SAFE HARBOR STATEMENT

These slides and any accompanying oral presentation contain forward-looking statements. All statements, other than statements of historical fact, included in these slides and any accompanying oral presentation are forward-looking statements reflecting management’s current beliefs and expectations. In some cases, you can identify forward-looking statements by terminology such as “will,” “anticipate,” “expect,” “believe,” “intend” and “should” or the negative of these terms or other comparable terminology. Forward-looking statements in these slides and any accompanying oral presentation include, but are not limited to, statements about estimates and forecasts of other financial and performance metrics and projections of market opportunity, expectations and timing related to the rollout of our business and timing of deployments, customer growth and other business milestones. These statements are based on various assumptions, whether or not identified in this presentation, and on the current expectations of our management and are not predictions of actual performance. These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. The potential risks and uncertainties that could cause actual results to differ from the results predicted include, among others, those risks and uncertainties included under the captions “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Form 10-Q filed with the Securities and Exchange Commission and subsequent annual reports, quarterly reports and other filings made with the Securities and Exchange Commission from time to time. Any forward-looking statements contained herein are based on assumptions that we believe to be reasonable as of the date hereof. Except as required by law, we assume no obligation to update these forward-looking statements, even if new information becomes available in the future.

Forward-looking statements may include, for example, statements about:

- our anticipated growth rate and market opportunities;
- our ability to maintain the listing of our securities on the Nasdaq Stock Market;
- the potential liquidity and trading of our securities;
- our ability to raise substantial additional financing in the future;
- our assessment of the competitive landscape;
- our ability to comply with laws and regulations applicable to our business;
- our ability to enter into, successfully maintain and manage relationships with industry partners;
- our receipt of substantial additional financing to fund our operations and complete the development and commercialization of our process technologies;
- the availability of governmental programs designed to incentivize the production and consumption of low-carbon fuels and carbon capture and utilization;
- our ability to adequately protect our intellectual property rights;
- our ability to attract, retain and motivate qualified personnel and to manage our growth effectively;
- our future financial performance, growth, costs and expenses, availability of resources and capital requirements;
- our ability to increase our revenue from engineering services, sales of equipment packages and sales of CarbonSmart™ products and to improve our operating results;
- our ability to implement and maintain effective internal controls.

This presentation includes data obtained from third-party studies and internal company company surveys prepared for other purposes. The company has not independently verified the data obtained from these sources. 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.

This presentation contains trademarks, service marks, trade names, and copyrights of ours and of other companies, which are the property of their respective owners. The use or display of third parties’ trademarks, service marks, trade name or products in this presentation is not intended to, and does not imply, a relationship with us, or an endorsement or sponsorship by or of LanzaTech. Solely for convenience, the trademarks, service marks and trade names referred to in this presentation may appear with the TM or SM symbols, but such references are not intended to indicate, in any way, that LanzaTech will not assert, to the fullest extent permitted under
FINANCIAL INFORMATION & NON-GAAP FINANCIAL MEASURES

To supplement our financial statements presented in accordance with US GAAP and to provide investors with additional information regarding our financial results, we have presented adjusted EBITDA, a non-GAAP financial measure. Adjusted EBITDA is not based on any standardized methodology prescribed by US GAAP and is not necessarily comparable to similarly titled measures presented by other companies.

We define adjusted EBITDA as our net loss, excluding the impact of depreciation, interest income, net, stock-based compensation, change in fair value of warrant liabilities, change in fair value of SAFE liabilities, change in fair value of the Forward Purchase Agreement ("FPA") Put Option liability and Fixed Maturity Consideration, transaction costs on issuance of Forward Purchase Agreement, (loss) gain from equity method investees and other one-time costs related to the Business Combination and securities registration on Form S-4 and our registration statement on Form S-1. We monitor adjusted EBITDA because it is a key measure used by our management and the Board to understand and evaluate our operating performance, to establish budgets, and to develop operational goals for managing our business. We believe adjusted EBITDA helps identify underlying trends in our business that could otherwise be masked by the effect of certain expenses that we include in net loss. Accordingly, we believe adjusted EBITDA provides useful information to investors, analysts, and others in understanding and evaluating our operating results and enhancing the overall understanding of our past performance and future prospects.

Adjusted EBITDA is not prepared in accordance with US GAAP and should not be considered in isolation of, or as an alternative to, measures prepared in accordance with US GAAP. There are a number of limitations related to the use of adjusted EBITDA rather than net loss, which is the most directly comparable financial measure calculated and presented in accordance with US GAAP. For example, adjusted EBITDA: (i) excludes stock-based compensation expense because it is a significant non-cash expense that is not directly related to our operating performance; (ii) excludes depreciation expense and, although this is a non-cash expense, the assets being depreciated and amortized may have to be replaced in the future; (iii) excludes gain or losses on equity method investee; and (iv) excludes certain income or expense items that do not provide a comparable measure of our business performance. In addition, the expenses and other items that we exclude in our calculations of adjusted EBITDA may differ from the expenses and other items, if any, that other companies may exclude from adjusted EBITDA when they report their operating results. In addition, other companies may use other measures to evaluate their performance, all of which could reduce the usefulness of our non-GAAP financial measures as tools for comparison.

The Company does not provide a reconciliation of forward-looking non-GAAP financial measures to the most comparable U.S. GAAP financial measures on a forward-looking basis because the Company is unable to predict with reasonable certainty the ultimate outcome of pending litigation, unusual gains and losses, foreign currency exchange gains or losses and potential future asset impairments, as well as discrete taxable events, without unreasonable effort. These items are uncertain, depend on various factors, and could have a material impact on U.S. GAAP results for the guidance period.
AGENDA / TABLE OF CONTENTS

Sections                                                                 Presenter
• 1Q 2024 Highlights.                      Jennifer Holmgren, CEO
• Project SECURE Overview.                Jennifer Holmgren, CEO
• Sustainable Aviation Fuel Updates.     Jennifer Holmgren, CEO
• Commercial Pipeline Growth.            Jennifer Holmgren, CEO
• 1Q 2024 Financial Results.              Geoff Trukenbrod, CFO
• Guidance Reiteration.                   Geoff Trukenbrod, CFO
• Appendix: Additional Financial Information
1Q 2024 HIGHLIGHTS

1 | Financials in-line with internal forecast & guidance
   - Revenue: $10.2M
   - Gross margin: 34%
   - Gross profit: $3.5M

2 | $200M for Project SECURE
   - Funding from U.S. Dept. of Energy for commercial ethylene project with Technip Energies
   - Sustainable ethylene production from captured CO₂ emissions
   - High replicability potential at 370+ ethylene crackers worldwide

3 | SAF milestones
   - LanzaJet* inaugurated world’s 1st commercial ethanol-to-SAF facility
   - LanzaJet in process to raise ~$100M in investment capital, with commitments thus far from Microsoft Climate Innovation Fund, & Southwest Airlines
   *LanzaTech maintains ~25% ownership interest in LanzaJet

4 | Commercial pipeline growth
   - Advancing pipeline of commercial-scale projects
   - Expanding the scale and diversity of the feedstocks and represented geographies
   - Strong and healthy base of projects in commercial pipeline with progression through development stages

5 | Reaffirming 2024 guidance
   - Expected revenue of $90M - $105M in 2024
   - At the midpoint, the 2024 revenue guidance reflects topline growth of approx. 55% over 2023 performance
   - Expected adjusted EBITDA loss of $(65)M - $(55)M
PROJECT SECURE

LanzaTech + T.E.N. Technip Energies

Project SECURE selected by U.S. DOE to receive $200 million grant

- Project SECURE is a demonstration of carbon capture and utilization at work, leveraging LanzaTech’s and Technip Energies’ transformational technologies to produce sustainable ethylene from captured CO₂ emissions
- Sited in the US, Project SECURE, will be the first commercial-scale deployment of this sustainable ethylene production integration with high replicability potential at any ethylene steam cracker facility globally
- DOE investment to contribute to the financing of the design, engineering, and construction of Project SECURE
- Major milestone achieved as part of LanzaTech and Technip Energies’ previously announced Joint Collaboration Agreement in July 2023

GLOBAL ETHYLENE MARKET

“the world’s most important chemical”

$200 Billion
Global ethylene market size by 2030

553 Million
Tonnes of annual CO₂ emissions from ethylene production

Ethylene is a precursor for producing myriad products such as polyester, textiles, foams, and plastics and is also utilized in the first step of the Alcohol-to-Jet process to produce sustainable aviation fuel (SAF)

PROJECT SECURE

$200 Million
Grant expected to be provided by the DOE

+200 jobs
Expected to be enabled through Project SECURE

30,000 tonnes
Expected annual nameplate capacity of sustainable ethylene production

$200 Million
Grant expected to be provided by the DOE

+200 jobs
Expected to be enabled through Project SECURE

30,000 tonnes
Expected annual nameplate capacity of sustainable ethylene production
RECENT SUSTAINABLE AVIATION FUEL (SAF) MILESTONES

**VERSATILE AND SCALABLE INTEGRATED SOLUTION**

- Using LanzaTech’s platform, just about any source of waste or pollution can be transformed into SAF using ethanol Alcohol-to-Jet
- SAF production creates enormous demand pull for LanzaTech’s waste-based ethanol as it takes ~1.6 tonnes of ethanol to produce 1 tonne of SAF

**UK’S SAF MANDATE CONSTRUCTIVE FOR LANZATECH’S PROCESSES AND PROJECT DRAGON**

- SAF must account for 2% of all fuel in the UK aviation sector, with threshold increasing to 10% in 2030 and 22% in 2040
- Cap on SAF production via hydroprocessed esters and fatty acids (HEFA) pathway protects UK market for advanced SAF, including SAF produced from waste-based ethanol
- Significant increase in SAF buy-out price from mandate further supports SAF processes in this market
STRONG PIPELINE THAT POSITIONS THE COMPANY FOR CONTINUED GROWTH AND SCALE

ACTIVE BIOREFINING CUSTOMER PROJECT PIPELINE

- 70+ Active Engagements with Positive Technoeconomic Results
- 25+ Early-Stage Engineering
- 14 Advanced Engineering
- 0 Construction
- 8 Operating

9 net additions into this stage
0 net additions into this stage
1 net addition into this stage

LanzaJet Freedom Pines Fuels removed from the pipeline depiction and will be tracked separately

KEY PIPELINE CHARACTERISTICS

- As of April 24, 2024.
- LanzaJet Freedom Pines Fuels facility has completed construction and is in commissioning and start up. Production of fuel expected in 2Q 2024

PIPELINE BY FEEDSTOCK

- Asia & Pacific
- Europe
- Middle East
- Americas
- India
- Gasified MSW
- Other Gasified Solids
- Biogas
- CO2 + H2

~83,000 tons Avg. Plant Capacity

6 commercial gas fermentation projects: SGLT 1 – 4, IndianOil, and ArcelorMittal Ghent
2 demonstration-scale gas fermentation projects: Sekisui 1/10th plant and Suncor demo unit

1 As of April 24, 2024.
OVERVIEW OF 1Q 2024 FINANCIAL RESULTS
**OVERVIEW OF 1Q 2024 FINANCIAL RESULTS**

**SUMMARY FINANCIAL RESULTS¹**

<table>
<thead>
<tr>
<th></th>
<th>Three Months Ended March 31st</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2024</td>
<td>2023</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>$10.2</td>
<td>$9.6</td>
</tr>
<tr>
<td>Cost of Revenues</td>
<td>(6.8)</td>
<td>(7.8)</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>(29.6)</td>
<td>(34.4)</td>
</tr>
<tr>
<td>Net Loss</td>
<td>$(25.5)</td>
<td>$(63.3)</td>
</tr>
<tr>
<td>Adjusted EBITDA</td>
<td>$(22.1)</td>
<td>$(23.5)</td>
</tr>
</tbody>
</table>

**COMMENTARY**

Revenue:
- Revenue increased 6% YoY in 1Q 2024, in-line with forecast to $10.2 million. Revenue growth YoY in JDA & Contract Research and CarbonSmart. Biorefining revenue decreased YoY in 1Q 2024 as anticipated but saw strong contribution from engineering services and start-up services.

Gross Profit:
- Gross profit increase of 87% YoY and gross margin of 34% in 1Q 2024 as a result of high-margin engineering services and JDA contracts.

Net Loss
- Net loss of $(25.5) million in 1Q 2024, a $37.8 million improvement compared to 1Q 2023.

Cash
- Total cash, restricted cash, and investments of $92.3 million as of March 31, 2024. Cash burn of $29.2 million in the quarter.

**1Q 2024 DISAGGREGATED REVENUE²**

<table>
<thead>
<tr>
<th></th>
<th>1Q 2023</th>
<th>1Q 2024</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biorefining</td>
<td>$3.3</td>
<td>$6.4</td>
<td>46%</td>
</tr>
<tr>
<td>CarbonSmart™</td>
<td>$0.0</td>
<td>$0.9</td>
<td></td>
</tr>
<tr>
<td>Joint Development &amp; Contract Research</td>
<td>$4.3</td>
<td>$5.0</td>
<td></td>
</tr>
</tbody>
</table>

**1** Numbers may not add up due to rounding.

**2** Numbers may not add up due to rounding.

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¹ Revenue, cost of revenues, operating expenses, adjusted EBITDA, and net loss figures do not include special items.
² Biorefining revenue decreased by 21% YoY to $5.0 million in 1Q 2024. The YoY decrease was expected and attributed to timing and the unevenness of the project development pipeline. Strong contributions from engineering services and start-up services.

- CarbonSmart™ revenue was $0.9 million in 1Q 2024, up from $0.0 million in 1Q 2023 from sales to multiple brand customers through commercial product campaigns.

- Joint Development & Contract Research revenue increased 32% YoY to $4.3 million in 1Q 2024, reflective of existing contract progression and new customer projects.
2024 GUIDANCE REITERATION

REVENUE GUIDANCE: $90M - $105M

ADJUSTED EBITDA GUIDANCE: $(65)M - $(55)M
APPENDIX:
ADDITIONAL FINANCIAL INFORMATION
RESULT OF OPERATIONS – THREE MONTHS ENDED MARCH 31, 2024

<table>
<thead>
<tr>
<th></th>
<th>Three Months Ended March 31, 2024</th>
<th>Change 2024 vs. 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2024</td>
<td>2023</td>
</tr>
<tr>
<td>Total revenue</td>
<td>10,244</td>
<td>9,646</td>
</tr>
<tr>
<td>Cost of revenue (exclusive of depreciation shown below)</td>
<td>(6,770)</td>
<td>(7,790)</td>
</tr>
<tr>
<td>Operating expenses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and development</td>
<td>(17,061)</td>
<td>(16,286)</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>(1,530)</td>
<td>(1,257)</td>
</tr>
<tr>
<td>Selling, general and administrative expense</td>
<td>(11,037)</td>
<td>(16,835)</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td><strong>$ (29,628)</strong></td>
<td><strong>$ (34,378)</strong></td>
</tr>
<tr>
<td>Loss from operations</td>
<td>(26,154)</td>
<td>(32,522)</td>
</tr>
<tr>
<td>Interest income, net</td>
<td>1,148 $</td>
<td>214 $</td>
</tr>
<tr>
<td>Other income (expense), net</td>
<td>179 $</td>
<td>(30,396)</td>
</tr>
<tr>
<td><strong>Total other income (expense), net</strong></td>
<td>1,327 $</td>
<td>(30,182)</td>
</tr>
<tr>
<td><strong>Loss before income taxes</strong></td>
<td><strong>$ (24,827)</strong></td>
<td><strong>$ (62,704)</strong></td>
</tr>
<tr>
<td>Loss from equity method investees, net</td>
<td>(681)</td>
<td>(608)</td>
</tr>
<tr>
<td><strong>Net loss</strong></td>
<td><strong>$ (25,508)</strong></td>
<td><strong>$ (63,312)</strong></td>
</tr>
<tr>
<td>Other comprehensive loss:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign currency translation adjustments</td>
<td>42 $</td>
<td>(49) $</td>
</tr>
<tr>
<td><strong>Comprehensive loss</strong></td>
<td><strong>$ (25,466)</strong></td>
<td><strong>$ (63,361)</strong></td>
</tr>
<tr>
<td>Net loss per share - basic and diluted</td>
<td>(0.13)</td>
<td>(0.58)</td>
</tr>
<tr>
<td>Weighted-average number of common shares outstanding - basic and diluted</td>
<td>196,974,508</td>
<td>116,530,963</td>
</tr>
<tr>
<td>(In thousands)</td>
<td>2024</td>
<td>2023</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Net Loss</td>
<td>$(25,508)</td>
<td>$(63,312)</td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,530</td>
<td>1,257</td>
</tr>
<tr>
<td>Interest income, net</td>
<td>(1,148)</td>
<td>(214)</td>
</tr>
<tr>
<td>Stock-based compensation expense and change in fair value of SAFE and warrant liabilities</td>
<td>(10,748)</td>
<td>(17,474)</td>
</tr>
<tr>
<td>Change in fair value of the FPA Put Option and Fixed Maturity Consideration liabilities</td>
<td>13,045</td>
<td>51,109</td>
</tr>
<tr>
<td>Transaction costs on issuance of Forward Purchase Agreement</td>
<td>—</td>
<td>451</td>
</tr>
<tr>
<td>Loss from equity method investees, net</td>
<td>681</td>
<td>608</td>
</tr>
<tr>
<td>One-time costs related to the Business Combination, initial securities registration and non-recurring regulatory matters</td>
<td>—</td>
<td>4,062</td>
</tr>
<tr>
<td>Adjusted EBITDA</td>
<td>$(22,148)</td>
<td>$(23,513)</td>
</tr>
</tbody>
</table>

(1) Stock-based compensation expense represents expense related to equity compensation plans.

(2) Represents costs incurred related to the Business Combination that do not meet the direct and incremental criteria per SEC Staff Accounting Bulletin Topic 5A to be charged against the gross proceeds of the transaction but are not expected to recur in the future, as well as costs incurred subsequent to deal close related to our securities registration on Form S-4 and our registration statement on Form S-1. Regulatory matters includes fees related to non-recurring items during the year ended December 31, 2023.