



LanzaTech Expands Biorefining Platform Capabilities to Include Production of Commercial-scale Nutritional Protein Directly From CO₂

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Company plans to access \$1 trillion alternative protein market by commercializing primary production of nutrient-rich protein through LanzaTech's proprietary gas fermentation process

CHICAGO, Oct. 01, 2024 (GLOBE NEWSWIRE) -- LanzaTech Global, Inc. (NASDAQ: LNZA) ("LanzaTech" or the "Company"), the carbon recycling company transforming waste carbon into sustainable fuels, chemicals, materials, and protein, today announced its plans to expand its biorefining platform capabilities to include operations that produce LanzaTech Nutritional Protein ("LNP") as the primary product. LNP is a microbial protein that is a nutrient-rich alternative to plant and animal-based proteins. By using a new microbe in its proprietary gas fermentation process, LanzaTech's biorefining platform can produce a cost-competitive protein solution that supports a resilient food supply chain. LNP production has the capability to address food security issues and be produced anywhere in the world, independent of weather extremes. Notably, the production of LNP uses a fraction of the land and water resources that traditional protein sources require.

With the development of LNP production facilities, LanzaTech will gain access to the large and growing alternative protein markets, diversifying its customer base, expanding its sources of revenue, and optimizing the value creation driven by its existing, proven platform.

"Building on the expertise of our commercially operating core gas fermentation process, LNP represents a natural expansion of our business," said Dr. Jennifer Holmgren, CEO of LanzaTech. "By coupling a new microbial production strain with our existing bioreactor technology, and our years of operating experience, we have developed a path to mass produce protein from CO₂. For two years, we've operated a pilot facility to prepare for commercialization, and in the process, we've partnered with leading brands and food testing organizations for rigorous analysis and prototyping of nutrition applications. We have now progressed into the engineering design phase for a 0.5 to 1.5 ton per day facility, expected to be operational in 2026, and have developed a roadmap to commercial-scale production in 2028."

By 2050, the world population is projected to reach 10 billion people, which means an additional 250 million metric tons ("MT") of protein will be required annually. LanzaTech is extending the power of its gas fermentation platform—which can already produce commercial scale volumes of essential ethanol for apparel, packaging, surfactants, and sustainable aviation fuel—to produce large quantities of protein without straining land and water resources or impacting biodiversity. LNP has a complete amino acid profile and no allergenicity.

LanzaTech has nearly two decades of experience biorefining carbon-rich feedstocks to produce ethanol as the primary product and protein as a co-product. Leveraging this experience, LanzaTech has developed a solution using CO₂ that produces LNP as the primary product. As a leader in gas fermentation, LanzaTech is well positioned to access the \$1 trillion and growing alternative protein markets with a cost-competitive product that leverages LanzaTech's proprietary biorefining platform and that utilizes similar feedstocks to LanzaTech's current operations.

LanzaTech is evaluating potential sites, in collaboration with several partners, for the first pre commercial facilities, planned to be operational in 2026. These facilities are expected to produce between 0.5 to 1.5 tons of LNP per day, and given the high protein content of LNP, 0.5 tons per day of LNP is roughly the equivalent of giving a typical complete daily intake of protein to approximately 9,000 people.

Commercial facilities are being designed to produce more than 30,000 MT per annum, or greater than 80 MT per day, with the first of these facilities expected to be operational during 2028.

LanzaTech is in the process of completing trials and testing in animal feed and pet food, and is underway with completing the U.S. Food and Drug Administration's Generally Recognized as Safe ("GRAS") certification process for LNP's use in human nutrition formulations.

The Center for Aquaculture Technologies has successfully tested LNP for fish feed applications and human food and beverage innovation firm Mattson completed thorough protein characterization and food prototyping for dish concepts such as smoothies, dairy-free cheese, and bread.

LanzaTech has also partnered with the U.S. Navy Research Lab on a joint research and contract development project jointly funded by the Office of the Under Secretary of Defense for Research and Engineering, the Office of Naval Research, and the U.S. Naval Research Laboratory to evaluate the viability of creating nutritional proteins on military platforms.

"We are excited to collaborate with LanzaTech on this groundbreaking extension of their carbon recycling platform. Together we are exploring the biomanufacturing potential of a nutritional protein product made from CO₂ extracted from seawater," said Dr. Matthew Yates, Research Biologist at the U.S. Naval Research Laboratory. "Integrating LanzaTech's state of the art gas fermentation technology with the U.S. Naval Research Laboratory's Seawater Carbon Capture Process presents a valuable opportunity to develop a unique capability to meet the nutritional needs of soldiers and sailors across the Joint Forces while simultaneously enhancing the resilience of military operations in an evolving geopolitical landscape."

For more information on LanzaTech and LNP please visit <https://lanzatech.com>.

About LanzaTech

LanzaTech Global, Inc. (NASDAQ: LNZA) is the carbon recycling company transforming waste carbon into sustainable fuels, chemicals, materials, and protein for everyday products. Using its biorecycling technology, LanzaTech captures carbon generated by energy-intensive industries at the source, preventing it from being emitted into the air. LanzaTech then gives that captured carbon a new life as a clean replacement for virgin fossil carbon in everything from household cleaners and clothing fibers to packaging and fuels. By partnering with companies across the global supply chain like ArcelorMittal, Zara, H&M Move, Coty, On, and LanzaJet, LanzaTech is paving the way for a circular carbon economy. For more information about LanzaTech, visit <https://lanzatech.com>.

Forward Looking Statements

This press release includes forward-looking statements regarding, among other things, the plans, strategies, and prospects, both business and financial, of LanzaTech. These statements are based on the beliefs, assumptions, projections and conclusions of LanzaTech's management. Forward-looking statements are inherently subject to risks, uncertainties and assumptions, many of which are outside LanzaTech's control, that could cause actual results or outcomes to differ materially from those discussed in the forward-looking statements. LanzaTech cannot assure you that it will achieve or realize these plans, intentions or expectations. Forward-looking statements are not guarantees of future performance, conditions or results, and you should not rely on forward-looking statements.

Generally, statements that are not historical facts, including those concerning possible or assumed future actions, business strategies, events or results of operations, are forward-looking statements. These statements may be preceded by, followed by or include the words "believes," "estimates," "expects," "projects," "forecasts," "may," "will," "should," "seeks," "plans," "scheduled," "anticipates," "intends" or similar expressions. Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include, among others, the following:

- Our ability to scale and develop the LNP business to the maturity and levels of efficiency required to realize returns, or to receive the required government and regulatory approvals for the marketing and sale of LNP;
- Timing delays in the advancement of projects to the final investment decision stage or into construction;
- Failure by customers to adopt new technologies and platforms;
- Fluctuations in the availability and cost of feedstocks and other process inputs; • The availability and continuation of government funding and support;
- Broader economic conditions, including inflation, interest rates, supply chain disruptions, employment conditions, and competitive pressures;
- Unforeseen technical, regulatory, or commercial challenges in scaling proprietary technologies, business functions or operational disruptions; and
- Other economic, business, or competitive factors, and other risks and uncertainties, including the risk factors and other information contained in LanzaTech's most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q, as well as other existing and future filings with the U.S. Securities and Exchange Commission.

Any forward-looking statement herein is based only on information currently available to LanzaTech and speaks only as of the date on which it is made. LanzaTech undertakes no obligations to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

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