STUDY NOTES · BASIC CONCEPT

Green Skies Push: India Moves Toward Ethanol-Blended Aviation Fuel

Indian Economy

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What the Decision Means

India has taken a significant step toward greener aviation by allowing the blending of ethanol in aviation fuel. This move aligns with the country’s broader clean energy transition strategy, where ethanol has already been successfully mixed with petrol. Extending this concept to aviation signals an effort to reduce carbon emissions in one of the most fuel-intensive sectors.

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Why Ethanol in Aviation Fuel?

Ethanol is a biofuel derived from agricultural sources like sugarcane and grains. Blending it with aviation fuel can help lower greenhouse gas emissions and reduce dependence on imported crude oil. With India importing a large share of its energy needs, this step also supports energy security while promoting the use of domestic resources.

How It Impacts the Aviation Sector

For airlines, this move could eventually lead to cleaner operations, but adoption will be gradual. Aviation fuel requires strict safety and performance standards, so blending levels will likely be limited and carefully tested. Airlines and engine manufacturers will need to ensure compatibility, efficiency, and safety before large-scale implementation.

Boost for Farmers and Rural Economy

One of the biggest benefits of ethanol blending is its positive impact on farmers. Increased demand for ethanol can drive higher procurement of crops like sugarcane and maize, providing farmers with better income opportunities. This creates a strong link between agriculture and the energy sector, boosting rural economic growth.

Environmental Benefits and Challenges

Ethanol blending can significantly reduce carbon emissions and contribute to India’s climate goals. However,

challenges remain—such as ensuring sustainable crop production, avoiding overuse of water resources, and maintaining food security. Balancing these factors will be crucial for long-term success.

India’s Larger Energy Strategy

This step is part of India’s broader push toward alternative fuels, including electric mobility, green hydrogen, and biofuels. The government has already set ambitious ethanol blending targets for petrol, and aviation is now becoming the next frontier.

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