



FIRST BUSINESS AVIATION OFFTAKE PARTNER AGREEMENT FOR SAF 2.0 - DIRECTIONAL AVIATION & ALDER FUELS

News / Business aviation



Directional Aviation invested in **Alder Fuels**, a clean tech developer and greencrude producer. As part of the agreement, the two companies will also pilot a pioneering blockchain-powered transparency tool to document the production life cycle and industry adoption of low-carbon SAF. The state-of-the-art tool will assist with transparency around the production of SAF and provide robust documentation for compliance with regulatory programs, environment, social and governance targets, and carbon reduction milestones for the aviation sector.

Alder Fuels uses sustainable biomass, such as regenerative grasses, forest residues, and agricultural waste products, to create a low-carbon to carbon-negative greencrude that can be converted into SAF using existing bio and petroleum refinery infrastructure. In contrast to first generation SAF, which was primarily generated from non-scalable supplies of fats,

oils, and grease, these biomass sources are abundantly available, and when repurposed, can contribute to soil regeneration and wildfire mitigation.

When calculating the fuel production carbon life cycle from field to wingtip across different biomass sources, AGC-derived SAF can achieve greenhouse gas reductions of over 80% compared to petroleum jet fuel. The process, which has been validated by the Department of Energy's National Renewable Laboratory (NREL), could even be carbon negative when utilizing regenerative crops. AGC-derived SAF will meet current aviation specifications and is currently in the process of global certification as a 100% drop-in replacement for petroleum-based jet fuel. As part of the agreement, Flexjet will become the first business aviation user of this SAF.

Kenneth C. Ricci, Principal, Directional Aviation, commented: "Our investment in Alder Fuels and partnership on advancing the use of digital technology to document SAF use is an example of private aviation leading the way on sustainability commitments and identifying solutions to reduce carbon emissions that aid the entire aviation industry."

Bryan Sherbacow, Chief Executive Officer and President of Alder Fuels, said: "As we make the transition from fossil to sustainable energy throughout our economy, transparency is critical. It is how we engender trust and integrity to strengthen the adoption curve – and that is exactly what we are working towards at Alder Fuels. This partnership will demonstrate exactly how fuel is sourced, developed, and deployed – from the sustainable biomass provider to the wingtip. We are thrilled to test and trial the technology against our offtake agreement with Flexjet and are incredibly grateful to Directional Aviation for their financial support and industry leadership."

4AIR and Alder will align the use of blockchain technology tools to account for all the emission claims from the use of the SAF, generating the necessary records and transparency for compliance with regulatory frameworks, ESG standards, and other sustainability commitments. This application of digital technology for the aviation sector has enormous potential. Public blockchains represent a groundbreaking technological platform for documenting supply chains and recording physical asset ownership. They can also be deployed to help verify and validate the supply chain and emissions outputs of renewable fuels. For example, they can enhance the book-and-claim model of SAF use, a practice where a sustainability claim made by a company or customer is separated from the physical flow of these goods.

Kennedy Ricci, 4AIR's president, said: "Our goal at 4AIR is to make sustainability as simple and cost-effective as possible in order to promote its growth. The use of blockchain technology to transparently and permanently record the use of sustainable aviation fuel is an innovative application that will help users with regulatory and voluntary compliance and provide greater transparency about SAF's benefits as a way to reduce climate-changing aircraft carbon emissions."

Through this partnership between Directional and Alder Fuels, Flexjet will be the first business aviation offtake partner for AGC, advancing Flexjet towards its goal of having 12 percent of its annual fuel consumption come from SAF by 2030.

Flexjet Chief Executive Officer Michael Silvestro, commented: "Flexjet has achieved carbon-neutral flight operations for the past two years, purchasing credits to offset emissions from all flights booked by our aircraft Owners worldwide. However, we have wanted to take the next step, not merely offsetting emissions but actually reducing them directly in our operations by taking tangible steps today. The use of SAF produced with Alder's cutting edge greencrude will help us achieve this goal, maintaining our leadership on aviation sustainability, and the transparency tool developed by Alder Fuels and 4AIR will serve as a real-world proof of concept."

Recognizing the scaling up of SAF is critical to meeting such aggressive climate goals, the White House launched the “SAF Grand Challenge,” with goals to have 3 billion gallons of SAF produced in the U.S. by 2030 and augmenting to 35 billion gallons by 2050. The recent passage of the Inflation Reduction Act into law amplifies the U.S. commitment to SAF by providing tax credits for every gallon produced that demonstrates a 50 percent or greater lifecycle greenhouse gas emissions reduction relative to petroleum jet fuel.



18 SEPTEMBER 2022

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