

## Sasol makes world's first fully synthetic fuel-powered flight

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Published: 21 Sep 10



South African petrochemicals giant Sasol on Tuesday took to the skies the world's first passenger flight powered with only synthetic jet fuel, which was produced from coal.

The South Africa-developed fuel, produced by the coal-to-liquids (CTL) process, is the only fully synthetic jet fuel to have been approved as a commercial aviation turbine fuel.

Speaking to *Engineering News Online* after this celebratory flight from the Lanseria airport, north of Johannesburg, to Cape Town, Sasol CEO **Pat Davies** said that the new jet fuel had undergone significant testing, burning 800 000 l of fuel in the process.

Stringent testing processes had also proved that the alternative jet fuel held both economic and environmental benefits for the consumer, compared with conventional jet fuel derived from crude oil, owing to its limited sulphur content and higher hydrogen levels.

"This is a very clean burning fuel and much better in terms of CO<sub>2</sub> [carbon dioxide] emissions, compared with conventional jet fuel. Sasol is always considering its environmental impact, and as a company we are looking at the full cycle of reducing our carbon footprint, across all our processes," said Davies.

Further, he explained that the economic benefit of the jet fuel is mainly driven by the fact that the synthetic fuel provided an alternative source of supply, in a world where demand is always on the increase.

Davies noted that in terms of energy security for South Africa, it was a "sensible" path to pursue.

"South Africa is sitting on an abundance of coal and natural gas reserves, and Sasol consists of the technology, in line with what we are doing with petrol and diesel, to convert these resources into jet fuel."

However, he said that the petrochemicals company would not be making the fuel 100% commercially available - yet. "Sasol is in the process of getting the technology in place to ensure that we are able to supply the markets with this synthetic jet fuel as it starts making more commercial sense."

Sasol has been providing South Africa's OR Tambo International Airport with a 50% synthetic jet fuel component since 1999, and Davies pointed out that, currently, the company had the capacity and logistics in place to supply the airport with increasing volumes of synthetic jet fuel if needs be.

"If a problem with the supply of crude oil arises, we are immediately able to ramp up our production of synthetic jet fuels."

Further, the South African technology company has entered into a number of international ventures to implement its CTL and gas-to-liquids technology across the globe.

South Africa remains Sasol's home base with its largest facility located in Secunda, however, the group is also building plants in the Middle East, Nigeria, and its biggest venture decision yet will be set up in China.

"All of those plants will also have the potential, depending on the commercial viability, to produce this jet fuel from their natural resources."

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"It's clear that the development of this 100% synthetic jet fuel has opened up a world of opportunities for Sasol, and while this has been a long journey for the group, the increasing demand and growing need for alternative fuel will soon turn these opportunities into a reality," said Davies.

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