



TOPIC OF THE WEEK

SEPT'18 (01 to 07)

Topic: First Flight Powered By Biofuel in India

The country's first ever biojet-fuel run flight landed at the Indira Gandhi International Airport in New Delhi on August 27, 2018. The flight was operated by SpiceJet from Dehradun to Delhi with Bombardier Q400 plane. Officials from regulatory agencies, including the Directorate General of Civil Aviation (DGCA), were on board this flight.

A SpiceJet statement said the company intends to undertake operations using a blend of 75 per cent aviation turbine fuel and 25 per cent of biojet fuel.

Background

The genesis of this development goes back several years to an Indo-Canadian consortium project from 2010 to 2013 involving CSIR-IIP, Indian Oil, Hindustan Petroleum, IIT Kanpur and IISc Bangalore, in which research was directed towards the production of Bio-aviation fuel by CSIR-IIP from jatropha oil and its evaluation under various conditions.

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The test culminated in a detailed engine test by Pratt and Whitney in Canada that showed fitness for purpose.

Spicejet and Chhattisgarh Biofuel Development Authority, which supplied the jatropha oil for the flight after sourcing from over 500 farmers, received considerable policy and regulatory support from the MOPNG Working Group on Biofuels and the Directorate General Civil Aviation (DGCA) in making the flight happen

Significance:

The experiment is first-of-its-kind in India. With this, India joins the exclusive club of nations using biofuel in aviation.

Its successful implementation provides a significant boost to encourage alternative fuels in transport and aviation sector, as envisaged in the National Biofuel's Policy.

India has been attempting to promote biofuels to reduce dependence on fossil fuel. The environment-friendly initiative is expected to reduce the country's import bills.

The biojet fuel was made of jatropha crop and developed by the CSIR-Indian Institute of Petroleum. This has the potential to reduce carbon footprint by 15 per cent.

Highlights:

- The test flight carried 28 people, including five crew members. Among others, officials from aviation regulator DGCA, SpiceJet and the IIP were in the test flight, which was flagged off by Uttarakhand Chief Minister Trivendra Singh Rawat at Dehradun.
- Spice Jet is the first Indian airline to fly on biofuel. The government is working on ideas to make air travel the most environmentally friendly travel in the world.
- Besides this, the government is planning to use methanol in the shipping sector.
- The dependence on biofuel will help increase farmers' income and is an ideal example of converting waste to wealth.

Advantages:

The use of bio jet fuel leads to reducing greenhouse gas emissions by about 15 percent and sulfur oxides (SOx) emissions by over 99 percent.

It is expected to provide indigenous jet fuel supply security, possible cost savings as feedstock availability at farm level scales up. This will also lead to superior engine performance and reduced maintenance cost for the airline operators.

This is an environment friendly initiative which will reduce the country's import bills. It will also boost farmers' income and improve the quality of life of the people in both rural and urban areas.

Conclusion:

In India the overall economic growth is fueled by its agrarian sector. Here biofuels assume great significance in light of the country's ambitious goals of doubling farmers' income, import reduction, employment generation, and waste-to-wealth creation.

Aviation industry could generate demand of biofuels and encourage Indian farmers to indulge in cultivation of crops such as Jatropha. It is not always incentives, but just the creation of a well-defined value chain that will attract entrepreneurial activity and investment in this sector. Acknowledging the importance of abundant

resources for biofuel in the country, the union cabinet recently approved the National Policy on Biofuels 2018. Biojet fuel is low cost and helps in significantly reducing carbon emissions. It has the potential to reduce our dependence on traditional aviation fuel by up to 50 percent on every flight and bring down fares.

Suggested Reading:

- ✓ <https://www.thehindubusinessline.com/economy/logistics/indias-first-biojet-fuel-test-flight-lands-in-delhi/article24790596.ece>
- ✓ <https://ceai.org.in/industrynews/industry-news/indias-first-flight-powered-by-biofuel-lands-at-igi-airport/>
- ✓ <http://www.newsonair.com/Main-News-Details.aspx?id=352118>