OXCCU unveils OX1 plant: The world’s first sustainable aviation fuel production facility at Oxford Airport

OXCCU, a pioneer in carbon-to-value technology that transforms carbon dioxide into fuels, chemicals, and plastics has opened its groundbreaking demonstration plant, OX1, at Oxford Airport marking a major milestone in the production of Sustainable Aviation Fuel (SAF).

Temps de lecture : minute

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Utilising an innovative catalyst and reactor design, developed over more than a decade of research at the University of Oxford, the plant will directly convert carbon dioxide (CO2) and hydrogen (H2) into long-chain hydrocarbons with exceptional efficiency and selectivity, resulting in a new SAF product called OX•EFUEL™.

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This first-of-its-kind facility, situated at London Oxford Airport and designed and operated by *OXCCU*, will produce approximately 1 kg (about 1.2 litres) of liquid fuel per day, with operations set to begin in September 2024. The plant will be the world's first to demonstrate the direct conversion of CO2 and H2 into jet fuel-range hydrocarbons in a single step, with minimal oxygenated byproducts, using OXCCU's unique catalyst. The OX1 plant represents a crucial phase in OXCCU's strategic plan to scale up its technology from the lab to full-scale production.

The plant exemplifies British innovation, developed through a decade of research at the University of Oxford and backed by substantial industry and government investment. Unlike other companies developing Power-to-Liquid (PtL) fuels, OXCCU has simplified the traditionally multi-step process into a single step, eliminating the need to first convert CO2 into

CO – a challenging and energy-intensive step. This breakthrough is critical to lowering the cost of PtL SAF, which is currently a major barrier to widespread adoption.

> *“We’re thrilled to launch the OX1 plant, located near where OXCCU was founded. The fuel we’ve already produced in a single step from CO2 in the lab has generated tremendous excitement for its potential to dramatically reduce SAF costs, but scaling up is crucial. This plant will provide the data and fuel needed to advance our mission to enable future generations to fly without harming the climate. Achieving cost-effective PtL SAF is key to that mission, and this launch is a significant step toward realising that goal.” Andrew Symes, CEO of OXCCU*

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