Entrepreneur INDIA

11 Reasons why India Needs Biodiesel for Energy Balance and Economic Security

India will produce 450 crore litre of ethanol in the next four years and it will result in import savings of Rs 12,000 crore

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Can't we make use of an alternative fuel that provides very similar performance, with the same horsepower, torque, and fuel mileage as petroleum diesel fuel? Yes, this is possible with biodiesel, bestowing a positive impact on the environment, health and economy of the nation.

Biodiesel can prove to be a game changer for the energy security of our country, which is aspiring big. Yes, our government has come up with the National Policy on Biofuels 2018, which includes harnessing of biodiesel to meet the energy security of India.

The goal of the policy is to enable availability of biofuels in the market thereby increasing its blending percentage. Currently, the ethanol blending percentage in petrol is around 2.0% and biodiesel blending percentage in diesel is less than 0.1%. An indicative target of 20% blending of ethanol in petrol and 5% blending of biodiesel in diesel is proposed by 2030.

Recently, on the World Biofuel Day Prime Minister announced that now India will produce 450 crore litre of ethanol in the next four years from existing 141 crore litre. It will result in import savings of Rs 12,000 crore.

Additionally, on World Biofuel Day, the Food Safety and Standards Authority of India (FSSAI) launched RUCO – Repurpose Used Cooking Oil, an ecosystem that will enable the collection and conversion of used cooking oil to biodiesel.

Why India needs biodiesel?

- India must promote biofuels for reducing its crude import bill. It is noteworthy that India meets more than 80 per cent of its oil needs through imports. The domestic crude oil production is able to meet only about 17.9% of the demand, while the rest is met from imported crude. India is the largest consumer of vegetable oil and has a potential to recover 220 crore litre of Used Cooking Oil (UCO) for the production of biodiesel by the year 2022 through coordinated action.
- Biodiesel, produced from any edible/ non-edible oil, has a huge untapped potential. However, biodiesel coming for the blending programme is presently being manufactured from imported sources like palm stearin. In-house produced Used/Waste cooking oil (UCO/WCO) offers the potential to be a source of biodiesel production. Also with the proper collection and processing of UCO, from the edible stream through various small eateries/vendors & traders, can greatly add to the potential.
- If all efforts are made to substitute diesel fuel, India could replace over 40% of the projected demand for diesel by 2020. The energy generated from biofuels is equivalent to 340 million barrels of oil or over $22 billion. Considering that in the first quarter India had a current account deficit of $14.3 billion, we could wipe out almost a third of our current account deficit.
- The crude oil price has been fluctuating in the world market. Such fluctuations are straining various economies the world over, particularly those of the developing countries. Road transport sector accounts for 6.7% of India's Gross Domestic Product (GDP). Currently, diesel alone meets an estimated 72% of transportation fuel demand followed by petrol at 23% and balance by other fuels such as CNG, LPG etc. for which the demand has been steadily rising. Provisional estimates have indicated that crude oil required for indigenous consumption of petroleum products in FY 2017-18, is about 210 MMT. So, exploring the other substitute is the need of the hour where biodiesel is the best fit.
- Globally, biofuels assume importance due to growing energy security and environmental concerns. As an effective tool for rural development and generating employment, India too embraced the policy, the primary approach for biofuels is to promote indigenous feedstock production. Plus the conventional or fossil fuel resources are limited, non-renewable, polluting and, therefore, need to be used prudently.
- Biofuels are derived from renewable biomass resources and wastes such as Plastic, Municipal Solid Waste (MSW), waste gases etc. and therefore seek to provide a higher degree of national energy security in an environmentally friendly and sustainable manner by supplementing conventional energy resources, reducing dependence on imported fossil fuels and meeting the energy needs of India's urban and vast rural population.
- A community-based biodiesel distribution programme benefits local economies, from the farmers growing the feedstock to local businesses producing and distributing the fuel to

the end consumer. The money will stay with the community while reducing the impact on the local environment and increasing energy security.

- The Policy aims to increase usage of biofuels in the energy and transportation sectors of the country during the coming decade. The various efforts by the government to solve the transportation and mobility solutions have not worked well so far. It's the biodiesel which can work well as a suitable alternative for the country.
- The alternative to switching to biodiesel will also help India to meet its global climate commitments. Climate change mitigation can be done apart from creating new employment opportunities in a sustainable way. Simultaneously, the switch to biodiesel will also encourage the application of advanced technologies for the generation of biofuels in India.
- Biodiesel is the only alternative fuel that significantly reduces emissions of carbon monoxide, particulate matter, unburned hydrocarbons, and sulfates compared to petroleum diesel fuel. If we compare biodiesel to petrodiesel then the former reduces emissions of carcinogenic compounds by as much as 85%. Biodiesel is even less toxic than table salt.
- It's important to have proper lubrication in diesel engines as the functioning of its injection system depends highly on it. If the lubrication is less, then, it might result in the failure of the injection system. Here again, Biodiesel plays an important role, for it acts as an excellent lubricator. The life of injection system could be improved and extended by blending biodiesel, in amounts as little as 5%. Biodiesel like petroleum diesel fuel can also work in cold weather. The best way to use it during winters is by blending it with winterized diesel fuel.

Biodiesel in India is of strategic importance for ensuring India's energy balance and security. Also, it aligns well with the ongoing initiatives of the Government such as Make in India and Swachh Bharat Abhiyan and offers great opportunity to integrate with the ambitious targets of doubling of farmers' income, import reduction, employment generation, waste to wealth creation, and simultaneously, creating a win-win model for people, profit and planet.