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ARENA backs Jet Zero for sustainable aviation fuel

The Australian Renewable Energy Agency (ARENA) has today announced \$9 million in funding to Jet Zero Australia to advance sustainable aviation fuel (SAF) production in Townsville.

The next stage of engineering activities for Jet Zero Australia's project will include a \$36.8 million front-end engineering design (FEED) study to determine the viability of its commercial scale alcohol-to-jet low carbon liquid fuel (LCLF) production facility and progress towards a final investment decision.

ARENA CEO Darren Miller said the project is an exciting step towards producing SAF in Australia.

"With abundant feedstocks and vast renewable energy resources, Australia is well placed to produce the sustainable aviation fuels we need, right here at home," Mr Miller said.

"ARENA is funding Jet Zero Australia to investigate producing sustainable aviation fuel in Queensland to reduce our greenhouse gas emissions."

"We'll be taking an active role in making sure the lessons from Jet Zero Australia's study are shared with the industry at large, helping build a path to large-scale production in Australia."

Alcohol-to-jet fuel production is an emerging production pathway for reducing emissions in the aviation sector.

The pathway also helps to reduce constraints on feedstock, with the ability to convert ethanol as a drop-in fuel blend. Aircraft are currently certified to use blends of up to 50 per cent SAF with traditional jet fuel.

Jet Zero Australia's Townsville production facility would be capable of converting ethanol into approximately 100 million litres of SAF per year, representing more than enough to meet the demands of Cairns and Townsville Airports.

Based on modelling, the use of sustainable aviation fuels, like the one produced by Jet Zero Australia's project, could reduce domestic aviation carbon emissions by 70 per cent compared to conventional fossil-based fuel, displacing up to 225,000 metric tons of carbon dioxide annually.

Jet Zero Australia has formed a consortium of partners and investors to support delivery of the project, including Qantas, Airbus and Idemitsu Kosan. Queensland's Department of State Development and Infrastructure is also providing \$5 million in funding to the study through the Queensland New-Industry Development Strategy to grow local production capabilities and establish SAF value chains in Queensland. The alcohol-to-jet technology is licenced and will be supplied by LanzaJet.

According to [ARENA's Bioenergy Roadmap](#), by 2030 a domestic SAF industry could be worth \$10 billion in extra annual GDP and could create up to 26,200 jobs, with regional Australia positioned to receive most of those new jobs where SAF production is derived from domestic agricultural feedstocks.

Jet Zero Australia CEO Ed Mason said the support from ARENA, together with ongoing support from the Queensland Government, will aid the development of a new commercial pathway to produce over 113 million litres per year of SAF and renewable diesel from agricultural by-products in Australia.

"The funding will help achieve Australia's transport sector decarbonisation goals, promote fuel security and create regional jobs."

The project represents ARENA's first announcement from its SAF funding initiative, launched in 2023 to support the development of domestic SAF production.

The project's FEED activities are due for completion in 2025.

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