



Company Overview

The world's leading carbon negative materials company

March 1, 2022

Forward looking statements and disclaimers

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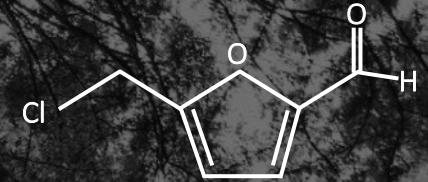
The financial information and data contained in this presentation are unaudited and do not conform to Regulation S-X. Accordingly, such information and data may not be included, may be adjusted or may be presented differently in any document to be filed or furnished by Origin with the SEC. In addition to financial measures included in this presentation that are calculated in accordance with generally accepted accounting principles in the United States (“GAAP”), this presentation contains non-GAAP financial measures. Origin believes these non-GAAP financial measures provide useful information to management and investors regarding certain financial and business trends relating to Origin’s financial condition and results of operations. Origin does not place undue reliance on these non-GAAP financial measures, and they should not be considered as substitutes for other measures of financial condition and results of operations reported in accordance with GAAP.

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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' net-zero 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

\$5.6Bn³ and growing

from a diverse mix of industries

Protected & Validated Technology

19 Patent Families

Core technology protected in key countries

Cash on hand⁴

\$445³ Mn

Origin expected to be fully financed until EBITDA positive with anticipated financing and grants

1. Denotes ownership by PepsiCo, Danone and Nestlé prior to business combination with Artius Acquisition, Inc.

2. Includes \$264Mn specified as customer options. Figures assume maximum offtake amounts and exercise of full customer options. Refer to slide 23 for additional detail.

3. As previously reported in the Q4 2021 Earnings Presentation of Origin Materials, Inc. dated February 24, 2022.

4. As of December 31, 2021. Refer to slide 46 for additional detail.

As previously reported on Origin's Form 8-K filed on August 12, 2021, except where otherwise noted.

Source: Origin Materials.

Leading institutions are committing to a net zero future

The global industrial complex is committed to decarbonization

2030



Patagonia
Carbon neutral by 2025



Proctor & Gamble
Net zero between 2020 – 2030

SIEMENS

Siemens
Net zero by 2030



LG
Carbon neutral by 2030



IKEA
Carbon negative by 2030



Microsoft
Carbon negative by 2030



Unilever
Carbon neutral before 2030

2030-2040



AT&T
Net zero by 2035



Walmart
Net zero by 2040



PepsiCo
Net zero by 2040



Amazon
Net zero by 2040



Mercedes Benz
Net zero by 2040



Best Buy
Net zero by 2040



General Motors
Carbon neutral by 2040

2040 - 2050



Michelin
Net zero by 2050



BP
Net zero by 2050



Danone
Net zero by 2050



Ford
Net zero by 2050



Nestlé
Net zero by 2050



Nike
Net zero by 2050



Shell
Net zero by 2050

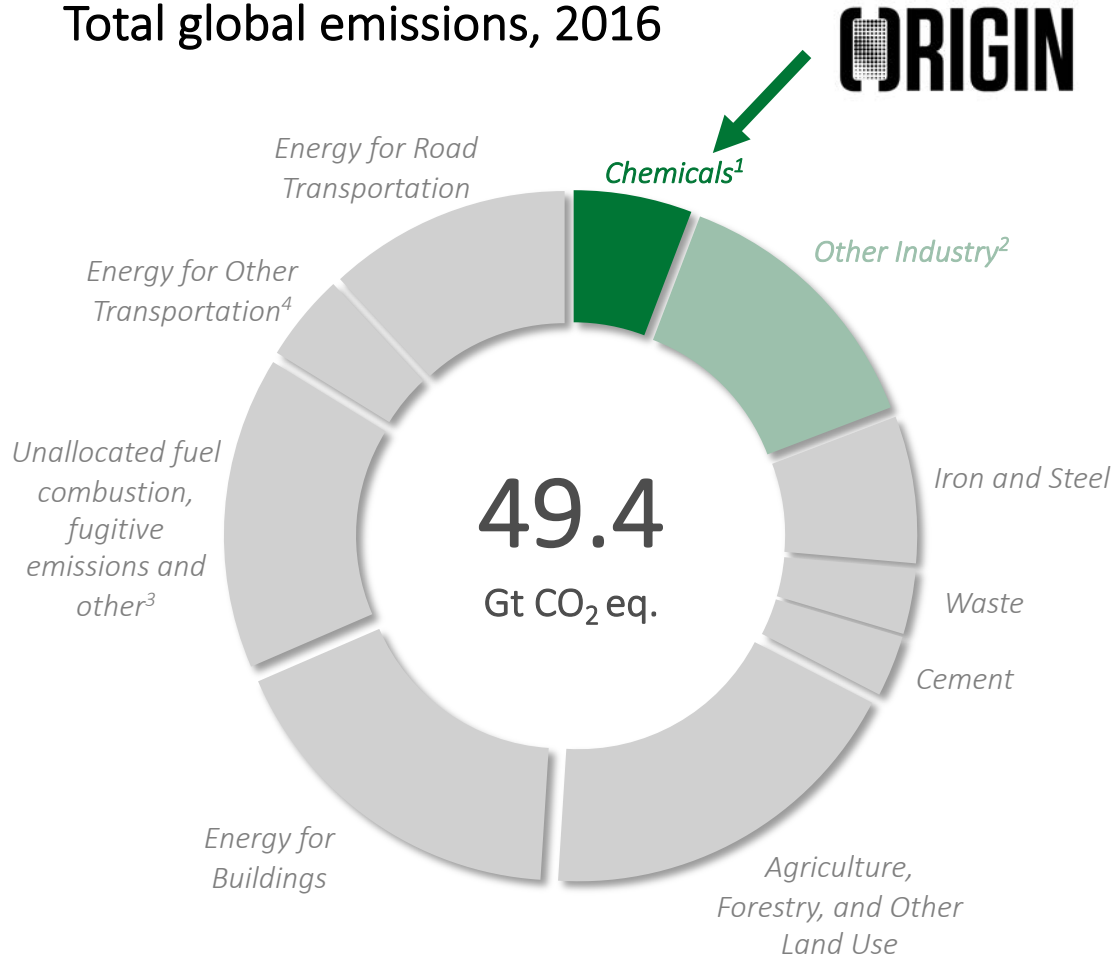
Note: Page not intended to represent that these are all Origin customers.

Source: Press search and company websites.

As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Nearly half of all global emissions come from making products

Total global emissions, 2016



Origin's mission is to enable the world's transition to sustainable materials

Fossil-based



10.6Mn

Daily barrels of oil consumed by the chemicals market

Sustainable-based



<1%

Of annually available 900Mn tons of forest residue and wood waste

Emitting



2.78kg

Carbon emissions per kg of fossil-based PET produced

Avoiding



>100%

Carbon reduction for Origin's PET vs. fossil-based PET

The Origin platform can replace oil as the foundational feedstock for the materials economy

1. Includes energy-related emissions from the manufacturing of chemicals as well as direct industrial process. 2. Includes energy-related emissions in mining and quarrying, construction, textiles, machinery, food and tobacco, paper & pulp and other industries. 3. Includes energy-related emissions from the use of machinery in agriculture and fishing. 4. Includes energy-related emissions in aviation, shipping, rail and pipeline transportation.

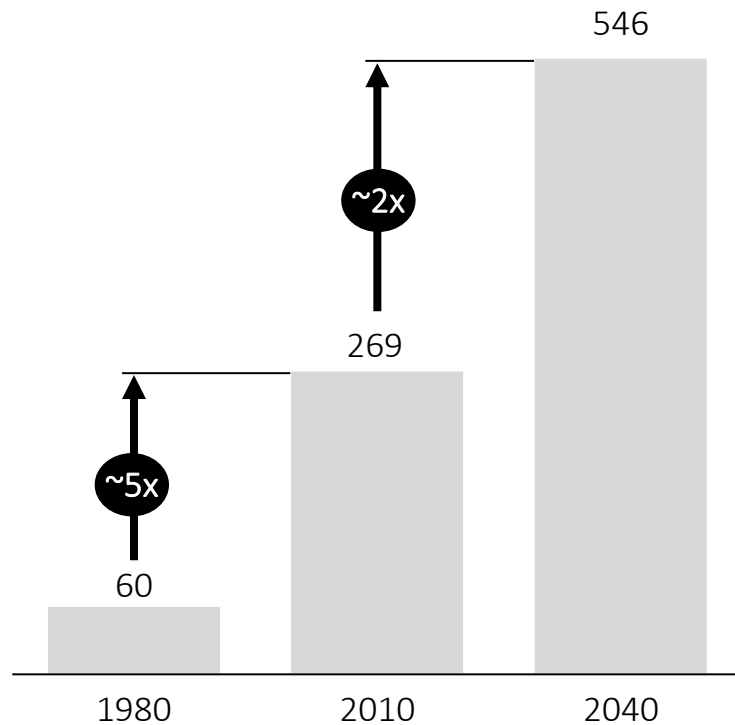
Source: Origin Materials estimates, Climate Watch, the World Resources Institute (2020), ourworldindata.org.

As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Ubiquitous plastics are a prime target to begin reducing carbon emissions

Plastics enable modern life...

Million tons



... but we need better, scalable solutions



Drop-in ready – change only happens at scale

Transforming the materials economy won't happen in niche markets. Plastics permeate every sector and Origin's products are supply-chain ready alternatives for fossil-based feedstocks



Negative-to-low carbon

Sustainably harvested, renewable feedstocks (e.g., forest waste / residues) can convert naturally captured carbon into useable end products



Sustainable, end of life solutions (recycle first)


Responsible plastics use goes from 'cradle to grave'. Enabling the circular economy through high rates of recycling is a must for any solution

The Origin platform: 'Once in a planet' shift from fossil to decarbonized materials

Abundant, low-cost, bio-feedstocks



Origin Core Technology



✓ Carbon Negative

✓ Flexible

✓ Lowest Cost, Beats Petroleum

"CMF"
5-Chloro-methyl-furfural

ClCC1=CC=C(C=O)O1

"HTC"
Hydrothermal Carbon

C

Countless products can be manufactured using Origin's carbon negative materials...

NOT EXHAUSTIVE

Textiles and fabrics






Next-gen packaging






Paints, coatings, and epoxies






Filler for tires and more

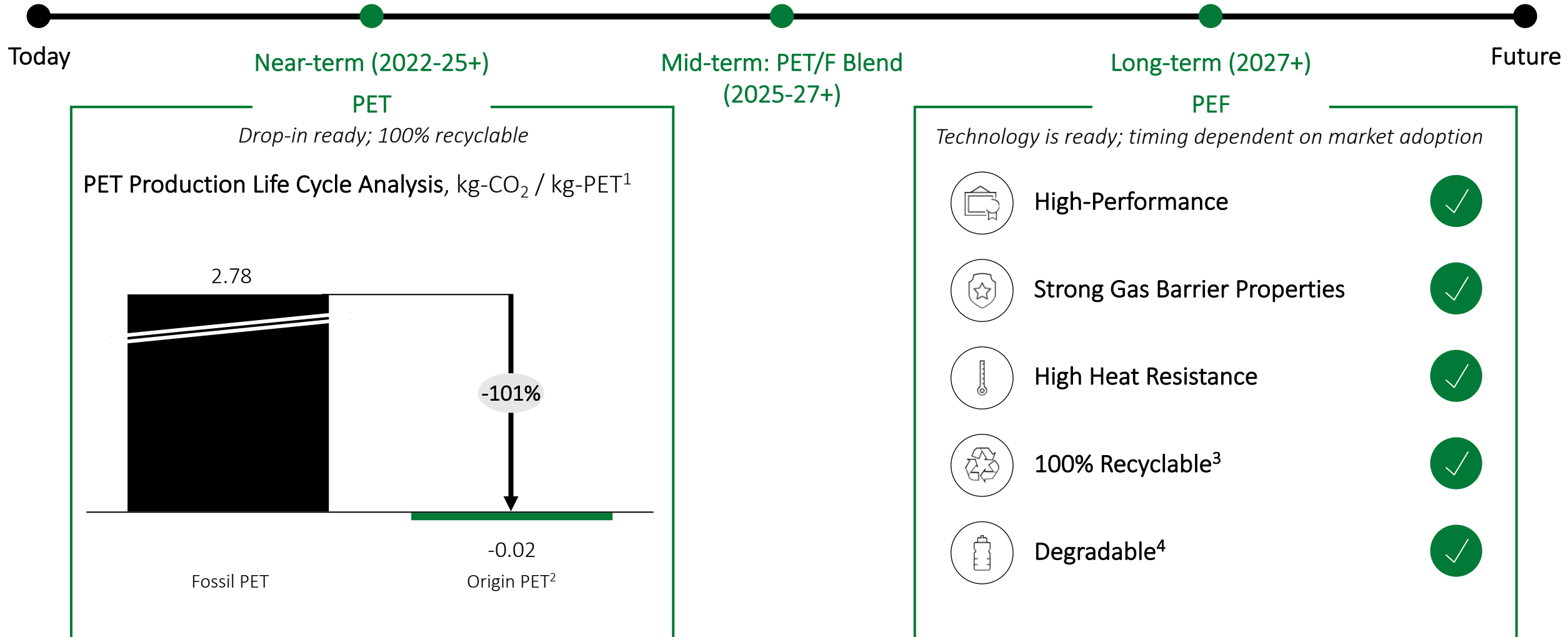
Solid fuels





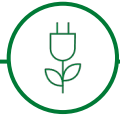
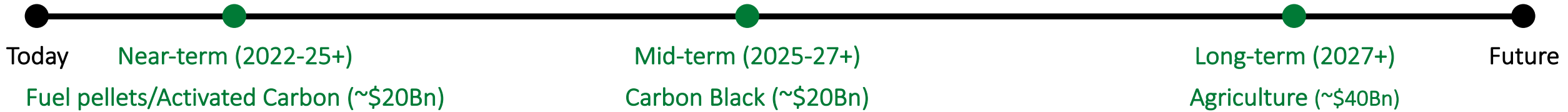
Agriculture & soil products

Origin's CMF is a carbon negative solution for recyclability and degradability



1. Process step carbon impacts are derived from Deloitte ISO compliant LCA report. Deviations from supply chain described in LCA report may affect carbon impacts. 2. Southern Pine based bio-PET. 3. 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. 4. PEF degradation time in industrial composting conditions (58 °C) range from 7 to 13 months to 90% degradation, depending on conditions, according to "First Results Accelerated Tests Biodegradation of PEF," Organic Waste Systems (OWS), Gent, Belgium.
Source: Origin Materials. As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Origin's HTC is a diverse, high-potential carbon negative platform material



A drop-in ready, energy dense, fuel alternative

Net 0 Carbon footprint

>7% Annual growth rate of fuel pellet market

A carbon negative solution for food and water treatment

~500 - 3,000 m²/g – Ultra high surface area

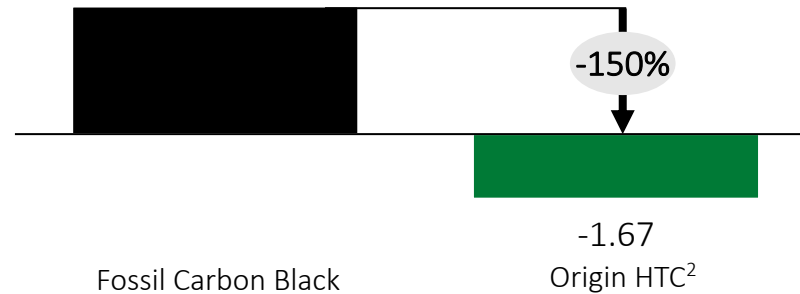
>8% Annual growth rate of activated carbon market



A carbon negative carbon black replacement for tires, foams, and dyes

No Detectable Carcinogens¹

Carbon Black Production Life Cycle Analysis,
kg-CO₂ / kg-Carbon Black
3.3



A next-generation agriculture additive to improve farming efficiency

Key Properties

- Porous, High Surface Area
- Available Water Capacity
- High Cation Exchange

Applications

- Biochar, slow-release fertilizer, microbials / biologics, soil amendment

1. Origin carbon black does not contain any PAH, or polyaromatic hydrocarbons, which are carcinogens found in fossil carbon black.
2. Derived from Deloitte ISO compliant LCA report. Deviations from supply chain described in LCA report may affect carbon impacts.
Source: Origin Materials, PBL Netherlands Environmental Assessment Agency.
As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Origin's platform technology decarbonization impact



By 2030, Origin's operating plants are expected to annually avoid ~8.3MMT¹ CO₂ equivalent to approximately...



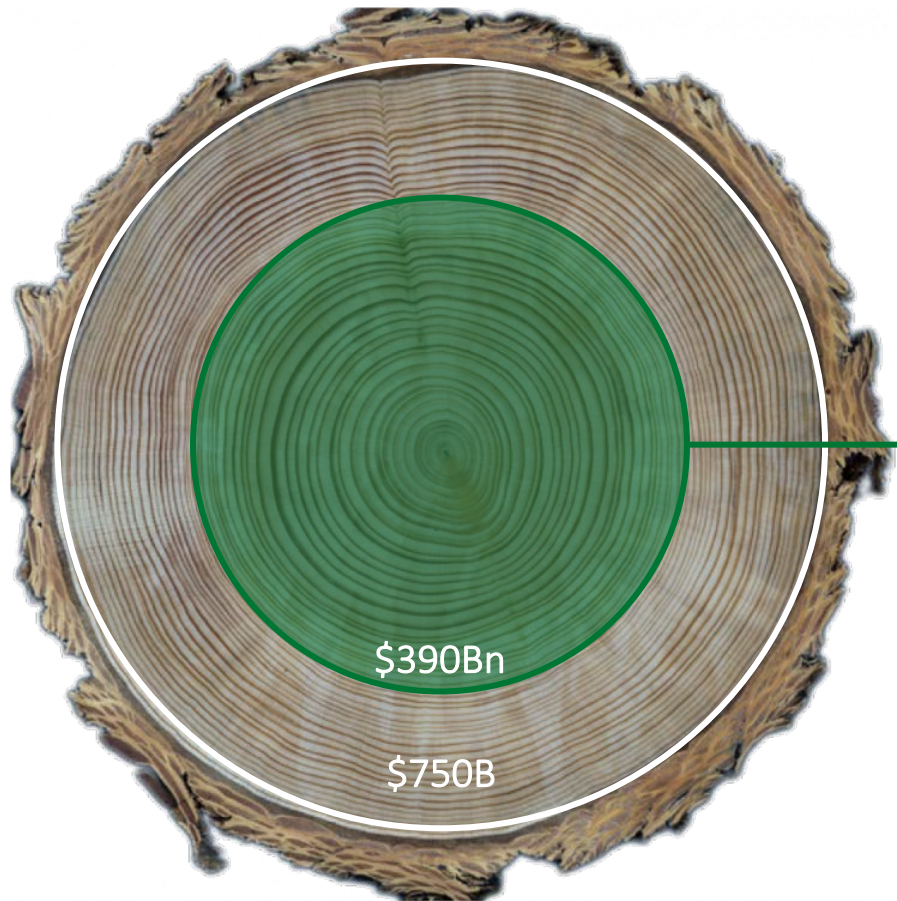
1. Million Metric Tons.
Source: Origin Materials calculations based on 6 commercial scale plants and plant life cycle impact estimates. U.S. Environmental Protection Agency greenhouse gas equivalencies calculation: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Estimated total addressable market for Origin products is more than \$1Trn

Origin addresses a growing market with broad applications



 HTC market  CMF market

Cumulative TAM = >\$1Trn



Markets	Market Size
	\$





PET Fiber	~\$175Bn
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-  Apparel
-  Carpet

PET Resin	~\$145Bn
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-  Food and beverage packaging

Carbon	~\$70Bn
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-  Tires
-  Activated Carbon
-  Foams
-  Fuel pellets



Near term focus pre-2030
>\$390Bn market



Near-term focus TAM is expected to grow by ~\$15Bn annually

Estimated total addressable market for Origin products is more than \$1Trn

Origin addresses a growing market with broad applications

 HTC market  CMF market

Cumulative TAM = >\$1Trn



Select Markets | Market Size
\$



Paints & Coatings | ~\$30Bn

 Colorants

Soil Additives | ~\$40Bn

 Soil Nutrients

PEF | ~\$225Bn

 Apparel  PET Applications

 Packaging

Epoxies | ~\$15Bn

 Adhesives

 Coatings

Plasticizers | ~\$18Bn

 PVC Piping

Long term focus post-2030

>\$750Bn market



Origin is supported by Global Fortune 500 companies

PackagingNews

NEWS MATERIALS MARKETS PN TV FEATURES EQUIPMENT EVENT

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Add to Bookmarks

By Waqas Qureshi 10 September 2018

PepsiCo joins Danone and Nestlé Waters in bio-based bottles R&D partnership

PepsiCo has joined the NaturALL Bottle Alliance, which is conducting an R&D partnership to develop 100% bio-based bottles.



We believe total estimated plastics demand from these three customers represents...

4.75Mn
Tons

~20
Commercial facilities
required to meet PET
demand¹

1. Illustrative opportunity from fulfilling estimated PET portion of PepsiCo, Danone, and Nestlé Waters combined annual consumption of 4.75 million tons of plastics / year.

Source: Company websites; Origin Materials management estimates.

As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

AECI SANS Technical Fibers Partnership



“Origin Materials and AECI SANS Technical Fibers to Develop Carbon-Negative Materials for Apparel and Automotive Applications” – April 5, 2021

- AECI SANS Technical Fibers is a leader in engineered thread for high-performance apparel and automotive applications
- Expands existing joint development agreement in order to develop high-performance fibers for diverse thread applications serving the apparel, footwear and automotive industries
- AECI SANS Technical Fibers signed a capacity reservation agreement for carbon-negative PET and next-generation polymers produced using the Origin platform



AECI Much Asphalt Partnership



“Origin Materials and AECI Much Asphalt to Develop Low-Carbon Asphalt” – April 6, 2021

- AECI Much Asphalt is the largest commercial asphalt producer in southern Africa
- Region’s leading manufacturer and supplier of hot and cold mix asphalt products, and a manufacturer, supplier and applicator of bituminous road binders, emulsions, primes, pre-coats and modified binders
- The collaboration is expected to create substantial value in the developing African market, where AECI Much Asphalt is currently active



Packaging Matters Partnership



“Origin Materials and Packaging Matters Launch Partnership to Develop Advanced Carbon-Negative Packaging Solutions, Building on Existing 10-Year Supply Agreement” – April 12, 2021

- Packaging Matters is a leader in packaging innovation with several Fortune 100 food companies as customers
- Development work to produce advanced packaging materials, including PEF
- Packaging Matters will transition its virgin petroleum-based PET purchases to sustainable carbon-negative PET from Origin Materials.
- As the companies make progress on developing PEF applications, some or potentially all of the supply is expected to transition to PEF
- 40+ years PET experience
- 3 manufacturing facilities in the United States



PrimaLoft Partnership



“Origin Materials and PrimaLoft Form Strategic Alliance to Develop Carbon-Negative Insulating Fiber for Outdoor Gear, Bedding, and Apparel” – April 19, 2021

- PrimaLoft is advanced material technology company and a world leader in the development of high-performance insulations and fabrics
- Launched strategic alliance to develop high-performance, carbon-negative insulating fibers for diverse apparel applications, including for leading outdoor, fashion, and lifestyle brands, plus home goods applications such as hypoallergenic insulated bedding
- Signed capacity reservation agreement for carbon-negative PET produced using the Origin Materials technology platform
- Fibers to address demand for sustainable, high-performance materials from over 900 global brand partners
- PrimaLoft iconic brand partners include Patagonia, Stone Island, L.L. Bean, Lululemon, adidas and Nike



Solvay Partnership



Solvay and Origin Materials to Develop Advanced Carbon-Negative Materials for Automotive Industry – April 19, 2021

- Solvay, founded 1863, is a global leader in chemicals and materials with more than 23,000 employees in 64 countries, and net sales of €9 billion in 2020
- Collaboration to develop advanced materials for the automotive industry, including a drop-in ready specialty polyamide, a polymer for internal combustion engine technology as well as e-mobility systems like e-motors and power electronics that can provide resistance to heat, toughness, corrosion, and operate at high voltages
- The companies believe these materials will be critical to decarbonize supply chains in the automotive industry and achieve the zero-carbon car
- “The cooperation with Origin Materials is a new important element in our continuous commitment to sustainability which, together with our customers, is at the heart of our operations and growth strategy,” said Mike Finelli, President of Solvay Specialty Polymers. “Today carbon negative-materials can be added to the evolution of our sustainability roadmap, which already includes different actions from the integrated use of renewables to generate electricity in our plants to pursuing more sustainable products with bio-sourced monomers or recycled content.”



Ford Partnership



“Origin Materials Launches Net Zero Automotive Program With Ford Motor Company” – June 10, 2021

- Launched Net Zero Automotive Program, a sustainable automotive supply chain initiative focused on industrializing new materials to drive decarbonization in the automotive industry
- Partnership will pursue drop-in applications for carbon negative PET plastic (polyethylene terephthalate) produced from sustainable wood residues with Origin technology
- Ford and Origin will also work together to develop sustainable pigments and fillers for automotive applications throughout the interior and exterior of the vehicle, including bumpers, paint pigment, door panels, tire filler, underbonnet foam sheet, black plastic, head rests, seat cushions, and arm rests



Kolon Industries Partnership

“Origin Materials and Kolon Form Strategic Partnership to Industrialize Advanced Carbon-Negative Chemicals and Materials” – November 8, 2021

- Kolon Industries, a global leader in chemicals and materials, signed a multi-year capacity reservation agreement to purchase sustainable carbon-negative materials from Origin Materials
- Materials include novel polymers and drop-in solutions for select applications, with an initial focus on automotive applications
- The partnership includes development work aimed at commercializing polyethylene furanoate (“PEF”), a polymer with an attractive combination of performance characteristics for packaging and other applications, including enhanced barrier properties when compared with polyethylene terephthalate (“PET”), degradability, and other qualities.
- Origin Materials’ technology platform is expected to produce cost-competitive, sustainable carbon-negative furandicarboxylic acid (“FDCA”), the primary precursor to PEF. Kolon has deep expertise in novel FDCA-based polymers, including PEF.

Industrial Materials



Film/EM



Chemicals



Fashion



Kolon Industries areas of business¹

1. Included to indicate Kolon Industries areas of business, but does not imply collaboration or product development activity in every business area

As previously reported in the Q3 2021 Earnings Presentation of Origin Materials, Inc. dated November 11, 2021.

Mitsui Partnership



“Origin Materials and Mitsui Form Strategic Partnership to Industrialize Advanced Carbon-Negative Chemicals and Materials”

– January 10, 2022

- Mitsui & Co., Ltd., a global leader in energy, machinery, chemicals, food, textile, logistics, finance, and more, signed a multi-year capacity reservation agreement to purchase sustainable carbon-negative materials from Origin Materials
- This strategic partnership aims to rapidly develop and industrialize new sustainable carbon-negative products for the automotive, chemicals, electronics, packaging, textiles, construction, and personal care industries based on Origin Materials’ patented technology platform
- The partnership will leverage Mitsui’s global supply chain strength, access to Japanese and international markets, and leadership in business innovation
- Mitsui is a global trading and investment company with a diversified business portfolio that spans approximately 63 countries in Asia, Europe, North, Central & South America, the Middle East, Africa and Oceania



Mitsui & Co., Ltd areas of business include mineral & metal resources, energy, machinery & infrastructure, chemicals, iron and steel products, lifestyle, and innovation & corporate development.¹

1. Included to indicate Mitsui & Co., Ltd. areas of business, but does not imply collaboration or product development activity in every business area.

Minafin Partnership



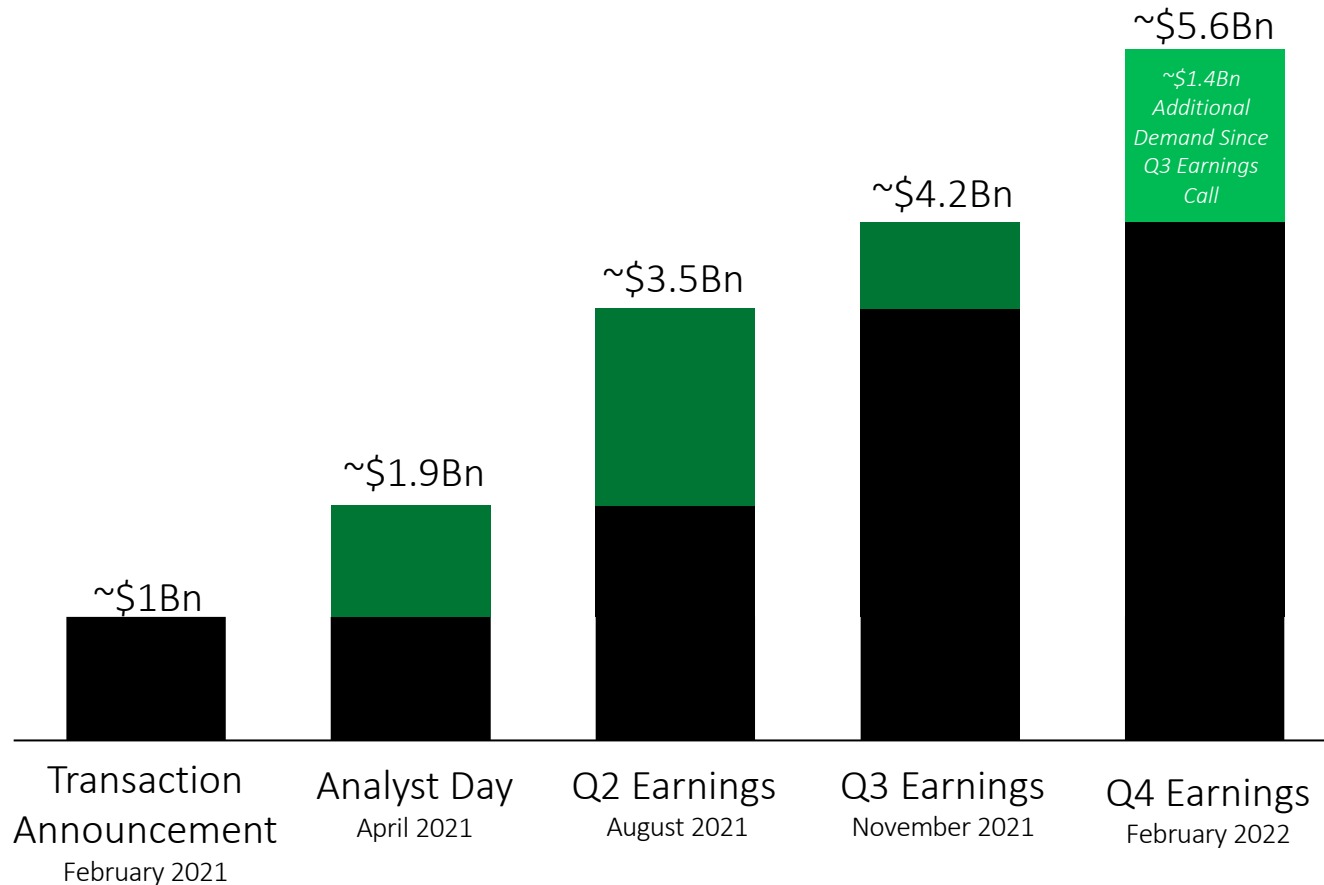
- Belgium headquartered Minafin Group is a leading developer and manufacturer of fine chemicals with three main areas of expertise: health chemistry, green chemistry, and challenging chemistry
- Origin + Green Chemistry Division of the Minafin Group collaboration aims to bring cost-competitive biobased products to the market, with applications in the pharmaceutical, agricultural, cosmetics and personal care, and automotive industries
- This partnership demonstrates Origin's expanded product offerings apart from CMF- and HTC-derived materials, for applications in specialty and fine chemicals
- Minafin affiliate Pennakem aims to develop new technologies with Origin to further expand the market for Pennakem's biobased products
- Minafin business unit EcoXtract® is in discussions with Origin to commercialize its revolutionary biobased extraction process using sustainable carbon-negative materials produced by Origin. The EcoXtract® process efficiently extracts useful plant oils for food, cosmetics, and other applications



Origin customer demand has more than quintupled to \$5.6Bn since February announcement to go public

Total demand is \$5.6Bn in either offtake agreements or capacity reservations¹

Customer Demand, \$Bn cumulative

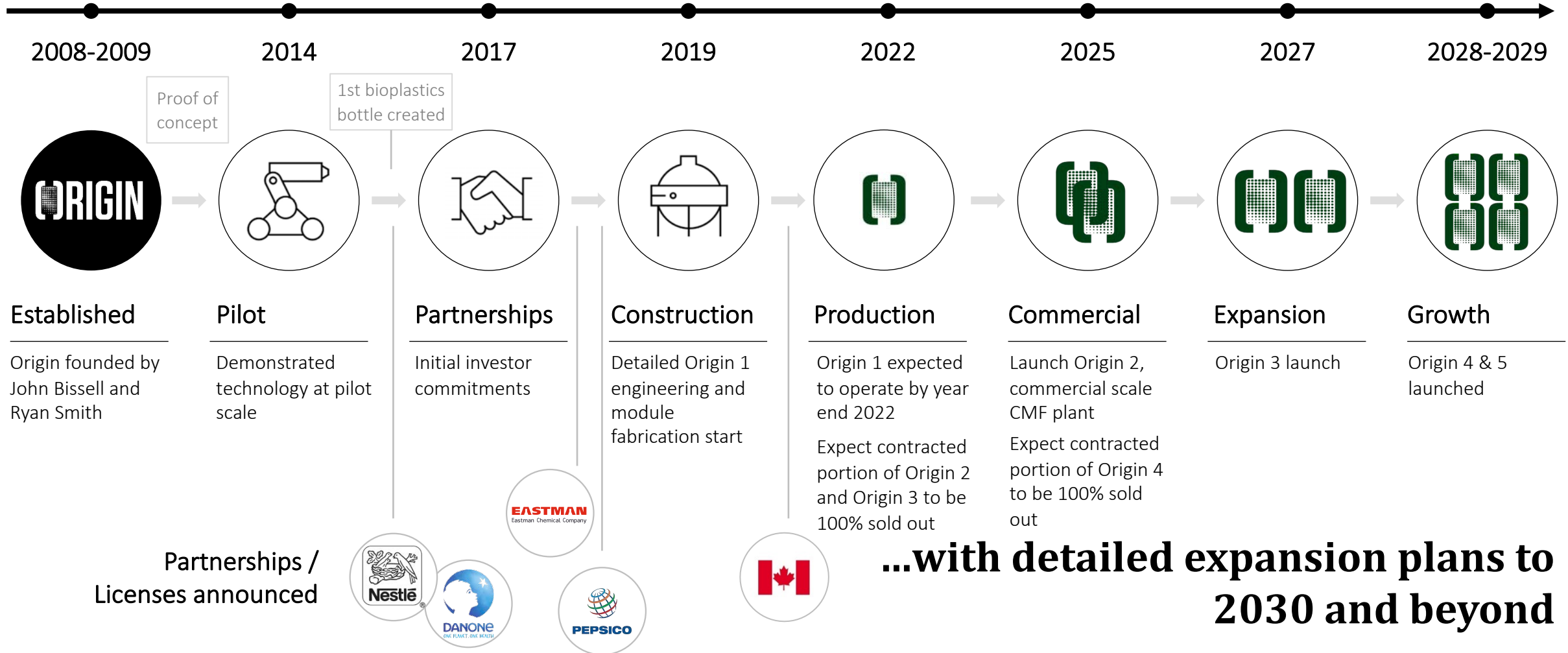


Select Origin Customers & Partners



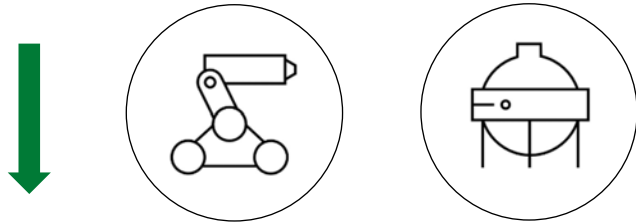
1. Includes \$264Mn specified as customer option. Figures assume maximum offtake amounts and exercise of full customer option.

Origin is building on a strong foundation toward rapid growth...

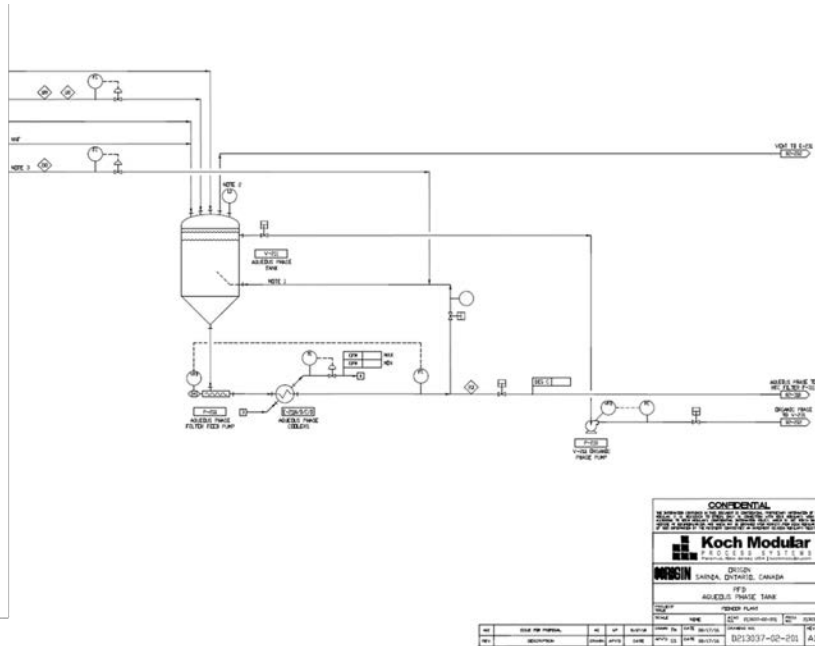


Construction - Origin 1 story (1 of 2)

>10 years bench/pilot scale chemistry & engineering



Origin 1 design



Origin 1 core technology module fabrication



Construction - Origin 1 story (2 of 2)



Foundations



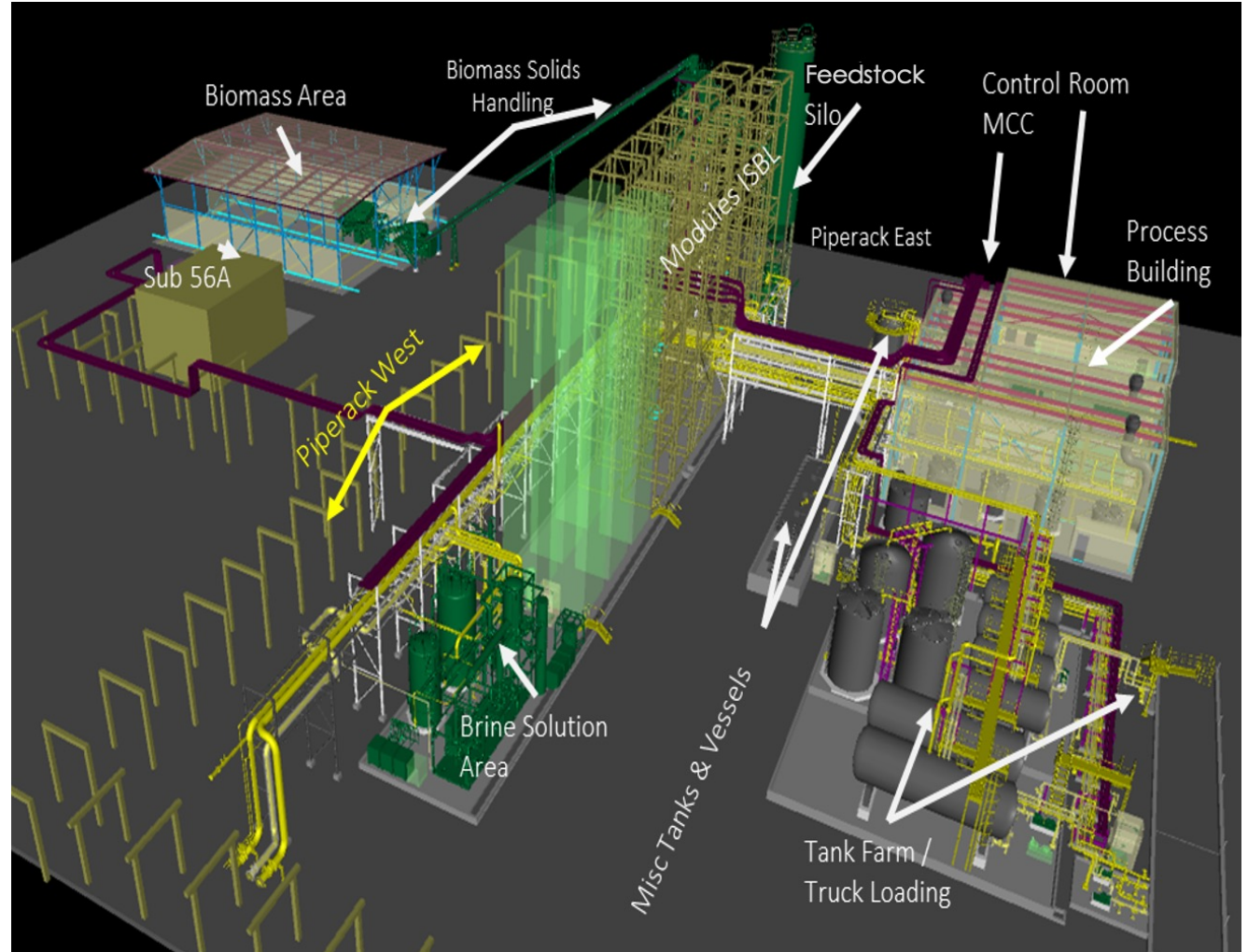
Tanks & other equipment



Core technology modules



Origin 1 Plant



Construction – Origin 1 update (1 of 5)

Module installation milestone achieved ahead of schedule in October 2021

All 17 core process modules installed successfully, 6 months ahead of schedule announced in April 2021.



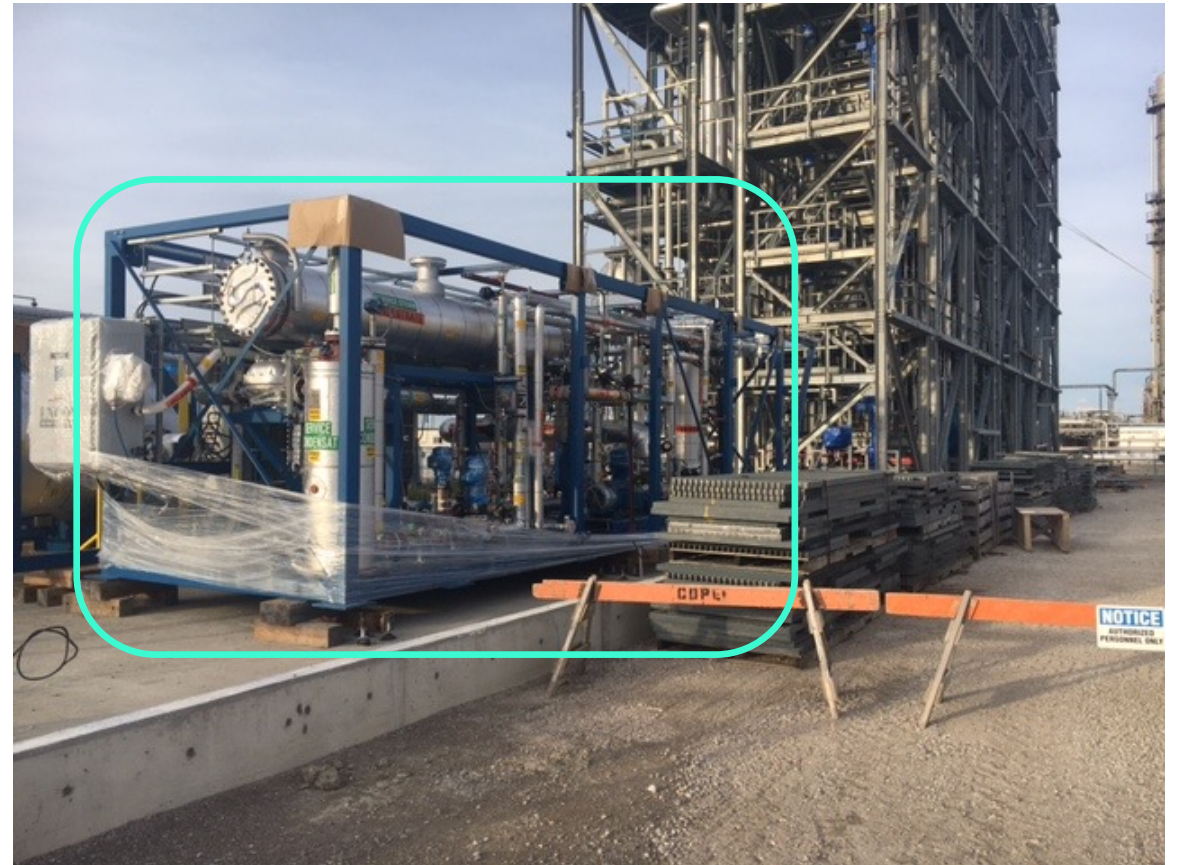
Construction – Origin 1 update (2 of 5)

The ENCON evaporator module system was placed and bolted three months ahead of the schedule announced in April 2021

ENCON evaporator module offload



ENCON module system placed



Construction – Origin 1 update (3 of 5)

The ENCON evaporator module system was placed and bolted three months ahead of the schedule announced in April 2021

ENCON tanks being offloaded and placed



Construction – Origin 1 update (4 of 5)

Piping fabrication began earlier this year, nearly six months ahead of the schedule announced in April 2021

Steel delivery for piping modules



Piping delivery (approx. 12,000 linear feet of pipe)



Small bore carbon steel piping (<3")



Small bore carbon steel piping (<2")



Construction – Origin 1 update (5 of 5)

Origin 1 is on track for completion by the end of 2022

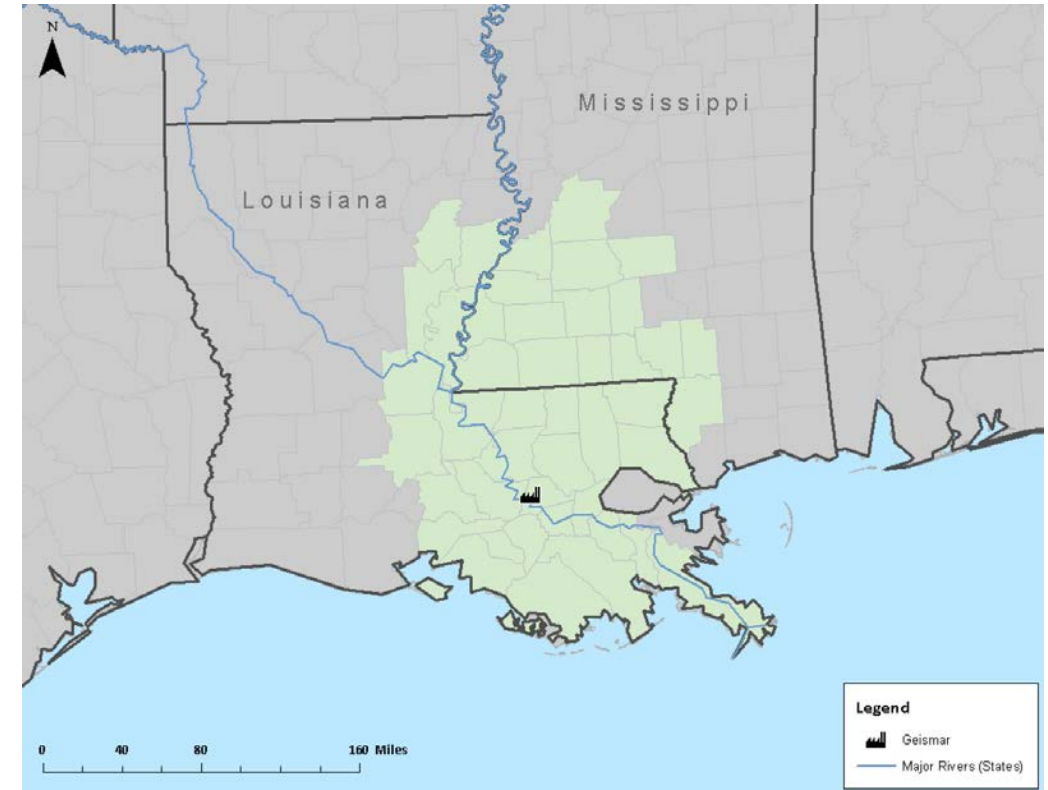


Construction – Origin 2 update (1 of 3)

“Origin Materials Announces Geismar, Louisiana as Location for Second Manufacturing Plant, Origin 2” – February 16, 2022

- The company has selected a site in Geismar, Louisiana, for the construction of its first world-scale manufacturing facility, Origin 2, subject to finalization of economic incentives from the State of Louisiana
- The plant is expected to convert an estimated 1 million dry metric tons of sustainable wood residues each year into carbon-negative materials used to make PET and HTC for a wide variety of end markets
- The site offers access to plentiful sustainable wood residues, including “residuals” or waste wood from local large-scale pulp mills. The Geismar wood basin is estimated to consist of approximately 650 million green short tons¹ of inventory²
- Pending state and local incentives are estimated to be worth more than \$100 million, and the State of Louisiana has preliminarily awarded Origin a Private Activity Bond volume cap allocation in the amount of \$400 million
- Construction expected to start by mid-2023 and the plant is expected to be operational mid-2025

(Continued on next page)



The Geismar wood basin, shown in green, offers plentiful sustainable wood residues, including “residuals” or waste wood from local large-scale pulp mills¹

1. 2,000 pounds, inclusive of moisture content.

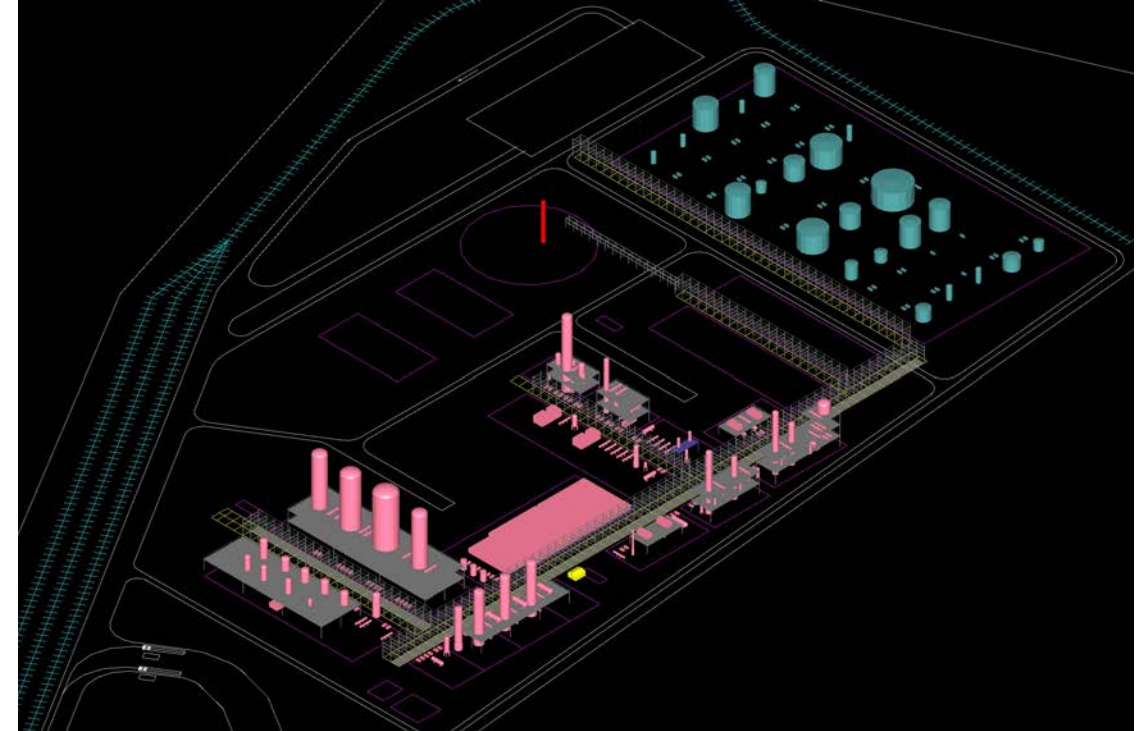
2. Fisher International.

As previously reported in the Q4 2021 Earnings Presentation of Origin Materials, Inc. dated February 24, 2022.

Construction – Origin 2 update (2 of 3)

“Origin Materials Announces Geismar, Louisiana as Location for Second Manufacturing Plant, Origin 2” – February 16, 2022

- The local industrial cluster offers access to reliable utilities, including hydrogen pipelines, ethylene pipelines, valuable inorganic species, water, and wastewater treatment
- Opportunities to place Origin products in the local industrial ecosystem and to participate as a customer in that ecosystem as well
- The site offers exceptional logistics via rail and water, located along the Mississippi River with easy barge access to the Gulf Coast, which is valuable for the distribution of chemical intermediates
- The site is nearby other chemical company potential partners, with approximately 15 chemical companies and refineries in the nearby Geismar area
- Baton Rouge and New Orleans have extremely skilled labor pools across refining, pulp and paper, forestry and agronomy, feedstock logistics, and chemicals
- The 150-acre facility would create an estimated 500 construction jobs, 200 local full-time positions, and between 500 and 1,000 indirect local jobs



Preliminary rendering of Origin 2 at Geismar site

Construction – Origin 2 update (3 of 3)

Origin has selected Hunt, Guillot & Associates as its owner’s engineer for Origin 2

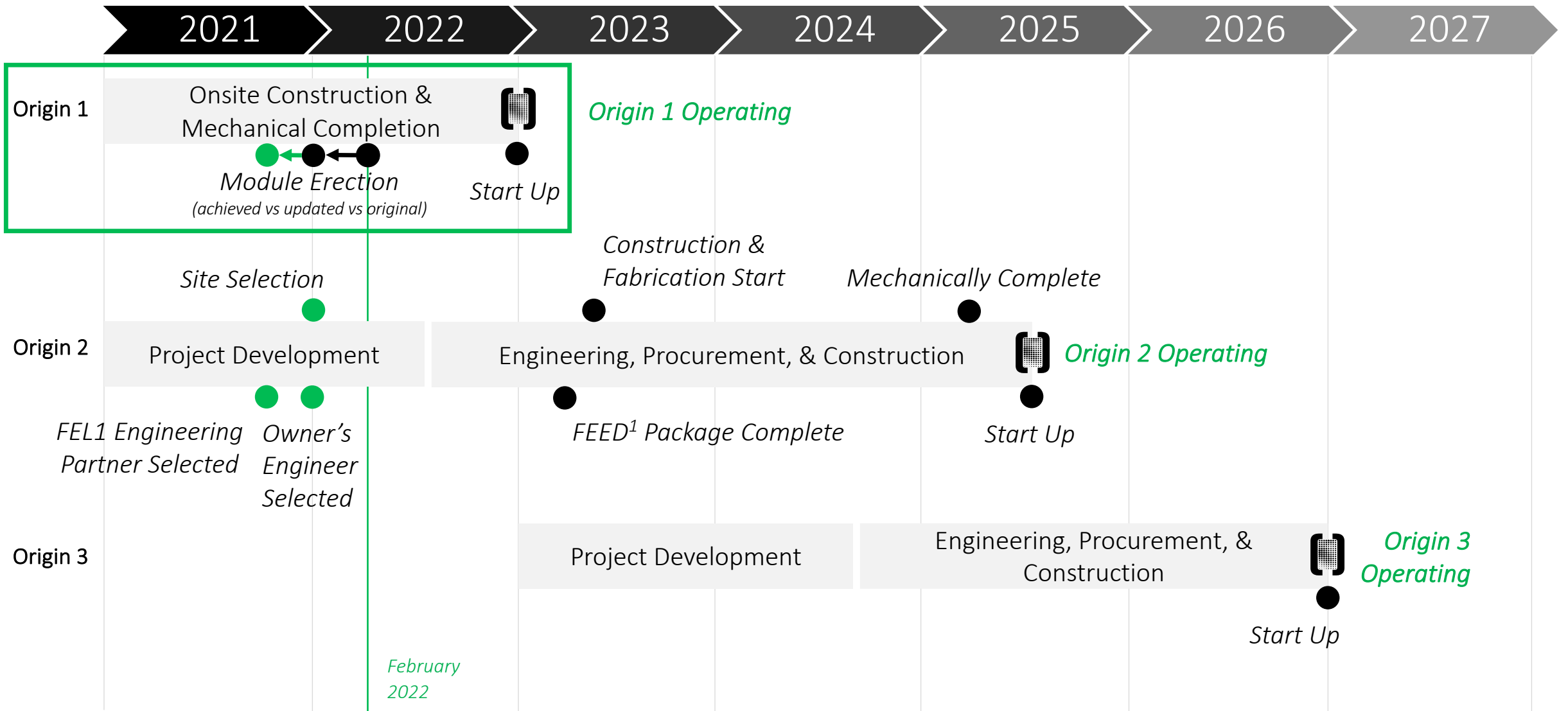


- The owner’s engineer will provide full-service engineering to support and augment Origin in all phases of the project, from early design to construction, logistics, planning, detailed scheduling, cost forecasts, progress tracking and reporting, and work stream integration
- As a multi-disciplined project management and engineering services company, HGA has provided professional services to an extensive portfolio of customers throughout numerous industries for 25 years. HGA has ten locations throughout Louisiana, Texas, Arkansas, and Alabama and has provided full-service offerings in over 30 states, Puerto Rico, Canada, China, and Mexico
- HGA is located close to many tier 1 engineering companies, the Origin 2 site in Geismar, Louisiana, and much of the Origin design team
- HGA owner’s engineer experts have conducted multiple billion-dollar projects
- HGA has extensive wood handling and forest products experience



HGA projects

Construction schedule – Origin 1, Origin 2, and Origin 3

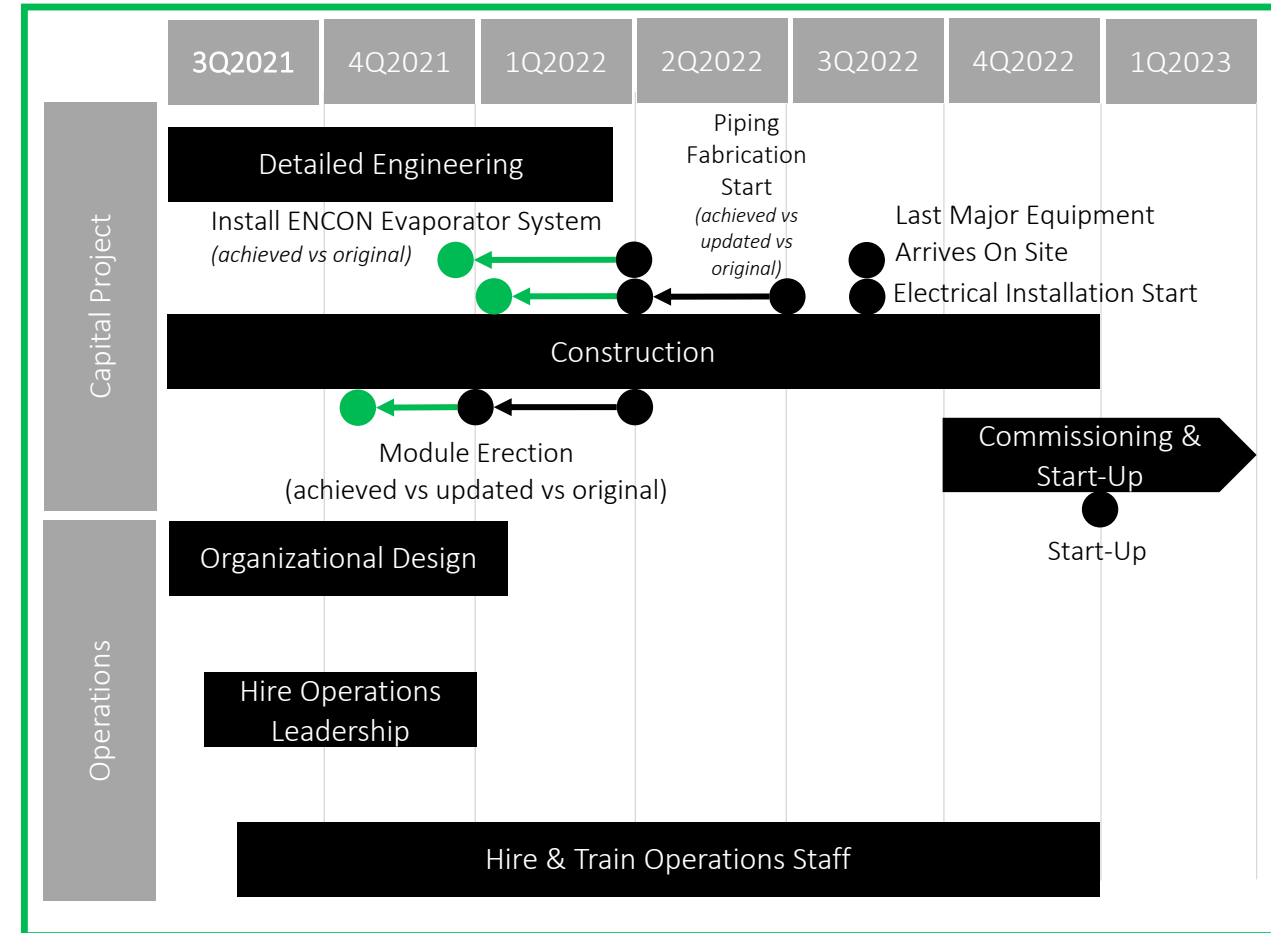


1. Front-end engineering design.
As previously reported in the Q4 2021 Earnings Presentation of Origin Materials, Inc. dated February 24, 2022.

Construction schedule – Origin 1

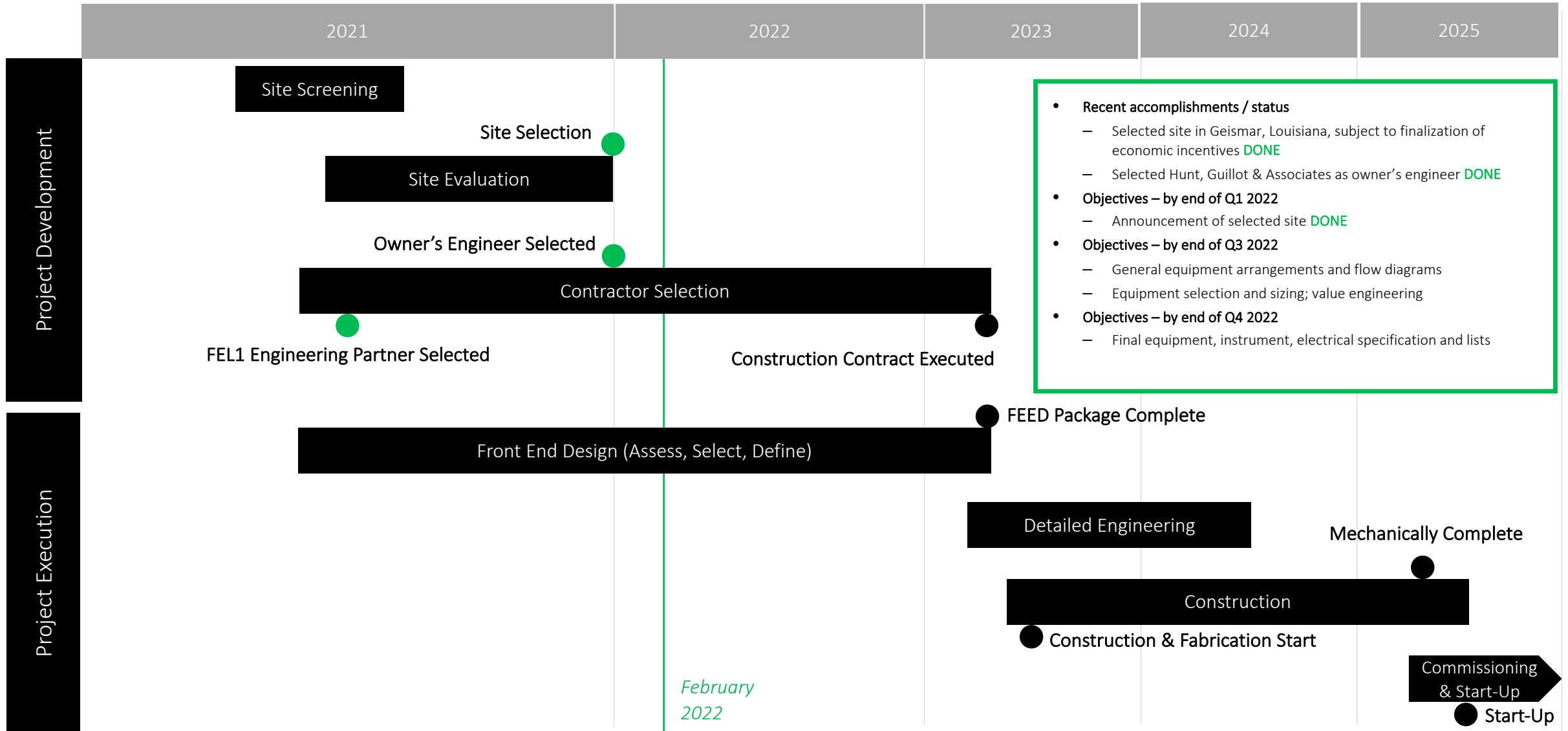
- **Origin 1 – plant purpose**
 - Produce CMF and HTC at commercial volumes
 - Produce CMF and HTC and other intermediates in volumes that allow customers to qualify products and applications other than PET
- **Objectives – by end of Q3 2021**
 - Achieve activities required to enable module lift by end of Q4 2021 **DONE**
 - Hire Process Automation Lead, additional Project Manager/ Project Engineer **DONE**
- **Objectives – by end of Q4 2021**
 - Hire Origin 1 operating leadership: Site & Plant Director, Operations Manager, Site EHS&S (Environmental Health, Safety, and Security) Manager **DONE**
 - Complete structural elements of plant ISBL and complete foundations of auxiliary process buildings **DONE¹**
 - Erect main plant modules **DONE**
 - Install ENCON evaporator module system **DONE** (Previous: Receive ENCON evaporator module system by end of Q1 2022)
- **Objectives – by end of Q1 2022**
 - Receive additional major equipment (tanks, etc.)
 - Piping fabrication start **DONE** (Previous: By end of Q2 2022)
- **Objectives – by end of Q2 2022**
 - 1st round of operations hiring (Admin, Head of Shift Operators, Manufacturing QA/QC Lead)
- **Objectives – by middle of Q3 2022**
 - Electrical installation start
 - Last major equipment arrives on site
- **Objectives – by beginning of Q4 2022**
 - First system turnovers to commissioning and start-up team

Origin 1 Timeline (Detail View)

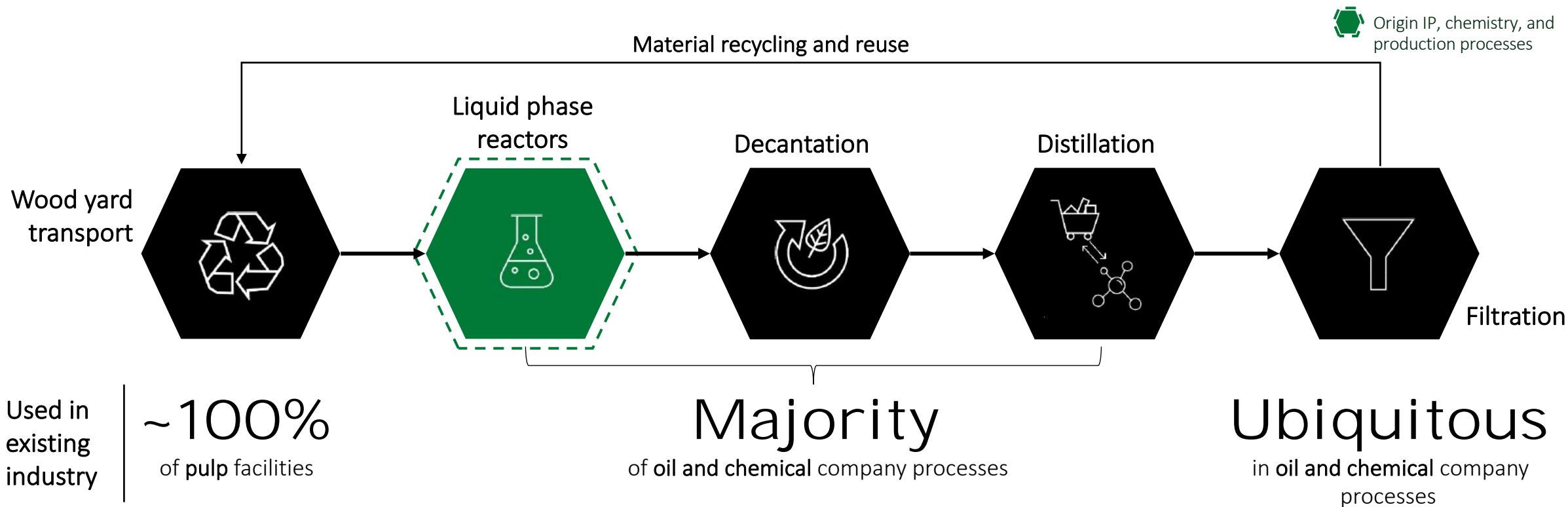


1. Does not include biomass storage unit.
As previously reported in the Q4 2021 Earnings Presentation of Origin Materials, Inc. dated February 24, 2022.

Construction schedule – Origin 2



Origin is delivering transformational chemistry through mature, industry-standard equipment, materials, and technical processes



19

Patent families protect unique CMF and HTC production processes

Zero

untested mechanical processes required for operations / scale-up¹

1. Origin does not rely on any novel mechanical processes in its plants. All of Origin's mechanical processes are standard mechanical processes utilized in the chemicals and refining industry.

Source: Origin Materials.

As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Origin's technology uses conventional chemical processing, which is inherently well suited to scale-up

Moreover, Origin technology offers additional technical and economic advantages for process scale-up

Origin technology scale-up advantages

Proven approach for scaling up bio-processes

Conventional chemical bio-processes that have scaled up include bio-diesel, Kraft process, PLA, ethanol to ethylene, and renewable diesel

Conventional equipment

Standard equipment used in the chemical industry for centuries makes scale-up more straightforward than processes requiring new mechanical designs

Extensively tested at pilot scale

Origin's process has been extensively run and stress tested at pilot scale for over 10 years

Powerful demand pull

Carbon efficiency and the low cost & volatility of feedstock drive demand for Origin's products



Technology comparison

	Origin conventional chemo-catalytic chemical process	Fermentation Process	Thermochemical Process (e.g. gasification / pyrolysis)
carbon efficiency (product yield ¹)	high ✓ (removes oxygen via H ₂ O)	low (removes oxygen via CO ₂)	low (removes oxygen via CO ₂)
feedstock variation	robust ✓ (a vast number of compositions can be used)	moderate ✓ (causes stress and inhibition)	fragile (salt accumulation and process inhibition)
equipment	conventional ✓	conventional ✓	novel
temperature	moderate ✓	moderate ✓	high

1. Yield of carbon in product as a fraction of carbon input
As previously reported in the Q2 2021 Earnings Presentation of Origin Materials, Inc. dated August 12, 2021.

Origin has meaningful advantages over bioplastics companies

✓ Origin advantaged category vs. non-fossil competitors

		Company A PHA	Company B PEF / FDCA	Company C PLA	 Fossil
TAM \$ Bn	\$1,000	\$0.1 - \$0.5	\$250	\$1.5 - \$5.0	\$1,960
Carbon footprint¹, indexed to fossil	<0	~0.7	0.3	0.3	1.0
Illustrative feedstock cost, \$/lb	\$0.03 Timber	\$0.36 Vegetable Oil	\$0.36 Fructose	\$0.15 Glucose	\$0.18 Oil
Process reliability	Chemical	Fermentation	Chemical	Fermentation	Chemical
Market maturity	Established	Nascent	Nascent	Nascent	Established
Recyclability	Strong existing infrastructure ²	No existing infrastructure	Limited Infrastructure	Extremely limited infrastructure	Strong existing infrastructure
Degradability	Non-degradable PET; Industrial composting PEF ³	Natural composting	Industrial composting ³	Industrial composting	Non-degradable



Origin...

-  Larger TAM
-  Less expensive
-  More sustainable
-  Lower risk

1. For end product; carbon footprint based on publicly available feedstock footprint for analogous biofuels process (CORSA, REDII). 2. Refers only to PET. 3. Further study needed to determine if industrial composting reproduces results observed in degradation studies.

Source: Company websites, filings and press releases; Market and technical research reports; Origin Materials management team.

As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Origin brings an unrivaled set of industry veterans, leaders, and visionaries



John Bissell
Co-Founder
& Co-CEO

- Founded Origin Materials in 2008
- Featured on Forbes 30 under 30



Rich Riley
Co-CEO

- Former CEO Shazam and senior executive at Yahoo!
- 20+ years managing rapid-growth organizations



Nate Whaley
CFO

- 20 years C-Suite experience scaling complex high growth business across industries



Stephen Galowitz
CCO

- Co-founder / Chief Development Officer of Renewables company
- 15 years experience in renewables space



Ryan Smith
Co-Founder & CTO

- Founded Origin Materials in 2008
- Process Engineer at NEC Electronics



Mako Masuno, PhD
VP of R&D

- Pathway Development & Optimization Expert
- Organic Chemistry Professor



Roman Wolff
VP of Engineering

- Engineering leader at TETRA Technologies
- 30 years of experience in engineering on more than 20 projects



Josh Lee
General Counsel

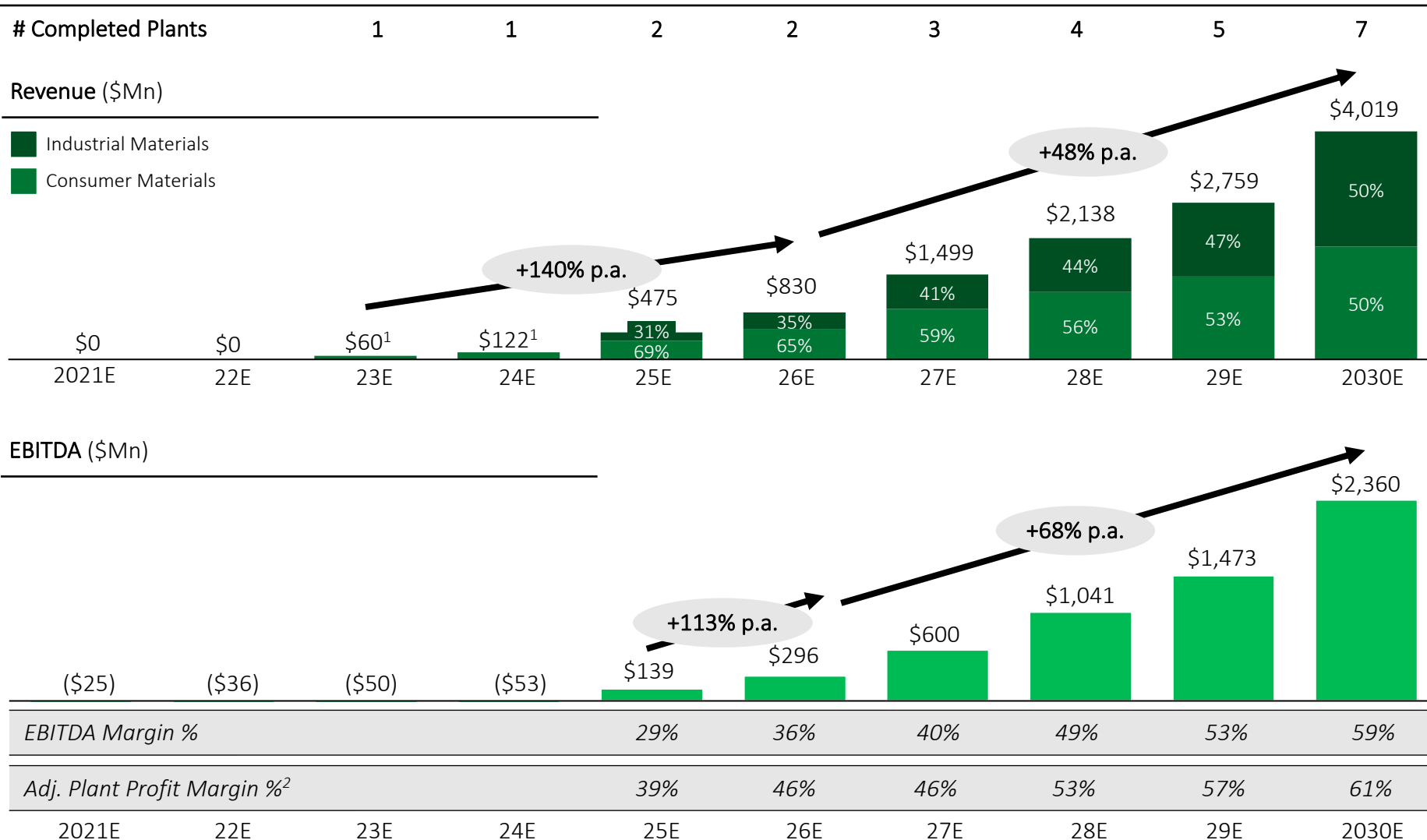
- Attorney at Irell & Manella, LLP
- Sr. Analyst at Strumwasser & Woocher, LLP





**Appendix A: Previously
Disclosed Financial
Details (Analyst Day
4/19/21,
8-K, 10-Q, 10-K Filings)**

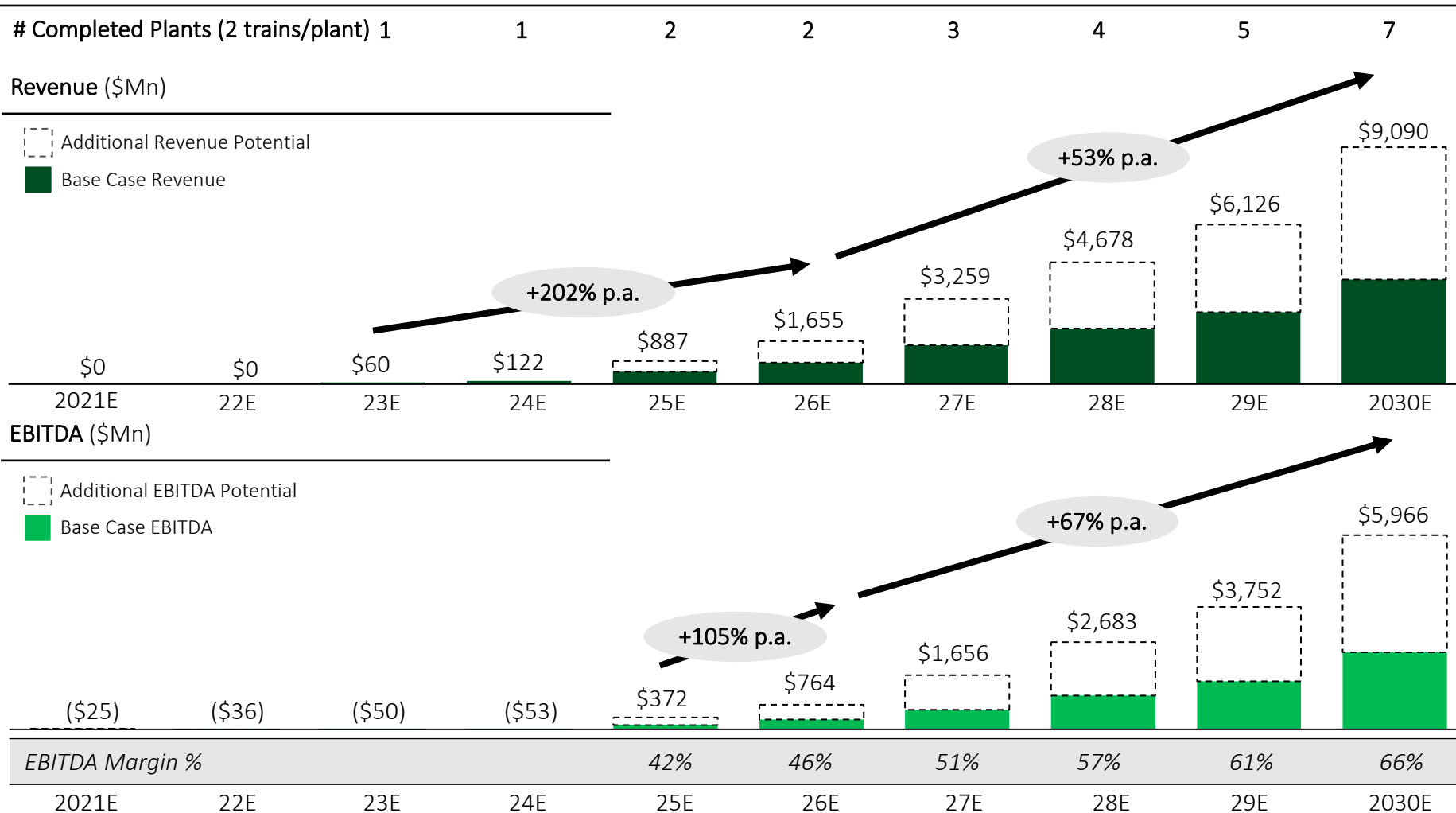
Origin expects to deliver a superior financial profile for years to come



- Revenue and materials volume forecast / growth based on satisfying existing customer off-take contracts and expected future demand
- Pricing assumptions are based on negotiated contract pricing with existing customers
- Feedstock cost assumptions reflect historically low volatility of pine pulpwood prices
- Cost assumptions also include additional required overhead during scaling
- EBITDA margins and associated growth are expected to improve throughout the forecast period as a result of increasing economies of scale from additional plants coming online
- Includes R&D expenditures to maintain Origin as the global leader in low or negative carbon material technologies

Source: Origin Materials management estimates. 1. 100% of revenue allocated to consumer materials. 2. A non-GAAP measure defined as Revenue less all plant direct cash costs (excluding depreciation, amortization, interest and taxes) divided by revenue. As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Origin could see significant additional revenue potential



- Assumes Origin is able to secure moderately higher prices in new customer contracts as a result of strong demand and carbon negative materials scarcity
- Concurrently, assumes Origin adds capacity at a faster rate than base business plan¹, adding two trains per new plant, effectively doubling capacity of each
- Feedstock prices assumed unchanged as primary feedstock supply (forest / wood processing residues) is ample and well above Origin's needs

1. Subject to capital availability.
 Source: Origin Materials management estimates.
 As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Long-term target operating model

	Origin Plant 1		Origin Plant 2		Origin Plant 3-7 Average	
Illustrative Run-Rate Economics						
Mn lb. biomass input	49		2,205		2,205	
Mn lb. products sold	146		2,412		1,313	
CapEx (\$Mn)	\$70 ¹		\$1,072		\$811	
ROIC (Adj. plant margin/CapEx)	NM		35.9%		51.1%	
	\$Mn	\$/lb. product	\$Mn	\$/lb. product	\$Mn	\$/lb. product
Revenue	\$122	\$0.84	\$708	\$0.29	\$637	\$0.49
Consumer materials	\$122		\$414		\$291	
Industrial materials			\$294		\$346	
Biomass feedstock	(\$7)	(\$0.05)	(\$56)	(\$0.02)	(\$56)	(\$0.04)
Other feedstock & variable costs	(\$7)	(\$0.05)	(\$93)	(\$0.04)	(\$108)	(\$0.08)
Tolling & downstream processing	(\$106)	(\$0.73)	(\$154)	(\$0.06)	(\$39)	(\$0.03)
Adj. Contribution²	\$2	\$0.01	\$405	\$0.17	\$435	\$0.33
Plant labor + other fixed costs	(\$6)	(\$0.04)	(\$20)	(\$0.01)	(\$20)	(\$0.02)
Adj. Plant Profit	(\$4)	(\$0.03)	\$385	\$0.16	\$415	\$0.32
Primary Products	PET/F, CMF, higher value application development samples		PET, HTC fuel		PET, PET/F, PEF ³ , CMF, FDCA ⁴ , carbon black, activated carbon, HTC fuel	

1. Denotes incremental capex to be spent in 2021-2022.

2. Reflected as adjusted gross profit in the base case projections included in the registration statement on Form S-4 as filed with the SEC by Artius Acquisition Inc. ("Artius") on March 9, 2021, as amended.

3. Polyethylene furanoate. 4. Furandicarboxylic acid. Source: Origin Materials management estimates.

As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Anticipated fully funding of Origin 1 and Origin 2 from cash on hand and traditional project financing sources

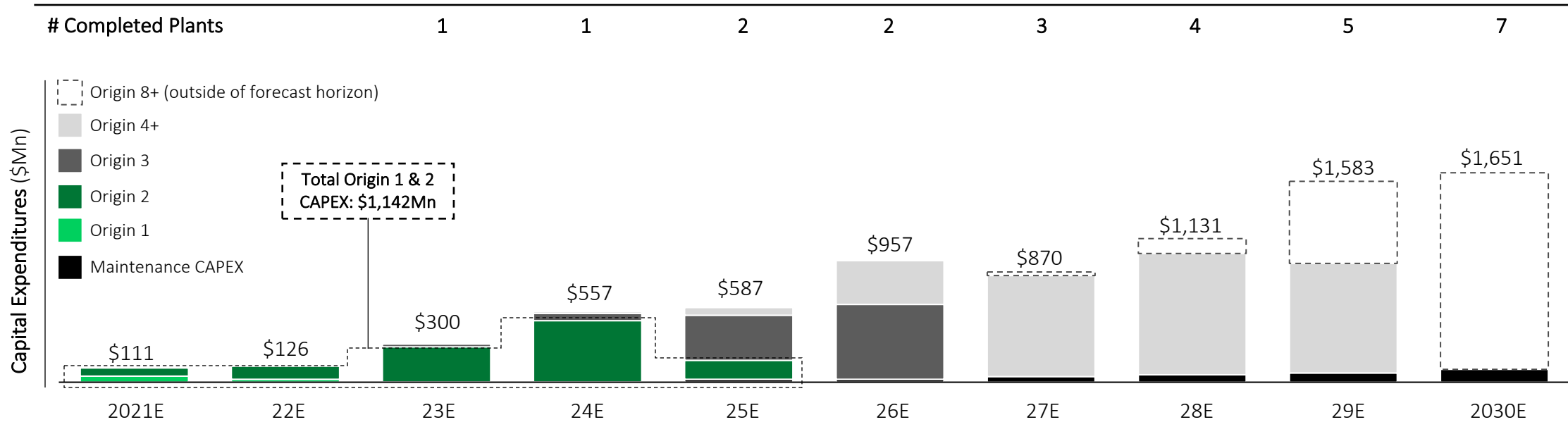
Cash Flow Sources & Uses from 2021E to Origin 2 Revenue in 2025E (\$Mn)

June 2021 Forecast

Gross Proceeds	\$529
Plus: Existing cash balance	3
Less: Transaction fees and expenses (net of prepaid out of existing cash balance) ¹	(61)
Net Cash Balance²	\$471
Add: Project Financing ⁴	\$804
Add: Local, State, and Federal Government Incentives / Support ⁴	185
Less: Origin 1 Growth CAPEX ⁵	(70)
Less: Origin 2 Growth CAPEX ⁵	(1,072)
Less: Cash Flow from Operations '21 – '25 ³	(218)
Remaining Cash to Fund Origin 3 and Beyond⁶	\$100

1. Transaction expenses figure excludes \$3Mn prepaid out of existing cash balance; total transaction expenses including prepaid is \$65Mn. 2. Assumes none of the Artius warrants to acquire 35.5Mn shares are exercised. 3. Cash flow from operations calculated as EBITDA + Working Capital + Maintenance CAPEX from 2021 until reaching Origin 2 revenue in 2025. 4. Project financing and government incentives / support have not yet been secured. 5. Origin has confirmed its estimates for construction cost after considering the latest input from various suppliers, construction companies and consultants specializing in chemical plant constructions. Origin has built into its capital budget for Origin 1 and Origin 2 contingencies as a reserve for any unexpected construction "overrun" that are appropriate at this stage of planning. 6. Defined as net proceeds less annual cash flow from operations less equity financed growth CAPEX for Origin 1 and 2. Source: Origin Materials management estimates. As previously reported on Origin's Form 8-K filed on August 12, 2021.

Anticipated fully funded growth plan to profitability



- Current transaction and anticipated financing and grants are expected to be sufficient to fully finance the construction of Origin 1 and Origin 2 and achieve EBITDA profitability
- CapEx based on estimates from world-leading EPC companies that Origin will partner with to deliver holistic capital project solutions
- Capacity scaling based on current customer contract commitments / orders and anticipation of demand from global industrial complex rushing to secure “drop in” decarbonized materials to meet their carbon commitments

Share count as of 12/31/2021

<u>Class</u>	<u>Outstanding Shares of Common Stock</u>
Total Shares Outstanding¹	136,801,569
Shares subject to forfeiture ¹	4,500,000
Total Shares Outstanding, including Shares subject to forfeiture¹	141,301,569
	<u>Shares Reserved for Future Issuance Pursuant to Potential Earnouts, Outstanding Warrants, and Options</u>
Public Warrants ²	24,150,000
Private Warrants ²	11,326,667
Legacy Origin Earnout Shares ³	25,000,000
Options and RSUs ^{4, 5}	15,074,862
Total Shares⁵	216,853,098

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 6,411,326 options with a weighted average strike price of \$0.21/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), 769,505 Restricted Stock Units, and 2,137,500 Performance Stock Units under which the maximum award can be up to 6,412,500 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, net of capitalized interest, (v) change in fair value of derivative liabilities, (vi) change in fair value of warrants liability, (vii) change in fair value of earnout liability, (viii) professional fees related to completed mergers, and (ix) other income, net.

(in thousands)	Three months ended December 31,		Year ended December 31,	
	2021	2020	2021	2020
Net income (loss)	\$ 5,237	\$ (23,534)	\$ 42,090	\$ (30,302)
Stock based compensation	959	1,552	5,767	1,630
Depreciation and amortization	181	174	544	479
Interest income	(1,413)	—	(1,413)	—
Interest expense, net of capitalized interest	(1)	175	2,838	341
Change in fair value of derivative liabilities	(100)	1,036	1,326	1,088
Change in fair value of warrants liability	(2,838)	17,370	4,525	18,498
Change in fair value of earnout liability	(8,480)	—	(75,488)	—
Professional fees related to completed mergers	—	—	640	—
Other income, net	(160)	(568)	(811)	(805)
Adjusted EBITDA	<u>\$ (6,615)</u>	<u>\$ (3,796)</u>	<u>\$ (19,982)</u>	<u>\$ (9,071)</u>

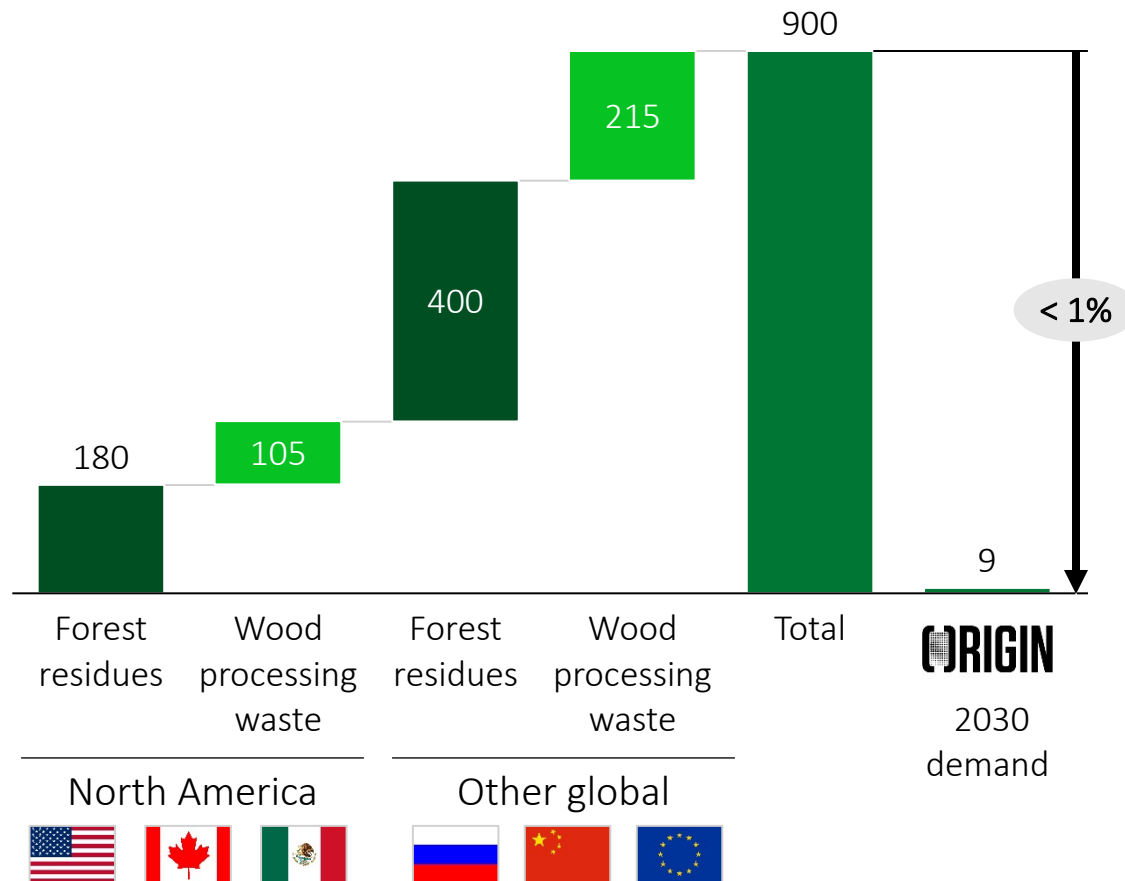


**Appendix B: Other
Previously Disclosed
Materials**

Origin is not feedstock limited

Primary feedstock (forest / wood processing residues)

Million tons annual availability



Additional feedstock optionality



> 2X Additional feedstock supply available above forest / wood processing residues alone

Origin will look to value chain participants to complement its strengths

 Origin's strengths



“Our proprietary bread and butter”

- Proprietary technology in a league of its own

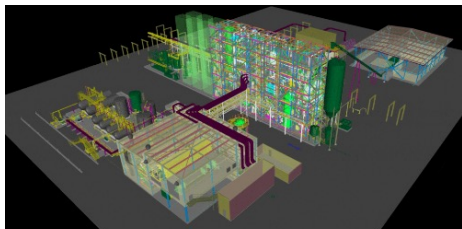
“Putting it all together”

- We will leverage an already-existing industrial base of monomer, polymer, additive, and packaging / extrusion technology
 - Beyond Origin 2 (monomers), we will license or sell that technology to a value chain participant

“Clear market pull”

- Years of experience working with the end consumer to address sustainability goals

Picture: Origin 1



Illustrative potential value chain participants¹:



Origin is in discussions with multiple partners and is ready to scale its strategy through its next phase of growth

1. Origin Materials may or may not be in discussions with these parties.

Source: Origin Materials.

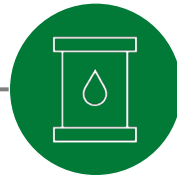
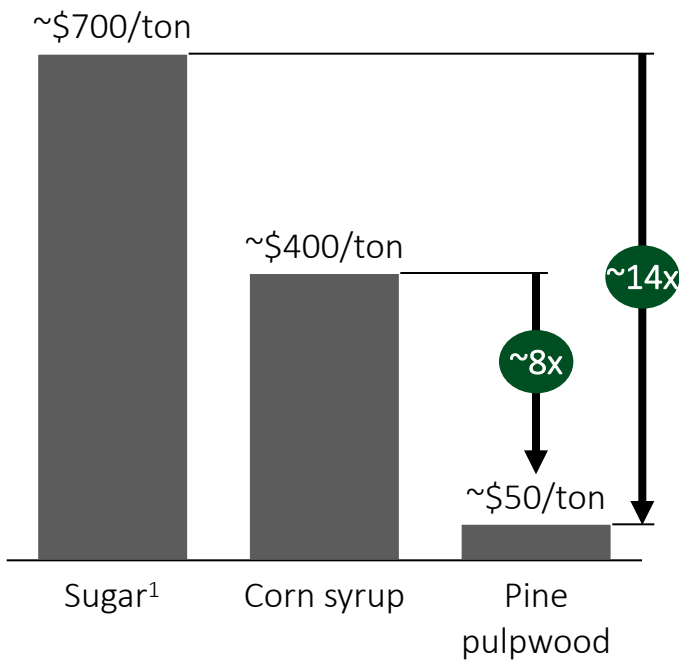
As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Origin's use of timber and forest residues as feedstock is a potential game changer



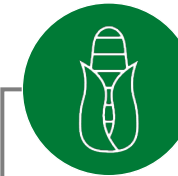
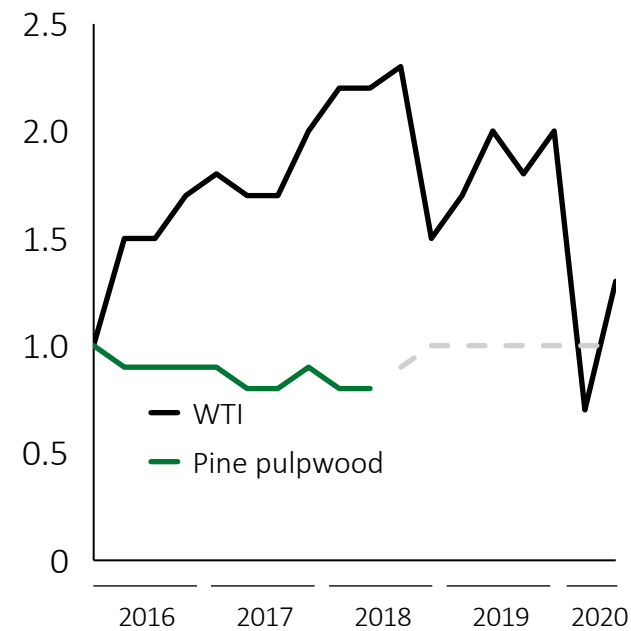
8x-14x cheaper than competing renewable feedstocks

Feedstock price



Decoupled from supply volatility of the oil markets

Indexed price (1 = Q1 2016 value)



Leverages waste, cleans forests, and lets food be food



Utilize waste



Improve forest management



Let food be food

1. Representative chemically relevant sugars such as glucose and high fructose corn syrup.
Source: North Carolina State University; Economic Research Service, USDA; Macrotrends; and Origin Materials estimates.
As previously reported on a Rule 425 filing of Artius Acquisition, Inc. dated April 19, 2021.

Origin is pursuing a capital efficient strategy to optimize CAPEX

Origin is keenly aware that **capital efficiency** will be the major driver of its long term profitability.

For this reason, Origin is pursuing a pulp mill “**brownfield**” CAPEX strategy to **save ~\$100Mn** on its total commercial plant CAPEX



Wood chip waste streams



Pulp mill scale

Origin’s strategy:

#1

Identify & purchase mill

Work with partners to identify suitable aging / defunct pulp mill

>40

Potential brownfield sites (e.g., closed pulp mills) in the US & Canada built in the last 50 years

#2

Convert equipment

Leverage key components needed for its wood handling process (e.g., utilities, boiler, wood yard)

>\$100Mn

Total useable value of converted equipment, even after considering expected upgrade costs

#3

Integrate & operate

Integrate refurbished components into the rest of its necessary equipment / plant infrastructure

Up to 15%

Net savings on total plant CAPEX, or ~\$100Mn co-location benefit

Pulp mill “brownfield” strategy offers additional benefits, including the existing forest supply chain ecosystem and local gov’t incentives

Glossary

Abbreviation

Explanation

Carbon negative

Carbon negative activities or products go beyond achieving reduced carbon impact, or net zero carbon impact, to actually remove additional carbon dioxide from the atmosphere

CMF

5-Chloromethylfurfural, organic compound obtained from dehydration derivatives

FDCA

2,5-Furandicarboxylic Acid, organic compound that is a renewable resource because it can be produced from carbohydrates

HTC

Hydrothermal Carbon, structured compounds that have been converted from organic compounds

PET

Polyethylene Terephthalate, most common thermoplastic polyester used for packaging foods and beverages

PEF

Polyethylene Furanoate, bio-based thermoplastic polyester also primarily used for packaging

pX

Paraxylene, an important chemical feedstock used in the large scale synthesis of various polymers



ORIGIN

The world's leading carbon negative materials company