LanzaTech Achieves Guaranteed Performance at Japan MSW-to-Ethanol Plant

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Collaborative pilot at Kuji facility showcases robust ethanol yields using LanzaTech's fermentation technology

- Achieved ethanol yields exceeding guaranteed performance for over 14 consecutive days at steady state
- Successfully operated on complex syngas streams with CO + H_2 contents as low as 40%
- Demonstrated robust waste-to-ethanol process under varying feedstock conditions

SKOKIE, Ill., Jan. 07, 2026 (GLOBE NEWSWIRE) -- LanzaTech Global, Inc. (NASDAQ: LNZA), a leader in industrial carbon recycling, has announced successful operational results at the municipal solid waste (MSW) to ethanol pilot plant in Kuji City, Iwate, Japan owned and operated by longstanding partner, SEKISUI CHEMICAL CO., LTD. (TSE: 4204) (SEKISUI). This 1/10th commercial scale facility, with the capacity to produce approximately 400 tons of ethanol per year, operated for nearly four years following mechanical completion in April 2022. Throughout this period, the plant demonstrated that LanzaTech's gas fermentation platform can reliably process highly inhomogeneous, unsorted mixed non-recyclable waste streams—materials that would otherwise be destined for landfill or incineration. The demonstrated ability to manage challenging and variable waste sources is especially significant, as it shows that the technology can adapt to diverse regional waste profiles and support the development of a global circular carbon economy.

The waste-to-ethanol plant was funded with investment by SBR, a joint venture between Sekisui Chemical and INCJ, a private-public fund overseen by the Japanese Ministry of Economy, Trade, and Industry (METI). It also received funding from the Japanese Ministry of the Environment.

The plant achieved its guaranteed performance, sustaining specific ethanol yields above guaranteed values for over 14 consecutive days after reaching steady state - making this the most productive fermentation campaign at the site to date. Notably, the ethanol yield was maintained above guaranteed performance despite operating on particularly challenging gas mixtures. The plant processed syngas (a blend of carbon monoxide and hydrogen) with a combined CO + H_2 content ranging from 40% to 55%, and an H_2:CO ratio between 1.1 and 1.4, a balance that can be especially demanding for other catalytic technologies. To put this in context, achieving high performance under these conditions is akin to running a marathon at high altitude; it demonstrates both the adaptability and resilience of the LanzaTech process.

Gasification is a widely used and established technology for processing solid waste streams, with LanzaTech having successfully integrated its fermentation platform with several proven, traditional gasifier systems. The project at Kuji provided an opportunity to collaborate on a novel gasifier design, underscoring both the value of ongoing innovation in waste conversion technologies and the adaptability of LanzaTech's fermentation process. Even with varied feed gas conditions, the process not only remained robust but also met key performance targets, demonstrating the reliability and effectiveness of LanzaTech's platform.

"We are immensely proud of what we've achieved together at our Japan demonstration facility," said Dr. Jennifer Holmgren, CEO of LanzaTech. "Our sincere thanks go to our partner Sekisui Chemical and the prefecture of Iwate and the city of Kuji for their outstanding collaboration and support. The results at Kuji once again demonstrate the scalability and technical viability of our fermentation platform. We are also grateful to the Government of Japan for its continued support and investment in sustainable technologies. We look forward to building on this progress and expanding sustainable fuels and chemicals in Japan and beyond."

LanzaTech remains committed to advancing waste-to-energy solutions that are essential for a circular economy and that create valuable feedstocks for sustainable aviation fuel and other chemicals. By turning challenging waste streams into critical resources, projects like this help enable low-carbon industries and accelerate the global transition to more sustainable fuels.

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