

News Release

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Turning Carbon Dioxide into Sustainable Fuel: United and Oxy Low Carbon Ventures Announce Collaboration with Biotech Firm to Create New Fuel Sources

Houston-based Cemvita Factory's synthetic biology process has the potential to create a new way to produce sustainable fuel for aviation

United has invested in more SAF production than any other airline

CHICAGO and HOUSTON, March 29, 2022 – United Airlines Ventures (UAV) and Oxy Low Carbon Ventures (OLCV) today announced a collaboration with Houston-based biotech firm Cemvita Factory to commercialize the production of sustainable aviation fuel (SAF) intended to be developed through a revolutionary new process using carbon dioxide (CO₂) and synthetic microbes. UAV also announced an equity investment in Cemvita Factory. OLCV, a subsidiary of Occidental (Oxy), is a founding investor in Cemvita Factory.

SAF is an alternative to jet fuel that uses non-petroleum feedstock and offers lower lifecycle greenhouse gas emissions. United has invested in more SAF production than any other airline.

"At United, we have been consistent in leading the airline industry with bold action when it comes to fighting climate change – that starts with building an ecosystem around companies like Cemvita Factory to create and commercialize new SAF technologies," said Michael Leskinen, President of United Airlines Ventures. "This is truly a global imperative, and this cooperation with Oxy Low Carbon Ventures reflects our dedication to building relationships across sectors and working with companies aligned with our sustainability goals."

United and OLCV have previously worked together on new approaches to combat climate change. Together, UAV and OLCV will fund development work at Cemvita to convert carbon dioxide into hydrocarbons for SAF. If performance targets are achieved, UAV and OLCV plan to form a joint venture to commercialize the technology. This includes funding projects such as pilot and demo plants, engineering studies, financing construction and operating SAF plants.

"The use of SAF is a promising approach that we believe can significantly reduce global emissions from aviation and further decarbonization initiatives to combat climate change," said Richard Jackson, President, Operations, U.S. Onshore Resources and Carbon

Management, Oxy. “We are eager to collaborate with United and Cemvita to accelerate SAF innovation to reach commercial scale.”

Today’s announcement makes Cemvita the third SAF-related technology to receive an investment from UAV. Launched in 2021, UAV targets startups, upcoming technologies, and sustainability concepts that will complement United's goal of net zero emissions by 2050 – without relying on traditional carbon offsets. United has aggressively pursued strategic investments in SAF producers and revolutionary technologies including carbon capture, hydrogen-electric engines, electric regional aircraft, and urban air mobility. SAF has the potential to deliver the performance of petroleum-based jet fuel but with a fraction of its carbon footprint on a lifecycle basis.

Cemvita uses synthetic biology to take carbon dioxide and manufacture hydrocarbons, like chemicals and sustainable aviation fuel. Cemvita is among the first to employ this technology to support heavy industry decarbonization and find ways to use microbiology to turn carbon dioxide into fuel.

"Cemvita Factory is delighted to team up with United and Oxy for this exciting development," says Moji Karimi, co-founder and CEO of Cemvita. “We commend United Airlines for being a leader in the airline industry’s decarbonization efforts and are proud to work once again with OLCV to provide these solutions on a broader scale.”

United’s 100% green commitment

Here are some of the ways United plans to make sustainability the new standard in flight:

- In December, United purchased an equity stake in [hydrogen-electric engine developer ZeroAvia](#), becoming the largest airline to invest in zero-emission engines for regional aircraft.
- In December, United became the first in aviation history to fly an aircraft full of passengers using [100% sustainable aviation fuel](#).
- In September 2021, United [agreed to purchase](#) 1.5 billion gallons of SAF paired with an investment in **Alder Fuels** - enough to fly more than 57 million passengers.
- United is also an investor in **Fulcrum BioEnergy**, where United has an option to purchase up to [900 million gallons of SAF](#).
- In July 2021, United announced that along with **Breakthrough Energy Ventures** and Mesa Airlines, it [invested in electric aircraft startup Heart Aerospace](#). **Heart Aerospace** is developing the ES-19, a 19-seat electric aircraft that has the potential to fly customers with zero emissions when powered by renewable electricity.
- In July 2021, [Air Transport World magazine named United its Eco-Airline of the Year](#) for the third time.
- In February 2021, United [announced an agreement to work with Archer Aviation](#) to accelerate the development and production of their electric aircraft – an urban mobility solution that has the potential to serve as an 'air taxi,' giving United customers another opportunity to reduce their carbon footprint before they even board a United flight.
- In 2020, United became the first airline to announce a commitment to invest in [1PointFive’s direct air capture](#), a carbon capture and sequestration technology. United remains committed to investing in carbon capture and sequestration as a key pathway to achieving its climate goals.

- In 2019, United operated the Flight for the Planet, which represented the most-eco-friendly commercial flight of its kind in the history of commercial aviation.
- In 2018, United became the first U.S. airline to commit to reducing its GHG emissions, by 50% by 2050. This goal has since been superseded by the airline's 100% green net zero commitment.
- In 2016, United became the first airline globally to use SAF in regular operations on a continuous basis with SAF from World Energy.

About United

United's shared purpose is "Connecting People. Uniting the World." In 2019, United and United Express® carriers operated more than 1.7 million flights carrying more than 162 million customers. United has the most comprehensive route network among North American carriers, including U.S. mainland hubs in Chicago, Denver, Houston, Los Angeles, New York/Newark, San Francisco and Washington, D.C. For more about how to join the United team, please visit www.united.com/careers and more information about the company is at www.united.com. United Airlines Holdings, Inc. is traded on the Nasdaq under the symbol "UAL".

About United Airlines Ventures

United's corporate venture capital fund, United Airlines Ventures (UAV), allows the airline to continue investing in emerging companies that have the potential to influence the future of travel. The fund concentrates on sustainability concepts that complement United's goal of net zero emissions by 2050 -- without relying on traditional carbon offsets -- as well as revolutionary aerospace developments and innovative technologies that are expected to create value for customers and United's operation. For more information about UAV, please visit <https://www.united.com/ventures>.

About Oxy Low Carbon Ventures

Oxy Low Carbon Ventures, LLC (OLCV) is a subsidiary of Occidental (Oxy), an international energy company with assets primarily in the United States, the Middle East and North Africa. OLCV is focused on advancing cutting-edge, low-carbon technologies and business solutions that enhance Oxy's business while reducing emissions. OLCV also invests in the development of low-carbon fuels and products, as well as sequestration services to support carbon capture projects globally. Visit Carbon Innovation on oxy.com for more information.

About Cemvita Factory

Cemvita Factory, Inc, is on a mission to create a sustainable future by transforming carbon dioxide into value-added products. This conversion platform leverages the biomimicry of natural processes to sustainably produce chemicals and polymers. Additionally, Cemvita's biotech platform is also used to develop and optimize low carbon bioprocesses for Heavy Industry such as mining and oil and gas. Visit www.cemvitafactory.com for more information.

Forward Looking Statement

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Certain statements in this press release are forward-looking and thus reflect our current expectations and beliefs with respect to certain current and future events and anticipated financial and operating performance. Such forward-looking statements are and will be subject to many risks and uncertainties relating to United's and Oxy's operations and

business environment that may cause actual results to differ materially from any future results expressed or implied in such forward-looking statements. Words such as "expects," "will," "plans," "intends," "anticipates," "indicates," "remains," "believes," "estimates," "forecast," "guidance," "outlook," "goals," "targets" and similar expressions are intended to identify forward-looking statements. Additionally, forward-looking statements include statements that do not relate solely to historical facts, such as statements which identify uncertainties or trends, discuss the possible future effects of current known trends or uncertainties, or which indicate that the future effects of known trends or uncertainties cannot be predicted, guaranteed or assured. All forward-looking statements in this press release are based upon information available to us on the date of this press release. Neither United nor Oxy undertakes any obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, changed circumstances or otherwise, except as required by applicable law. United's and Oxy's actual results could differ materially from these forward-looking statements due to numerous factors including, without limitation, the risks and uncertainties set forth under Part II, Item 1A., "Risk Factors," of the Annual Report on Form 10-K for the year ended December 31, 2021, of each of United Airlines Holdings, Inc. and Occidental Petroleum Corporation, as well as other risks and uncertainties set forth from time to time in the reports United Airlines Holdings, Inc. and Occidental Petroleum Corporation file with the U.S. Securities and Exchange Commission.

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