

World Biofuel Day

August 12, 2020

World Biofuel Day is observed every year on 10th of August to create awareness about the importance of non-fossil fuels as an alternative to conventional fossil fuels and highlight the various efforts made by the Government in the biofuel sector. This day also **honors the research experiments by Sir Rudolf Diesel who ran an engine with peanut oil in the year 1893.** His research experiment had predicted that vegetable oil is going to replace fossil fuels in the next century to fuel different mechanical engines.

Biofuels

Biofuels have the benefits of **reduction of import dependence, cleaner environment, additional income to farmers and employment generation.** Biofuel programme also **compliments Government of India's initiatives for Make in India, Swachh Bharat and increasing farmers income.** Biofuels are environment friendly fuels and their utilization would address global concerns about containment of carbon emissions. Biofuels are derived from renewable biomass resources and, therefore, provide a strategic advantage to promote sustainable development and to supplement conventional energy sources in meeting the rapidly increasing requirements for transportation fuels associated with high economic growth, as well as in meeting the energy needs of India's vast rural population.

Biofuel Categories in India

- **Bioethanol:** Ethanol produced from biomass such as sugar containing materials like sugarcane, sugar beet, sweet sorghum etc.; starch containing materials such as corn, cassava, rotten potatoes, algae etc.; and, cellulosic materials such as bagasse, wood waste, agricultural and forestry

residues or other renewable resources like industrial waste.

- **Biodiesel:** A methyl or ethyl ester of fatty acids produced from non-edible vegetable oils, acid oil, used cooking oil or animal fat and bio-oil.
- **Advanced biofuels:** Fuels which are produced from **lignocellulosic feedstocks** (i.e. agricultural and forestry residues, e.g. rice & wheat straw/ corn cobs & stover/ bagasse, woody biomass), **non-food crops** (i.e. grasses, algae), or **industrial waste and residue streams having low CO2 emission or high GHG reduction and do not compete with food crops for land use.** Fuels such as second generation (2G) ethanol, drop-in fuels, algae based 3G biofuels, bio-CNG, bio-methanol, dimethyl ether (DME) derived from bio-methanol, bio-hydrogen will qualify as advanced biofuels.
- **Drop-in fuels:** Any liquid fuel produced from biomass, agri-residues, wastes such as municipal solid wastes (MSW), plastic wastes, industrial wastes which meets the Indian standards for MS, HSD and Jet fuel, in pure or blended form, for its subsequent utilization in vehicles without any modifications in the engine systems and can utilize existing petroleum distribution system.
- **Bio-CNG:** Purified form of bio-gas whose composition & energy potential is similar to that of fossil based natural gas and is produced from agricultural residues, animal dung, food waste, MSW and sewage water.