



PRESS RELEASE

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India's first Cellulosic Alcohol Technology Demonstration Plant inaugurated

At a glance

India's First 2G ethanol plant inaugurated on Earth day

Demonstration plant is based on indigenous technology for production of Ethanol from lignocellulosic biomass, supported by Department of Biotechnology, Ministry of Science and Technology, Government of India.

Feedstock independent technology developed by DBT-ICT Centre for Energy Biosciences, ICT Mumbai

Globally competitive indigenous technology

Details

India's first cellulosic alcohol technology demonstration plant developed through indigenous technology with capacity of 10 ton per day was inaugurated by Union Minister for Science and Technology & Earth Sciences Dr Harsh Vardhan at Kashipur, Uttarakhand today.

The plant is based on the technology developed by the DBT-ICT Centre for Energy Biosciences at the Institute of Chemical Technology, Mumbai with the support of the Department of Biotechnology, Ministry of Science and Technology and its Public sector Undertaking – Biotechnology Industry Research Assistance Council (BIRAC). The plant built at India Glycols Ltd. at their Kashipur site has successfully demonstrated the production of Ethanol from lignocellulosic biomass and is a one of its kind in response to the Government's initiatives on Make in India and Swachh Bharat Abhiyaan.

At the inauguration on the Earth Day 2016, Union Minister for Science and Technology & Earth Sciences Dr Harsh Vardhan took pride in the indigenously developed technology and its evolution into a demonstration plant. "More such examples are needed for the Make in India and Swachh Bharat Abhiyaan to be successful initiatives, which can make India stand out as a leader in the world's struggle to save the earth from challenges like global warming" he pointed out.

The DBT-ICT 2G-Ethanol Technology is a novel indigenous technology suited to both Indian & Global needs and is designed for handling all types of agricultural residues like *Bagasse, Rice Straw, Wheat Straw, Bamboo, Cotton Stalk, Corn Stover, Wood chips etc* with optimum product yields.

“This is an example of how we can work on the challenges the world faces, define them in Indian labs and then strive to solve them for the benefit of the world community in general and India in particular. At DBT we promise to work towards more such initiatives”, said Dr K VijayRaghavan, Secretary, Department of Biotechnology.

This plant comes at a time when the country is making an all out effort to meet the mandate of 5% blending of renewable biofuel in both ethanol and diesel. While diesel biofuel blending is near zero, the petrol blending today stands at an overall of about 3% in the form of first generation or molasses based 1G-Ethanol. With an annual requirement of about 500 crore liters, the oil companies are looking at various options for sourcing ethanol as the current total installed capacity of 1G-ethanol stands at about 265 crore liters. In such a scenario, the targets of 10% blending by 2017 and 20% by 2020 look remote unless agriculture waste based ethanol i.e. second generation or 2G-Ethanol production technologies are successfully demonstrated. India’s potential for 2G-Ethanol production from a mere 10% of its non-food and non-fodder agricultural residues, currently estimated to be available in excess of 300 million tons, stands at nearly 1000 crore liters of ethanol.

However, the 2G-Ethanol Alcohol production technologies world-wide are yet to become economically and technologically viable despite more than 100 pilot plants and about 10 demonstration and commercial plants erected and commissioned globally over the last decade. In this context the country’s first demonstration plant built on the DBT-ICT indigenous technology as a continuous automated plant assumes considerable significance. The technology and the plant, projected to be capable of converting any biomass feedstock to alcohol in less than 24 hours, if successfully operated and scaled-up will establish India as a major global technology provider in the arena of renewables and reduction in **carbon-emissions besides effecting considerable savings in import of crude-oil**. The demo-plant is all set to run at a capacity of 10 ton biomass/day. The DBT-ICT Centre has already developed designs of plants for 250 ton/day and 500 ton/day capacities. The Department of Biotechnology is confident that this technology with the lowest capital and operating costs would allow 2G-Alcohol to be produced and sold at competitive price.