

Second Quarter 2023 Earnings Call

The world's leading carbon negative materials company

August 9, 2023

Forward looking statements and disclaimers

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Q2 2023 highlights

Origin 1 initiated startup, Origin 2 outlook updated

- Origin 1 initiated start-up, in-line with guidance. Plant to produce CMF, HTC, and oils and extractives
- FDCA mass production to move forward to Origin 2, rather than Origin 3 as initially planned, due to strong commercialization progress and higher-margin opportunities
- Origin 2 outlook updated; Phased construction plan to reduce risk on path to profitability, with Phase 1 startup expected in late 2026 to 2027, Phase 2 start-up expected in 2028. Phase 1 expected to be independently profitable
- Capital budget for Phase 1 of Origin 2 is expected to be up to \$400 million, capital budget for Phase 2 is projected to be up to \$1.2 billion, compared to the original \$1.07 billion aggregate capital budget estimate
- Origin to supply pX for bio-PET to customers prior to 2030 primarily through collaborations with strategic partners

Strong customer demand & product development

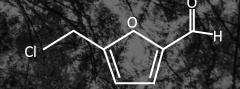
- Offtake and capacity reservation agreements exceed \$10 billion¹
- Strategic partnership and commercialization announcements with Sustainea, Terphane, Proman, and Husky
- Announcement of "All PET Mono-Material" bottle and cap solutions, offering breakthrough in recycling and circularity

Maintains 2023 financial guidance

- The Company maintains its 2023 financial guidance of revenue of \$40 million to \$60 million and an Adjusted EBITDA loss of \$50 million to \$60 million
- The Company reported Q2 revenue of \$6.9 million generated by JDAs and its supply chain activation program

Origin Materials - At a Glance

The world's leading carbon negative materials company



Disruptive Materials Technology Company



Origin produces low and negative carbon materials **Decarbonizing Platform** Technology



Enables customers' netzero commitments

Enormous TAM

>\$1+ Trillion

\$390Bn near-term focus in polyesters; \$750Bn across broad range of materials

Cost advantaged



Timber feedstocks are competitive with oil and ~10x cheaper than bio alternatives

Global Fortune 500 Customers & Investors¹



Strong Customer Demand²

>\$10Bn³

from a diverse mix of industries

Protected & Validated **Technology**

31 Patent Families⁴

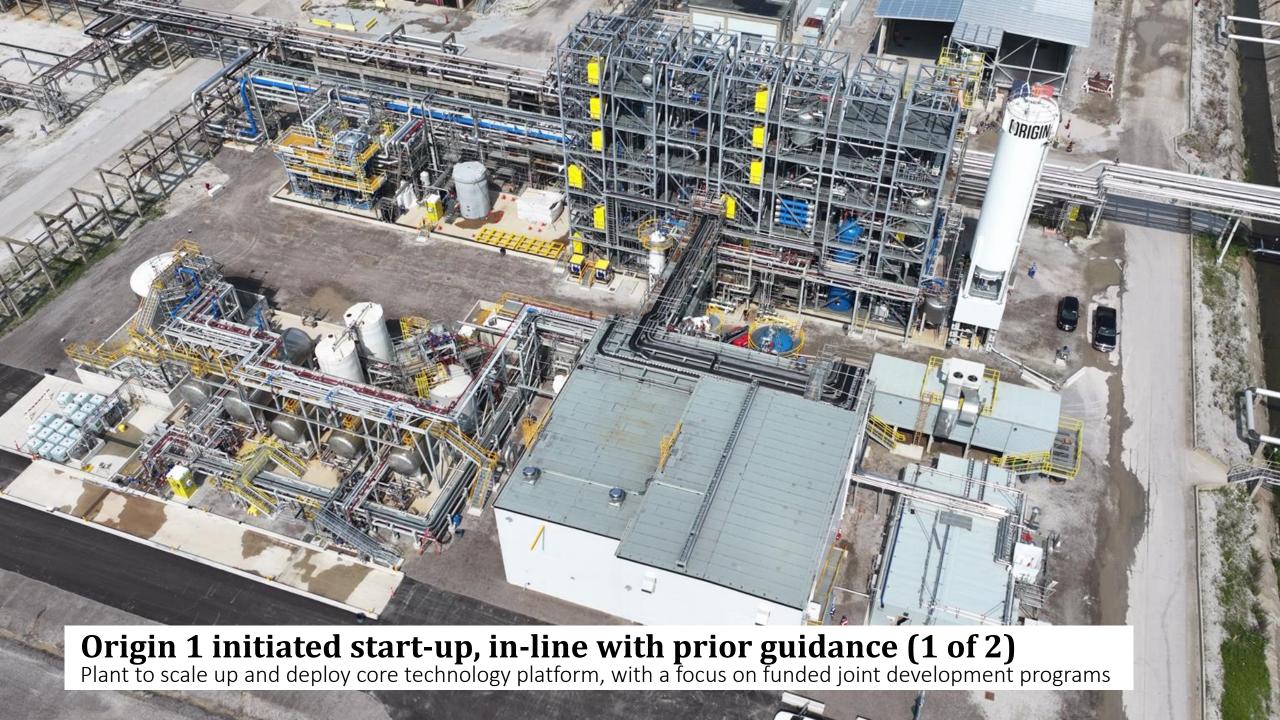
Core technology protected in key countries

^{1.} Denotes ownership by PepsiCo, Danone and Nestle prior to business combination with Artius Acquisition, Inc.

^{2.} Figures assume maximum offtake amounts and exercise of full capacity reservations

^{3.} As of August 9, 2023.

^{4.} As of August 9, 2023.

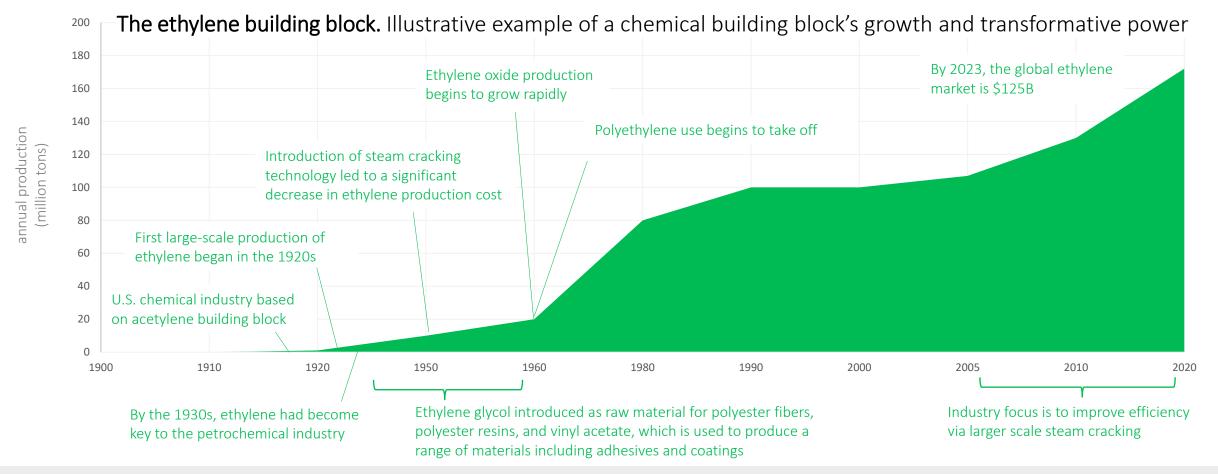




The Origin Platform - CMF building block is historic

The most recent chemical building block since polycarbonate, acrylate, and urethanes were commercialized in the 1980s¹

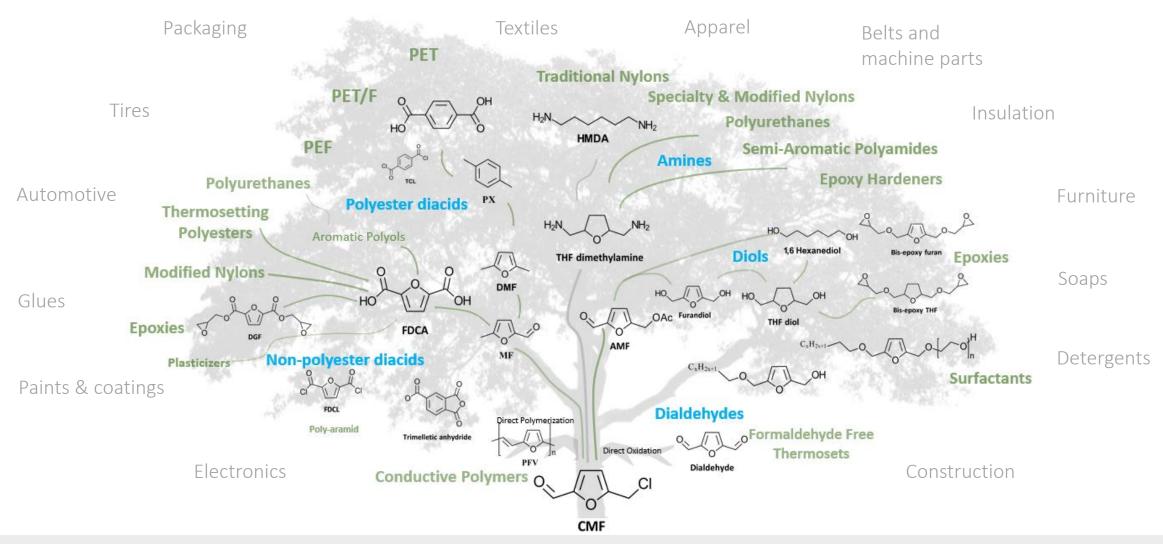
New fundamental building blocks are historic events driven by low cost of production, high versatility, and differentiated performance CMF differentiation includes low carbon intensity when produced from biomass using Origin's process and performance advantages of some CMF applications





The Origin Platform - CMF application breadth is expansive

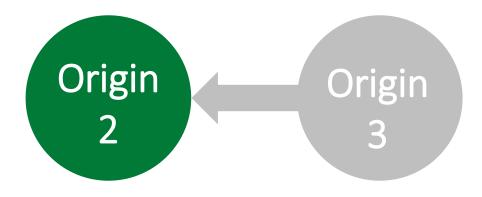
Competitive production cost, versatility, and differentiated performance unlock new pathways for making products



FDCA – Mass production moved forward to Origin 2, rather than Origin 3. Customer demand for FDCA from Origin 2 is robust and growing

Acceleration due to strong commercialization progress, higher-margin opportunities, and near-term drop-in applications

Rapid Progress in FDCA Commercialization Has Enabled Accelerated Mass Production Timeline



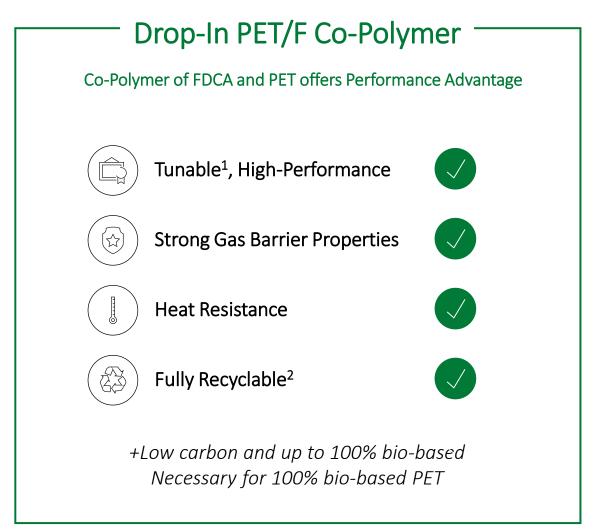
Origin 2 FDCA customer demand is robust and growing

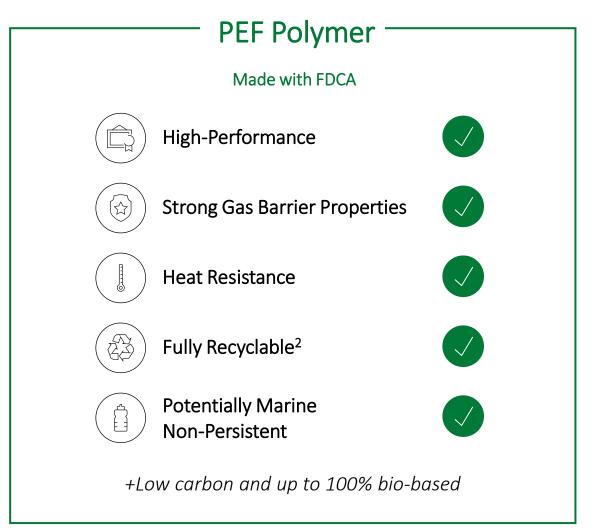
In February 2021, Origin 3 was expected to be the first Origin plant focused on FDCA production from CMF. Now, Origin 2 is expected to focus primarily on FDCA production from CMF.

- Higher margins due to performance advantages
- Applications include polyesters, polyamides, polyurethanes, coating resins, plasticizers
- Origin 2 initially anticipated to focus primarily on paraxylene production for bio-PET
- Origin now plans to supply pX to customers prior to 2030 primarily through collaborations with strategic partners
- Active discussions with strategic partners interested in licensing or co-developing low carbon bio-pX plants using Origin's technology, in the US and across the globe
- Most are large, well-capitalized industrial producers of petro-PTA, PET, and other downstream products

FDCA – We will begin with drop-in applications that improve the performance of PET and are validated on commercial-scale equipment

FDCA complements sustainable PET production strategies and is necessary for 100% bio-PET and future PEF production





^{1. &}quot;Tunable" performance properties include enhanced mechanical performance and superior barrier properties enabling longer shelf life.

^{2.} PEF can be recycled by the same mechanical methods used for PET. Currently there are no independent PEF recycling stream or U.S. guidelines for blending PEF and PET streams. PEF applications include films, fibers, and next-generation packaging, with the potential to replace glass and aluminum; superior break protection and light-weighting

Origin 2 – Profound market shifts present both opportunities and challenges

Opportunities:

Stronger than anticipated demand for higher-margin, performance-advantaged products including:

FDCA

- PEF and PET/F
- Carbon black
 Liquid biofuels

Challenges:

- Increased cost of labor, materials, process inputs, metallurgy (e.g., steel) due to volatile global materials markets, requiring engineering re-work. (Producer Price Index up 40% from 2020 to 2023.)
- Inflation and higher interest rates. (SOFR rose from 0.05% in June 2021 to 5.3% by August 2023.)
- Additional value engineering requirements that have extended project timelines.

Updated Origin 2 Outlook Phased Construction Plan

Adapting in this manner to the high-cost environment is expected to reduce project risk as we move forward on the path to profitability



Origin 2 – Phased construction: First oils and extractives, then CMF and HTC

Adapting in this manner to the higher-cost environment is expected to reduce project risk on the path to profitability

Phase 1: Oils and Extractives

Late 2026 to 2027

- Independently profitable
- Oils and extractives based liquid bio-fuel
- Product: Drop-in biofuel. Potential applications include marine fuel, heat and power generation. Potential benefits include improved energy density compared with existing renewable alternatives and increased bio-content
- Tailwind: Decarbonization goals set by United Nations' International Maritime Organization
- Capital budget expected to be up to \$400M¹

Phase 2: CMF and HTC 2028

- Phase 2 is additive to Phase 1
- CMF and HTC production from biomass
- FDCA and carbon black focus
- High-value, performance-differentiated products
- Feedstock synergy: Could include cellulosic output of Phase 1 process
- Capital budget expected to be up to \$1.2B1



Customer demand exceeds \$10Bn, a more than tenfold increase since announcement to go public in February 2021

Total demand consists of offtake agreements or capacity reservations¹

Customer Demand, \$Bn cumulative

Select Origin Customers & Partners



^{1.} Figures assume maximum offtake amounts and exercise of full capacity reservations. As of February 2023, Origin Materials' commercial strategy evolved from demand generation to revenue generation and the development of higher margin products, and as such the Company does not plan to provide quarterly updates to its total signed offtake agreements and capacity agreements but will provide updates as appropriate. Source: Origin Materials.



Sustainea Bioglycols Partnership



"Origin Materials and Sustainea Launch Strategic Partnership to Develop 100% Bio-Based Materials" - August 8, 2023

- Partnership centered on bio-based FDCA and biobased PTA produced using Origin's technology platform and Sustainea's bio-based glycol products and market expertise
- Sustainea is a JV between Braskem, the largest thermoplastic resin producer in the Americas, and Sojitz Corporation, a Japanese global trading company, aiming to be the global leader in bio-MEG production
- Sustainea signed two multi-year capacity reservation agreements to purchase bio-based PTA and biobased FDCA









FDCA – "Origin Materials and Husky Achieve Commercialization Milestone for Advanced Packaging"



- July 31, 2023

- Husky is a leading technology provider of injection molding equipment and services to the food and beverage packaging and consumer products industries
- Recyclable PET polymer incorporating FDCA successfully processed into preforms using Husky's commercialscale injection molding equipment and subsequently bottles
- Novel hybrid polymer "PET/F" expected to deliver enhanced performance compared with traditional PET plastic and have up to 100% bio content





Terphane Partnership



"Origin Materials and Terphane Form Strategic Partnership to Produce Sustainable, High-Performance Packaging"

- August 3, 2023
- Terphane, a global leader in specialty PET polyester films, signed a capacity reservation agreement to purchase biobased PEF polymer from Origin Materials for use in industrial and film packaging applications
- Applications include food and beverage packaging and high-value industrial applications



Proman Partnership



"Origin Materials and Proman Partner to Produce Low-Carbon Biofuels"

– August 9, 2023

- Proman, one of the world's largest producers of methanol, and Origin Materials signed an agreement to explore the production and global distribution of biofuels
- Proman expertise includes engineering, procurement, and construction related to world-scale sustainable technology development
- Long-term potential for biomass-derived, lowcarbon-intensity fuels to be used in marine and other transportation fuels, industrial applications, heat and power generation



"Origin Materials Creates Sustainable PET Bottle Caps, Enabling 'All PET Mono-Material' Bottle & Cap Solutions, a Breakthrough in Recycling and Circularity"

– August 7, 2023

- 100% PET caps and tamper-resistant closures can be made using recycled or bio-based content
- "Mono-material" makes "100% recycled PET"
 possible from cap to bottle and improves recyclability
 because it is all one material no need for recyclers
 to separate caps from bottles
- PET offers better oxygen and CO₂ barrier than HDPE and PP, common cap materials
- Patent-pending, cost competitive design and manufacturing innovation



The Origin Platform - Sustainability AND performance

The platform is stronger today than when Origin became publicly traded in February 2021

We became public with sustainability at our core...

Emphasis on competitive cost of production and powerful carbon advantage. E.g., para-xylene, fuel pellets offer only carbon advantage

- Low carbon advantage
- Competitive production cost

Since then, we have added functional advantages

Since developed higher-margin, higherperformance products, such as carbon black, FDCA, PEF, PET/F

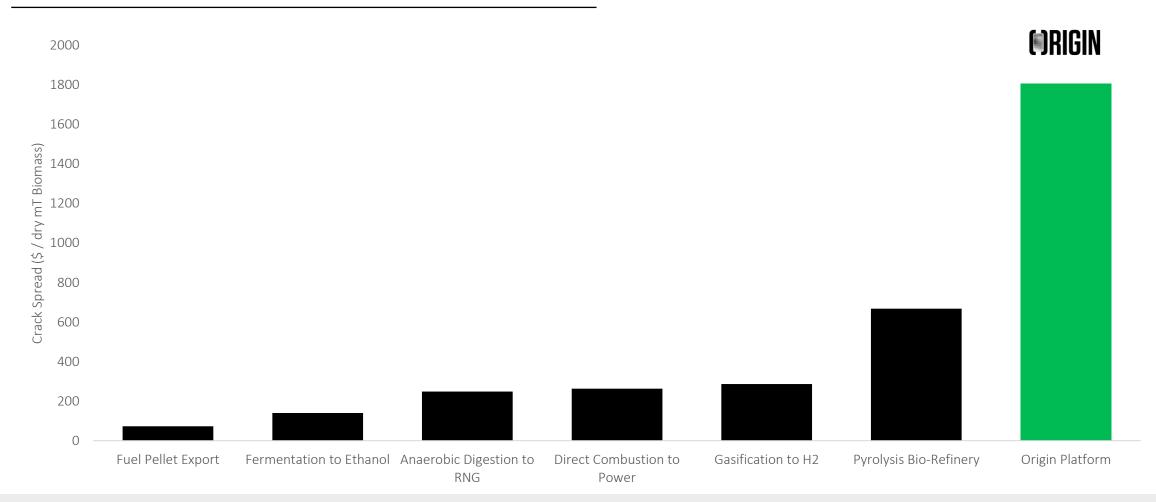
- Low carbon advantage
- Competitive production cost
- Functional advantages

"High performance. Low carbon. Better materials start with Origin."

The Origin Platform - Leading biomass conversion technology

We expect Origin 3 and beyond to continue improving platform economics

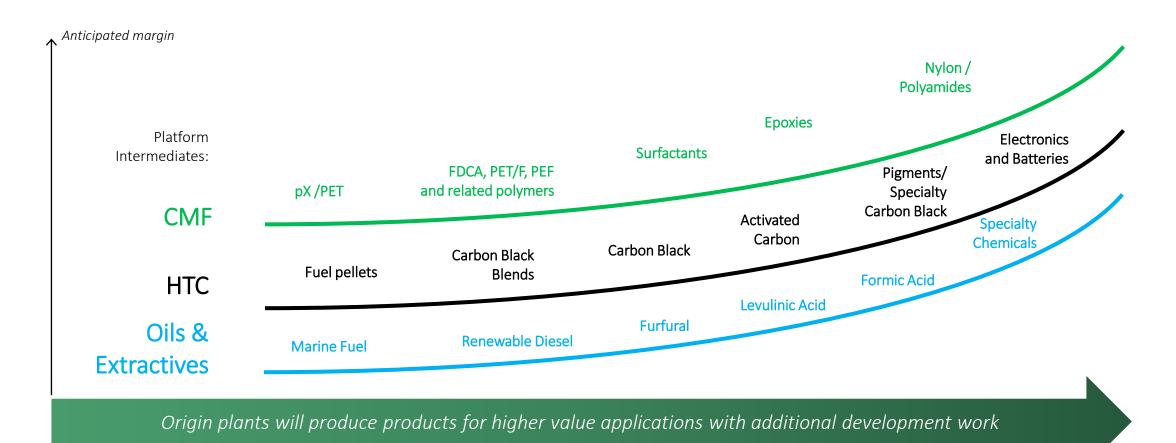
Value uplift, biomass conversion technology crack spread



The Origin Platform - Margins expected to continuously improve

Product development, versatility of platform intermediates, and economies of scale to drive long-term value creation

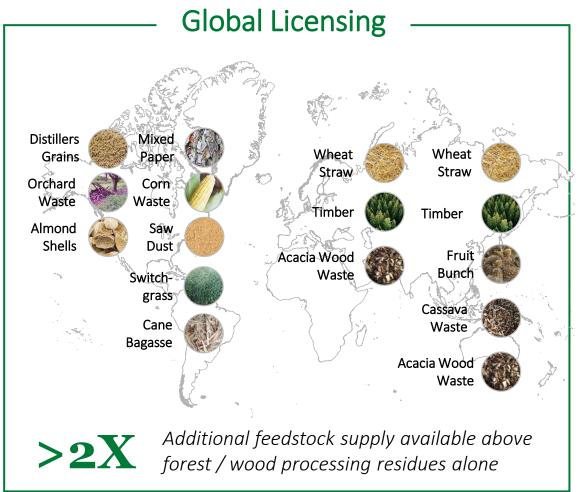
Illustrative gross margins for Origin's intermediates, \$/ton wood residue input versus feedstock cost



Capacity is our competition – Two-pronged approach brings capacity online

Demand is proven and the growth of our company will be determined by our ability to add capacity





Jim Stephanou joins Origin's **Board of Directors**

Expertise in manufacturing operations and engineering



Jim Stephanou

- 30+ years of experience in manufacturing operations and engineering
- Former VP and Head of Engineering and Projects at Merck & Co., Inc.
- VP of Global Asset Management, VP and Plant Manager for Manufacturing and Technology, and Regional Director of Engineering and







Karen Richardson Chair

- Board Member at BP, Exponent
- Former Board Member at WorldPay, BT Plc, Doma



worldpay

E^xponent





Kathy Fish

- Former Chief Research. Development and Innovation Officer at Procter & Gamble
- 41 years experience with Procter & Gamble
- Board Member at Balchem



worldpay

CIS vantiv.

 Former Chairman & CFO at Vantiv/WorldPav

Charles Drucker

Over 30 years as highly successful technology/fintech operator; created over \$40bn of value for Vantiv/WorldPay over a First Data. 10-vear period as CEO







30 under 30





6 SHAZAM

vahoo!

Wharton

Rich Riley Co-CEO

- Former CEO at Shazam and senior executive at
- 20+ years managing rapidgrowth organizations





William Harvey

Former President at DuPont Packaging and **Industrial Polymers**



40+ years chemical industry experience



Darden School of Business



UCDAVIS

- Former VP of Engineering and General Manager, Maintenance at Bayer, Inc.



M HEXION

Craig Rogerson

- Former Chairman, President & CEO of Hexion, Inc.; former Chairman, President & CEO at Chemtura Corp.
- 40 years experience leading private and publicly held specialty chemical companies



Pia Heidenmark Cook

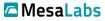
- Former Chief Sustainability Officer at Ingka Group (IKEA)
- 25+ years of international business experience



Tony Tripeny

- Former CFO at Corning, Inc; director at Mesa Laboratories. Inc.
- 30+ years of operational, CORNING strategy, and M&A experience







Q2 2023 financials in-line with previous outlook

Financial operating metrics for Q2 2023 are in-line with our previous outlook

- Net loss was \$6.3 million for the second quarter compared to net income of \$46.9 million in the prior-year period
- With ramp up of employee hiring and operations in support of construction, product development and sales activities, Q2 2023 Adjusted EBITDA loss was \$11.7 million compared to a loss of \$6.9 million in the prior-year period¹

Origin 2 outlook updated; phased construction reduces risk on path to profitability

- The Company is exploring multiple opportunities to finance Origin 2 including a combination of existing cash, previously indicated traditional project financing, federal and state government programs, licensing agreements, and strategic partnerships. The Company expects capital expenditures of up to \$50 million for 2024, with the majority of Origin 2 capital spend to occur following final investment decision (FID) in 2025
- Origin 2 has received final approval from Louisiana State Bond Commission and preliminary approval from Louisiana Public Finance Authority for the issuance of up to \$1.5 billion of tax-exempt bonds, inclusive of previously announced expected \$400 million Private Activity Bond ("PAB") allocation from the State of Louisiana

Maintains 2023 financial guidance

- The Company maintains its 2023 financial guidance of revenue of \$40 million to \$60 million and an Adjusted EBITDA loss of \$50 million to \$60 million
- The Company reported Q2 revenue of \$6.9 million from JDAs and its supply chain activation program
- JDAs, caps and closures, and supply chain activation will cause EBITDA loss to narrow as we approach profitability

Inflation Reduction Act ("IRA") offers potential for incremental government incentives for the construction of Origin's plants

Advanced Industrial Facilities Deployment Program ("AIFD") expected to provide feedback by the end of the year

IRA – Section 48C Advanced Manufacturing Tax Credit

- The IRA is expected to significantly expand the Section 48C Tax Credit available for investments in manufacturing facilities for clean energy technologies
- Law provides \$10 billion for allocations and expands the scope of eligible projects to "projects that re-equip, expand, or establish an industrial or manufacturing facility" ¹
- Origin is exploring several paths of eligibility in order to qualify for a discretionary tax credit for a significant portion of the plant's capital, which could support Origin 2 and future plant financing

IRA – Advanced Industrial Facilities Deployment Program

- Department of Energy program expected to provide competitive funding to advanced industrial facilities aimed at reducing greenhouse gas emissions from historically energy-intensive industries
- \$5.8 billion of funding expected to be allocated for grants, rebates, direct loans, or cooperative agreements¹
- Origin optimistic that U.S. based capacity will qualify for competitive financing



Origin 2 economic summary

Metric	Phase 1: Oils and Extractives	Phase 1 & 2: Oils and Extractives & CMF and HTC with FDCA focus
Start-up	Late 2026 to 2027	2028
CAPEX	<\$400M	<\$1,600M
Feedstock	~275 kta	~500 kta
Revenue	~\$140M / year	~\$600M / year
EBITDA	~\$80M / year	~\$280M / year

Share count as of 6/30/2023

Class	Outstanding Shares of Common Stock				
Total Shares Outstanding ¹	138,998,724				
Shares subject to forfeiture ¹	4,500,000				
Total Shares Outstanding, including Shares subject to forfeiture ¹	143,498,724				
	Shares Reserved for Future Issuance Pursuant to Potential Earnouts, Outstanding Warrants, and Options				
Public Warrants ²	24,149,960				
Private Warrants ²	11,326,667				
Legacy Origin Earnout Shares ³	25,000,000				
Options and RSUs ^{4, 5}	17,047,322				
Total Shares 5	221,022,673				

^{1. 4.5} million shares held by a certain stockholder subject to forfeiture in three equal installments unless our Common Stock reaches certain trading price thresholds within certain specified time periods (10 consecutive trading day closing volume weighted average price targets of \$15, \$20, and \$25 within 3, 4 and 5 years after the closing of the business combination between Artius and legacy Origin (the "Business Combination"), respectively) 2. Warrant exercise price = \$11.50 per share. 3. 25,000,000 Earnout Shares are subject to issuance in three equal installments if our Common Stock reaches certain trading price thresholds within certain specified time periods (10 consecutive trading day closing volume weighted average price targets of \$15, \$20, and \$25 within 3, 4 and 5 years after the closing of the Business Combination, respectively). 4. Includes 4,616,840 options with a weighted average strike price of \$0.17/share and 1,481,531 performance-based options at \$0.14/share (423,294, 634,942, and 423,295 performance-based options vest if our Common Stock reaches volume weighted average price thresholds of \$15, \$25, and \$50 per share respectively for 10 consecutive trading days), 4,414,827 Restricted Stock Units, and 2,162,150 Performance Stock Units under which the maximum award can be up to 6,534,124 shares. 5. Excludes shares available for future issuance pursuant to our equity incentive plan and employee stock purchase plan.



Reconciliation of GAAP and Non-GAAP results

We believe that the presentation of Adjusted Earnings before Interest, Taxes, Depreciation, and Amortization (Adjusted EBITDA) is appropriate to provide additional information to investors about our operating profitability adjusted for certain non-cash items, non-routine items that we do not expect to continue at the same level in the future, as well as other items that are not core to our operations. Further, we believe Adjusted EBITDA provides a meaningful measure of operating profitability because we use it for evaluating our business performance, making budgeting decisions, and comparing our performance against that of other peer companies using similar measures.

We define Adjusted EBITDA as net income or loss adjusted for (i) stock-based compensation expense, (ii) depreciation and amortization, (iii) interest income, (iv) interest expense, (v) change in fair value of derivative, (vi) change in fair value of warrants liability, (vii) change in fair value of earnout liability, (viii) other (income) expenses, net.

	Three months ended J			ed June 30,	June 30, Six months			ended June 30,	
(in thousands)		2023		2022		2023		2022	
Net income (loss)	\$	(6,464)	\$	46,931	\$	3,305	\$	54,277	
Stock based compensation		2,405		1,656		4,651		2,573	
Depreciation and amortization		347		160		635		308	
Interest income		(2,426)		(1,936)		(5,440)		(3,768)	
Interest expense		2		_		2		_	
(Gain) loss in fair value of derivatives		266		(1,430)		(494)		(596)	
(Gain) loss in fair value of warrants liability		2,143		(18,803)		(4,623)		(17,029)	
Gain in fair value of earnout liability		(7,508)		(33,188)		(20,380)		(48,414)	
Other (income) expenses, net		(420)		(247)		948		(698)	
Adjusted EBITDA	\$	(11,655)	\$	(6,857)	\$	(21,396)	\$	(13,347)	

