World’s First Commercial Ethanol-to-Jet Fuel Plant Operational

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LanzaJet’s Freedom Pines Fuels unlocks new era of jet fuel possibilities with full plant operation.

SKOKIE, Ill., Nov. 13, 2025 (GLOBE NEWSWIRE) -- LanzaTech Global, Inc. (NASDAQ: LNZA), a leader in industrial carbon recycling, is thrilled to celebrate that LanzaJet, Inc., has fully operated and produced fuels at its LanzaJet Freedom Pines Fuels facility in Soperton, Georgia, USA – marking both the world’s first production at a commercial-scale plant of jet fuel using ethanol as a feedstock, and the first renewable solution, compatible with today’s aircraft, that does not rely on lipids or oils.

Recognizing the potential of ethanol-to-jet, LanzaTech made the strategic decision to spin out LanzaJet into a dedicated company, deliberately positioning it to develop faster and reach commercial scale sooner, creating a clear strategic advantage. The company was founded at a time of unprecedented challenges for the aviation sector, yet early investors and supporters saw beyond the immediate turbulence. Their foresight, confidence, and commitment laid the foundation for the next generation of aviation fuels, with ethanol as the critical enabler.

For the first time, there is commercial-scale proof that ethanol can be successfully converted into jet fuel, unlocking a wide range of domestic and recycled carbon feedstocks. This includes ethanol produced using technology developed by LanzaTech, from waste industrial gases, trash, captured CO_2 combined with hydrogen, and agricultural residues that extend the role of farmers beyond traditional crops. Ethanol has become a strategic connector, linking diverse domestic feedstocks to aviation fuel markets, a potential realized by LanzaTech and LanzaJet.

The market opportunity is vast. By using local resources and ethanol as a platform molecule, carbon waste can be converted into everything from jet fuel to diesel and beyond. Because ethanol can be made from nearly any type of biomass or waste, it provides a pathway for communities everywhere to produce fuels from their own resources, strengthening local energy security. This approach unlocks distributed carbon for aviation, marine, and heavy-duty transport, while creating clean, resilient, self-sufficient fuel solutions that empower people and economies alike.

"Investing in a first-of-its-kind facility is about more than technology — it’s about unlocking new market opportunities. Fueling the aviation sector alone represents hundreds of billions of dollars globally, and by proving that ethanol can be converted into jet fuel and diesel at scale, we’ve opened a pathway to capture a meaningful share of that value,” said Jennifer Holmgren, CEO of LanzaTech and Chair of LanzaJet. “From day one, our vision has been two-fold- to produce the world’s best intermediate molecule—ethanol—and to enable its conversion into high value fuels, supporting communities and driving cleaner energy. We are deeply grateful to the investors who believed in this vision from the outset, giving us the foundation to create opportunities for replication around the world delivering long-term value.”

“Today proves what happens when you bring together innovation, resilience, ingenuity, and teamwork to think big and develop a new industry, overcome challenges, and enable global growth,” said Jimmy Samartzis, Chief Executive Officer of LanzaJet. “We’ve made jet fuel by transforming domestic ethanol at a commercial-scale plant for the first time in history. This is an important milestone for LanzaJet and it’s a major win for global aviation, the SAF industry, farmers, industrial operators, oil and gas companies, fuel users, and for our world. What we’ve built at LanzaJet is real, the technology works as expected, and it reinforces the work we’re enabling on just about every continent. What we’ve learned by engineering, investing, building, operating our commercial-scale plant, and producing this fuel, places us in a unique position and is invaluable for growing our business and this global industry in the decade ahead.”

The Lanza ecosystem has been pioneering sustainable aviation fuel for more than a decade. It began with LanzaTech in 2012, developing the world’s first ethanol-to-SAF technology in collaboration with the U.S Energy Department’s Pacific Northwest National Laboratory. That work enabled lab, pilot, and demonstration-scale plants, production of on-spec fuels in 2016, and ASTM approval in 2018 and the first commercial SAF flights with Virgin Atlantic and All Nippon Airways in 2018 and 2019. Building on this foundation, which included further support from the U.S Department of Energy, LanzaJet was launched in 2020 to commercialize the technology with early investment from Mitsui, British Airways, and Shell. Today LanzaJet is supported by investors and funders including Airbus, All Nippon Airways, Breakthrough Energy, British Airways, Groupe ADP, LanzaTech, Microsoft’s Climate Innovation Fund, Mitsui & Co., MUFG, Shell, Southwest Airlines, the U.S. Department of Energy, and the UK Department for Transport. Together, the Lanza ecosystem demonstrates how sustained innovation, scale-up, and perseverance can turn a bold idea into a global, market-ready solution.

About LanzaTech

LanzaTech Global, Inc. (NASDAQ: LNZA) is a carbon management solutions company that transforms industrial emissions, gasified solid waste and carbon dioxide into recycled carbon ethanol via proprietary bio-fermentation technology. Ethanol is a crucial building block in the world – a key feedstock for Sustainable Aviation Fuel (SAF), marine fuel and other downstream chemical derivatives. Operating commercially at six assets today, LanzaTech’s technology unlocks value across the supply chain, reducing the carbon footprint of hard-to-abate sectors while shepherding recycled carbon fuels and products to the world, building a circular carbon economy. www.lanzatech.com

Contact: freya@lanzatech.com