

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K
CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(D) OF THE
SECURITIES EXCHANGE ACT OF 1934
Date of Report (Date of earliest event reported): October 1, 2024

LanzaTech Global, Inc.
(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction
of incorporation)

001-40282

(Commission File Number)

92-2018969

(I.R.S. Employer
Identification No.)

8045 Lamon Avenue, Suite 400
Skokie, Illinois

(Address of principal executive offices)

60077

(Zip Code)

(847) 324-2400

(Registrant's telephone number, including area code)

Not Applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communication pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencements communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbols	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	LNZA	The Nasdaq Stock Market LLC
Redeemable Warrants, each whole warrant exercisable for one share of Common Stock at an exercise price of \$11.50	LNZAW	The Nasdaq Stock Market LLC

- Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).
- If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 8.01. Other Event.

Chicago, IL (October 1, 2024) – LanzaTech Global, Inc. (Nasdaq: LNZA) issued a press release announcing the expansion of its biorefining platform capabilities to include the primary production of commercial-scale nutritional protein produced directly from CO₂. The Company also made available on its website a presentation that discusses the content included in the press release.

Copies of the Company’s press release and presentation are attached as Exhibits 99.1 and 99.2 to this Form 8-K.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Description
99.1	Press release announcing LanzaTech Nutritional Protein dated October 1, 2024
99.2	Presentation on LanzaTech Nutritional Protein dated October 1, 2024
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: October 1, 2024

LANZATECH GLOBAL, INC.

By: /s/ Joseph Blasko
Name: Joseph Blasko
Title: General Counsel and Corporate Secretary



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

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, October 1, 2024 – 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

LanzaTech

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.

LanzaTech

"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

LanzaTech

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.

LanzaTech Global, Inc.

Investor Relations

Kate Walsh

VP, Investor Relations & Tax

Investor.Relations@lanzatech.com

Media Relations

Kit McDonnell

Director of Communications

press@lanzatech.com

LanzaTech



LanzaTech Nutritional Protein

*A NEW SUSTAINABLE SOURCE OF
PROTEIN FROM CO₂*



LanzaTech

Nasdaq: LNZA

Picture: LanzaTech Nutritional Protein
Produced in pilot facility in Illinois

DISCLAIMER

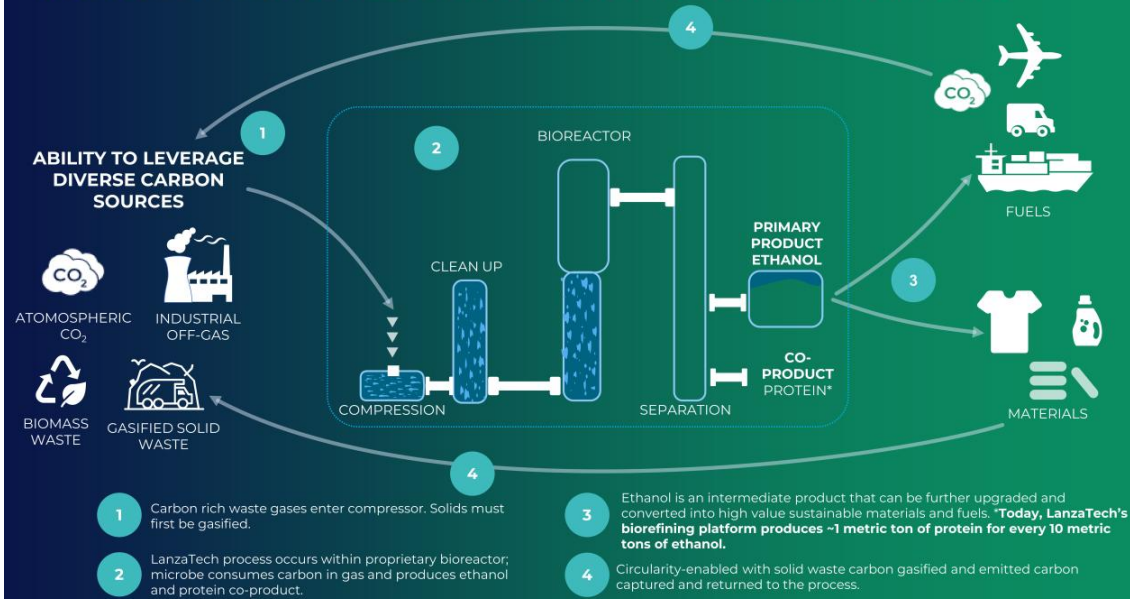
This presentation includes forward-looking statements regarding, among other things, the plans, strategies, and prospects, both business and financial, of LanzaTech. These statements are based on the beliefs, assumptions, projections and conclusions of LanzaTech's management. Forward-looking statements 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 waste 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. This presentation may include data obtained from third-party studies that the company has not independently verified. Forward-looking information obtained from these sources is subject to the same qualification and the additional uncertainties regarding the other forward-looking statements in this presentation. The use or display of third parties' trademarks, service marks, trade name or products in this presentation, if any, is not intended to, and does not imply, a relationship with us, or an endorsement or sponsorship by or of LanzaTech. The trademarks, service marks and trade names referred to in this presentation may or may not appear with the TM or SM symbols, but such references or the absence of such references are not intended to indicate, in any way, that LanzaTech or any third party will not assert, to the fullest extent permitted under applicable law, their rights in respect thereof.

LanzaTech

High-growth, pure-play carbon-recycling company with capital-light business model, advancing the circular carbon economy by recycling waste carbon feedstocks into fuels, chemicals, materials, and protein used in everyday products

<p>6 commercial plants operating</p>	<p>> 495,000 metric tons of CO₂ recycled to date</p>	<p>37% ownership of LanzaJet, a leading sustainable aviation fuel technology provider and fuels producer</p>
<p>14 projects in Advanced Engineering Phase</p>	<p>50%+ projected for 2024 Revenue Growth using 2024 range midpoint vs 2023 revenue of \$62.6M</p>	<p>19 years of operations (2005), publicly listed on Nasdaq in 2023 (\$LNZA)</p>
<p>4+ projects expected to reach FID and enter construction phase during next 12 months</p>	<p>Disciplined cost management</p>	<p>> 1,450 patents secured related to proprietary biorefining operations and technology IP</p>

LANZATECH'S INNOVATIVE CIRCULAR CARBON SOLUTION RECYCLES WASTE FEEDSTOCKS INTO VALUABLE PRODUCTS



LANZATECH NUTRITIONAL PROTEIN (“LNP”) EXPERIENCE

PROTEIN CURRENTLY PRODUCED AS A CO-PRODUCT WITH ETHANOL AT SEVERAL COMMERCIAL SITES

Plants operating in China using LanzaTech’s biorefining platform to produce ethanol as a primary product have produced **25,000 metric tons of protein co-product to date:**

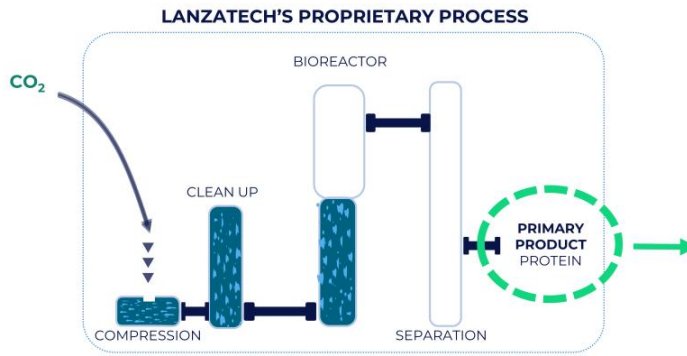
- ✦ Chinese operations went through a lengthy process to have protein certified for animal feed
- ✦ Protein has been sold as an ingredient to aquaculture, poultry, and pig feed producers

Operations in India are progressing with protein certification for poultry feed markets



LNP PROCESS

Commercializing production of nutrient-rich protein as primary product through LanzaTech's proprietary gas fermentation process



Entering \$1 trillion alternative protein market with new high-quality sustainable source of protein from CO₂

Protein as the primary product as compared to ethanol as the primary product:

- Uses the same bioreactor
- Uses the same feedstocks
- Protein uses new microbe

By using a new microbe, LanzaTech's existing biorefining platform **can mass produce protein as the primary product** of its gas fermentation process, which drives incremental value from LanzaTech's core competencies

THE WORLD NEEDS SUSTAINABLE SOURCES OF FOOD



Sustainable & Global: Can be made **anywhere in the world at low cost** using just CO₂, O₂, H₂ and water. Very little land and water use, no crops



Supply-chain security: Domestic feedstocks resilient to macro disruptions; **production independent of agricultural or climate variation and weather extremes**



Value: Low-cost production and ability to capture carbon credits; improves rural economies by building a market for waste streams (e.g. agriculture residue, CO₂ from corn ethanol plants, biomass, etc.)

*Picture: LanzaTech Nutritional Protein
Produced in pilot facility in Illinois*

LNP PRODUCT PROPERTIES

- ✓ Comparable properties to pea and whey protein
- ✓ >85% protein content
- ✓ Contains all 20 amino acids
- ✓ No allergenicity
- ✓ Highly digestible
- ✓ Odorless and neutral color

0.5 MT per day of LNP is roughly the equivalent of giving a typical complete daily intake of protein to approximately 9,000 people



Pictured: LanzaTech Nutritional Protein
Produced in pilot facility in Illinois

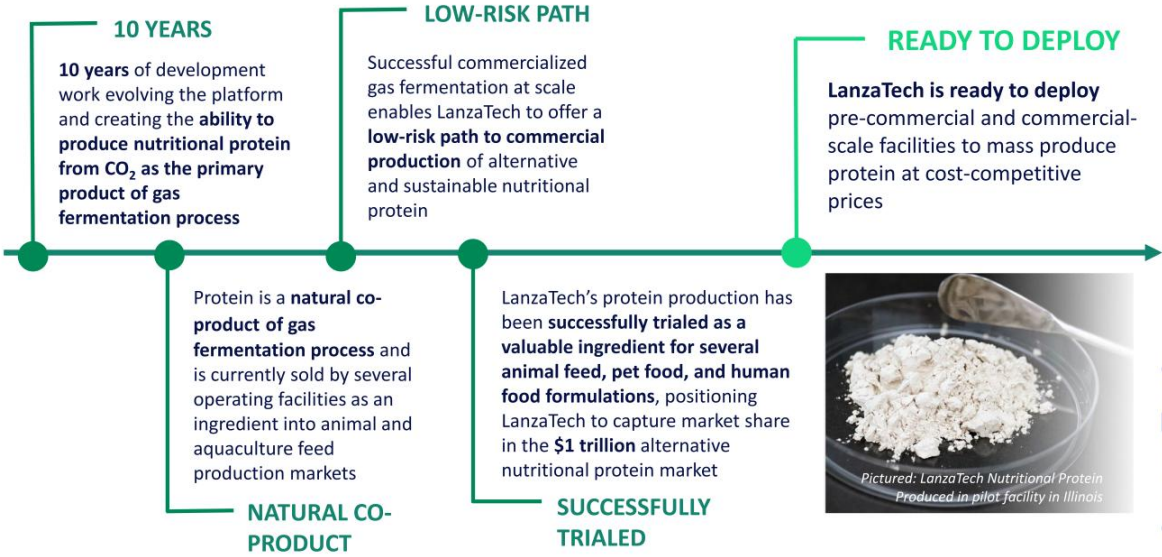
LNP AS A PRIMARY PRODUCT OF GAS FERMENTATION PROCESS

LanzaTech is operating a pilot facility at its headquarters in Skokie, Illinois. The pilot facility has the capacity to produce 1 kilogram per day of LNP:

- ✦ Prototyped with animal feed and pet food companies, and animal feed trials are underway (fish, shrimp, chicken, pigs)
- ✦ Initiated prototype development with human nutrition trials with [Mattson](#), a food development specialist
- ✦ LanzaTech has partnered with the U.S. Naval Research Laboratory 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



PROTEIN PRODUCTION IS A NATURAL CO-PRODUCT OF LANZATECH'S GAS FERMENTATION PLATFORM



**DERISKED LNP SCALE UP:
10 YEARS OF R&D AND PILOTING FOR COMMERCIAL CAPABILITY**



2014-2021

LABORATORY SCALE

Feedstock trials in lab; successfully produced protein as primary product



2022-2023

PILOT PRODUCTION

Trials and testing completed for animal feed, pet food, and human nutrition formulations



2024+

PATH TO COMMERCIAL PRODUCTION

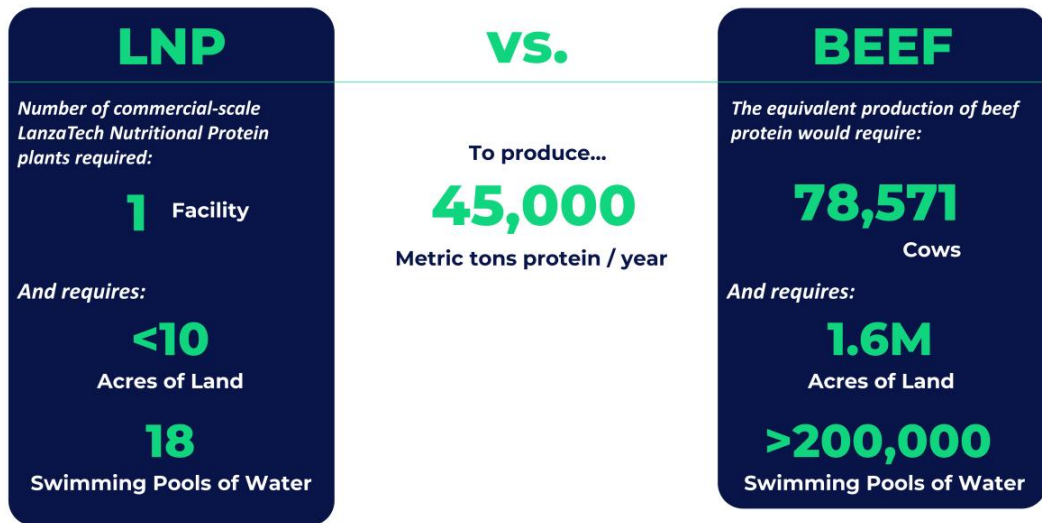
- Pre-commercial plant in process. Target in-service date in 2026. Projected capacity of ~280 metric tons per annum ("MTPA")
- First commercial-scale plant in planning phase. Target in-service date in 2028. Production capacity expected to be >30K MTPA

Pre-commercial facility production capacity expected to be 0.5 - 1.5 metric tons per day

Commercial-scale facility production capacity expected to be >80 metric tons per day

LNP IS A SINGLE CELL PROTEIN GENERATED FROM GHGs

LanzaTech is a global leader in gas fermentation and has created a protein solution for a resilient future food supply chain that uses a fraction of the land and water resources needed for traditional plant and animal protein sources, leading to a much-reduced impact on the environment and a cost-competitive product



REGULATORY & INTELLECTUAL PROPERTY MILESTONES TO DATE

- ✓ Gas fermentation protected by LanzaTech's established 1,450+ patent estate
- ✓ First patents on direct protein production published in December 2023
- ✓ Regulatory process for human nutrition and animal feed underway
- ✓ FDA Self-GRAS* determination expected in 2024 for LNP
- ✓ Safety gap assessment complete
- ✓ Salmon feed and other trials underway

*GRAS = *Generally regarded as safe*



HUMAN FOOD & BEVERAGE PRODUCT DEVELOPMENT
UNDERTAKEN WITH [MATTSON](#) SHOWING MULTIPLE INGREDIENT
APPLICATIONS

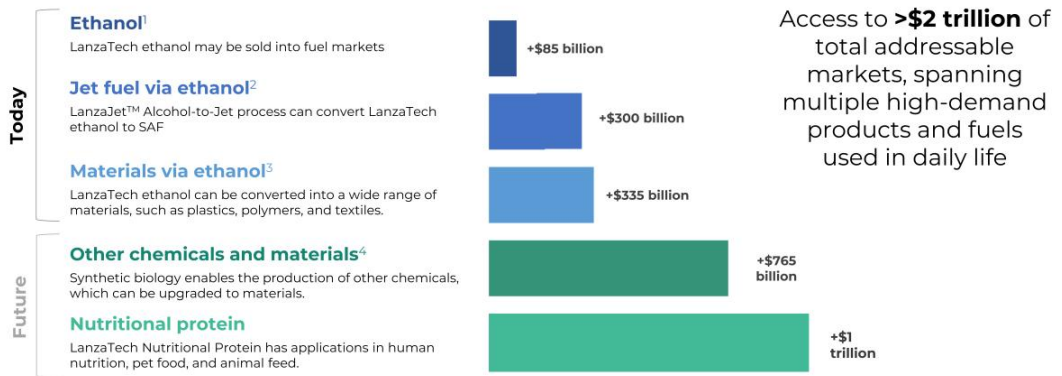


SUMMARY – LANZATECH NUTRITIONAL PROTEIN

- LNP is **protein-dense at >85% protein**, is highly versatile with characteristics similar to pea and whey proteins, and neutral in color, making it an attractive ingredient offering for multiple animal feed and human food formulations
- LNP has a substantially **lower impact across GHG emissions, land use, and water use** when compared to nearly all other protein sources, and can be produced anywhere in the world, regardless of climate and weather extremes
- LNP is produced from 4 main elements – CO₂, O₂, H₂, and water – using a **proven commercialized gas fermentation process** developed by LanzaTech, and leverages existing bioreactor equipment platform and feedstocks
- **Robust market pricing** across animal feed and human nutrition ingredient formulations provides attractive economic return for LanzaTech and partners
- **Sustainable, low cost of production** profile compared to other protein sources, given proven technology and the need for very little land and water use



LANZATECH'S BIOREFINING PLATFORM ACCESSES DIVERSE & GROWING MARKETS



Nutrition Fuels Materials Polymers Monomers Fragrances Chemicals Solvents

¹ Ethanol (\$89.1B, 2018, Grand View Research), ² International Air Transport Association, ³ Ethylene (\$222B, 2019, The Business Research Company), Ethylene Oxide (\$45B, 2020, Research and Markets), PET (\$43.8B, 2019, The Business Research Company), MEG (\$36B, 2018, Market Research Future), ⁴ Acetone (\$4.6B, 2019, Grand View Research), Isopropanol (\$2.7B, 2019, Grand View Research), Isoprene (\$2.6B, 2019, Technavio), Polypropylene (\$1.6B, 2019, Grand View Research), Methyl Methacrylate (MMA) (\$12.6B, 2019, Fortune Business Insights), Specialty chemicals (\$620B, 2019, Grand View Research).

Investor contact:

Kate Walsh
VP Investor Relations
Kate.Walsh@lanzatech.com



LanzaTech

Nasdaq: LNZA

RECYCLING CARBON TODAY AT COMMERCIAL SCALE

