 30% sugar content in 7Up – the first use of stevia to sweeten 7Up anywhere in the world. The Indian government had urged Nooyi to reduce sugar in its beverages two years back, when she was on an India visit.

Use of stevia will be extended to other brands in its India portfolio.

While globally, PepsiCo's mainstay brand Pepsi cola earns over \$1 billion annually, cola makers are under significant pressure from health activists and governments to curtail use of calories to reduce obesity levels.

Fizzy drinks contribute to less than 25% of PepsiCo's global sales now, according to data by global research firm Mintel. Other unsweetened drinks the company makes include Starbucks and Pure Leaf ready-to-drink coffee and iced tea, juices and Gatorade sports drinks.

(Source-<http://sugarnews.in/pepsico-sets-global-target-for-sugar-reduction-indian-operations-to-reduce-sugar-content-across-beverages/>, published on 17th October, 2016)

### **Sugarcane growers seek inquiry into irregularities**

Sugarcane growers and shareholders of the Pandavapura Sahakara Sakkare Karkhane (PSSK), a cooperative sector mill in Pandavapura near here, have demanded that the mill immediately clear the sugarcane dues to farmers who supplied cane during the previous crushing seasons. They staged a protest outside the office of the Deputy Commissioner here on Monday and raised slogans against the management of the mill.

They also demanded an inquiry into various alleged irregularities pertaining to recruitment and procurement of material in PSSK during the previous crushing seasons. Honnagirigowda, former president, PSSK, who led the protest, said that the mill has to pay Rs. 27 crore to the cane suppliers.

"The farmers were put to hardship due to the non-clearance of dues. The previous management of the mill had misused funds meant for the development of PSSK," Mr. Honnagirigowda, who is also the former president of the Pandavapura Town Municipal Council, said. The agitators demanded action against those who are reportedly involved in the alleged irregularities at the mill. Later, they submitted a memorandum to Chief Minister

Siddaramaiah through Deputy Commissioner S. Ziyaullah demanding suitable measures against the management of the mill.

(Source- <http://sugarnews.in/sugarcane-growers-seek-inquiry-into-irregularities/>, published on 17th October, 2016)

## A demerit rate of tax on sugary drinks

How high should the tax on sugary drinks like Coke and Pepsi be? Certainly the higher demerit rate that the GST regime comes up with but not a penal rate higher than that. Half the world's population is overweight and so it has become fashionable in many jurisdictions to levy a special tax on sugary drinks, to discourage people from imbibing them. India would make a mistake by imitating such policies without first examining their propriety in the Indian context.

If it were to be accepted as a principle that high-sugar foods should bear a sin tax even higher than the demerit rate, on par with, say, tobacco, we might end up taxing Indian sweets and fruit juices at the same rate. The idea of taxing fruit juices at a high rate is troubling. India's food processing industry is tiny and has great scope to grow, bring industry to rural areas and generate diversified employment and improve the lives of farmers. Juices are an important category of agro-processing that is waiting to be encouraged rather than choked with high taxes. If one kind of sugary drink, fruit juice, is given a privileged tax treatment over another kind of sugary drink, fizzy drinks that will now add juices, deferring to the prime minister's suggestion in this regard, that would invite charges of violating the right to equality guaranteed by the Constitution.

There is yet another consideration, deriving from the marketing reach of the fizzy drinks companies into India's hinterland. These drinks are the most easily accessible forms of oral rehydration therapy available to rural India, vulnerable as it is to debilitating diarrhoea. Colas offer a mix of glucose and assorted electrolytes. Sure, there is no case to subsidise them or cosset them with lower taxes, but there is equally a case against penalising them with extra-high taxes.

(Source- <http://www.indiansugar.com/NewsDetails.aspx?nid=6069>, published on 18th October, 2016)

## Co-gen/Power

### Coal India taps rising coking prices to woo steel sector

With volatile global coking coal prices straining the balance sheets of steel companies in the country, Coal India is planning to put up more coal for e-auctions.

Even as global coking coal — also known as metallurgical coal — prices crossed the \$190-a-tonne mark recently, Coal India decided not to increase its prices, to remain competitive and become a substitute to imports.

Coking coal constitutes a third of steel sector's total costs. The festival season, Coal India will put up 20 million tonnes (mt) coal for e-auction, where both the regulated and the non-regulated sectors, including traders, will be able to participate.

"We are devising plans whereby we will channelise the coking coal variety towards the steel sector," a senior Coal India official told Business Standard.

In May this year, Coal India reduced the prices of its G1-G5 grades for the non-power sector by 15.61 per cent on an average, while increasing the price for the remaining grades by 3.47 per cent on an average.

If the entire quantity offered for e-auction is taken, about 60 mt coal would be sold under this method till date this financial year, compared with 79 mt sold in entire FY16.

### THE COAL STORY

Hard Coking Coal  
Australia Export (FOB  
East Coast port) \$/tonne



Last month, Coal India had met buyers from different sectors, except power, and discussed ways to channelise the right kind of coal for particular segments during e-auctions.

An official in Coal India said companies like Tata Steel and SAIL were keen to buy domestic coking coal in wake of rising international prices. Following the meeting, Coal India made a one-time offer of 20-mt coal under Special Spot e-auction system.

"Such auctions are likely to rise in the coming days if we want to cater to the requirements of the steel sector," a senior Coal India official said.

In February this year, the Cabinet Committee on Economic Affairs decided that coal linkages or long-term fuel supply agreements (FSA) to the non-regulated sector, which includes steel, cement, and aluminium industries, will only be given through e-auction

mechanism.

A company official said the e-auction route will be followed for all future contracts once the existing FSAs lapse. Although the FSA for the public sector units will be renewed, additional requirements can only be met by the e-auction system.

India's coking coal imports remained flat at 43 mt in 2014-15 and 2015-16. Steel companies imported 6-mt coking coal in April and May, according to coal ministry data.

Additionally, Coal India is also keen to maximise production of coking coal and is on the lookout to acquire offshore assets in South Africa, Indonesia and Australia. "The coking coal variety is scarce in India and hence we need to look internationally to acquire assets for this variety of coal," the official, quoted earlier said. During April-September, Coal India produced 230.06-mt coal of which coking variant comprised less than 10 per cent.

(Source- [http://www.business-standard.com/article/companies/coal-india-taps-rising-coking-prices-to-woo-steel-sector-116101701388\\_1.html](http://www.business-standard.com/article/companies/coal-india-taps-rising-coking-prices-to-woo-steel-sector-116101701388_1.html), published on 17th October, 2016)

## ETHANOL

### Scientists just accidentally discovered a process that turns CO<sub>2</sub> directly into ethanol

If scientists can figure out how to convert atmospheric carbon dioxide into fuel - and do it at an industrial scale - it would, quite literally, change the world. Last month, we hit the highest levels of atmospheric CO<sub>2</sub> in 4 million years, and it's now permanent, meaning we'll never be able to drop to 'safe' levels again.

But if we can turn CO<sub>2</sub> into a fuel source, we can at least slow things down a bit, and now researchers have developed a process that can achieve this with a single catalyst.

"We discovered somewhat by accident that this material worked," said one of the team, Adam Rondinone, from the US Department of Energy's Oak Ridge National Laboratory.

"We were trying to study the first step of a proposed reaction when we realised that the catalyst was doing the entire reaction on its own."

Rondinone and his colleagues had put together a catalyst using carbon, copper, and nitrogen, by embedding copper nanoparticles into nitrogen-laced carbon spikes measuring just 50-80 nanometres tall. (1 nanometre = one-millionth of a millimetre.)

When they applied an electric current of just 1.2 volts, the catalyst converted a solution of CO<sub>2</sub> dissolved in water into ethanol, with a yield of 63 percent.

This result was surprising for a couple of reasons: firstly, because it's effectively reversing the combustion process using a very modest amount of electricity, and secondly, it was able to do this while achieving a relatively high yield of ethanol - they were expecting to end up with the significantly less desirable chemical, methanol.

As Colin Jeffrey explains for New Atlas, this type of electrochemical reaction usually results in a mix of several different products in small amounts, such as methane, ethylene, and carbon monoxide - none of which are in particularly high demand.

Instead, the team got usable amounts of ethanol, which the US needs billions of gallons of each year to add to gasoline.

"We're taking carbon dioxide, a waste product of combustion, and we're pushing that combustion reaction backwards with very high selectivity to a useful fuel," Rondinone said in a press statement.

"Ethanol was a surprise - it's extremely difficult to go straight from carbon dioxide to ethanol with a single catalyst."

This certainly isn't the first attempt to convert CO<sub>2</sub> pollution into something we can actually use - researchers around the world have been figuring out ways to turn it into things like methanol, formate, and hydrocarbon fuel.

This one team working in Iceland wants to turn it all into solid rock so we can just bury it and forget about it.

But all of these methods, while promising, are dishing up an end product that the world doesn't really need right now. Sure, we could adjust our cars and energy plants to run on hydrocarbon fuel if it was cheap and efficient enough to produce from CO<sub>2</sub>, but we're certainly not there yet.

Ethanol, on the other hand - well, the US is already blending most of its gasoline with 10 to 15 percent ethanol content.

The researchers explain that they were able to achieve such high yields because the nanostructure of the catalyst was easy to manipulate and adjust to get the desired results.

"By using common materials, but arranging them with nanotechnology, we figured out how to limit the side reactions and end up with the one thing that we want," said Rondinone. "They are like 50-nanometre lightning rods that concentrate electrochemical reactivity at the tip of the spike."

The team says that since the catalyst is made from inexpensive materials, and can operate at room temperature with modest electrical requirements, it could be scaled up for industrial level use.

But with so many CO<sub>2</sub> conversion projects in the works right now that are aiming to do the same thing, we'll have to remain cautiously optimistic until they can show real results in the field.

Let's hope someone ultimately figures it out, because with a drastically expanding population, we're only going to be needing more energy, and we're only going to be pumping more pollution into the atmosphere. A 'two birds with one stone' solution would change everything - particularly if we can integrate it with solar and wind farms.

"A process like this would allow you to consume extra electricity when it's available to make and store as ethanol," Rondinone said. "This could help to balance a grid supplied by intermittent renewable sources."

(Source- <http://www.sciencealert.com/scientists-just-accidentally-discovered-a-process-that-turns-co2-directly-into-ethanol>, published on 19th October, 2016)

### **Quote of the day**

Let us sacrifice our today so that our children can have a better tomorrow.

- A. P. J. Abdul Kalam