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

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**FORM 8-K**

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**CURRENT REPORT**  
**Pursuant to Section 13 or 15(d)**  
**of The Securities Exchange Act of 1934**

**Date of Report (Date of earliest event reported): November 28, 2023**

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**Ecovyst Inc.**

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**Commission File Number: 001-38221**

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**81-3406833**  
(I.R.S. Employer  
Identification No.)

**300 Lindenwood Drive**  
**Malvern, Pennsylvania**  
(Address of principal executive offices)

**19355**  
(Zip Code)

**(484) 617-1200**  
(Registrant's telephone number, including area code)

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

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

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

<b>Title of each class</b>	<b>Trading symbol</b>	<b>Name of each exchange on which registered</b>
Common stock, par value \$0.01 per share	ECVT	New York Stock Exchange

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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**Item 7.01. Regulation FD Disclosure.**

On November 28, 2023, Ecovyst Inc. will host an Investor Day. A copy of the presentation to be displayed during the Investor Day is furnished as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

The information in this Current Report on Form 8-K (including the exhibits attached hereto) shall not be deemed “filed” for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that Section. The information in this Current Report on Form 8-K (including the exhibits attached hereto) shall not be deemed incorporated by reference into any filing or other document under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing or document.

**Item 9.01. Financial Statements and Exhibits.**

(d) Exhibits

Exhibit No.	Description
99.1	<a href="#">Ecovyst Inc. Investor Presentation, dated November 28, 2023</a>
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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**SIGNATURE**

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

Date: November 28, 2023

**Ecovyst Inc.**

By: /s/ Joseph S. Koscinski  
Name: Joseph S. Koscinski  
Title: Vice President, Chief Administrative Officer, General Counsel  
and Secretary



# INVESTOR DAY

November 28, 2023



# Legal Discussion

**Continuing Operations** Financial results are presented on a continuing operations basis, which excludes the Performance Materials business and Performance Chemicals business unless otherwise indicated.

**Forward-Looking Statements** Some of the information contained in this presentation, the conference call during which this presentation is reviewed and any discussions that follow constitutes "forward-looking statements." Forward-looking statements can be identified by words such as "anticipates," "intends," "plans," "seeks," "believes," "estimates," "expects," "projects" and similar references to future periods. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Examples of forward looking statements include, but are not limited to, our future results of operations, financial condition, liquidity, prospects, growth, goals, strategies, capital allocation programs (including our share repurchase program), product and service offerings, and expected end use demand trends and 2023-2028 financial goals. Our actual results may differ materially from those contemplated by the forward-looking statements. We caution you, therefore, against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to, regional, national or global political, economic, business, competitive, market and regulatory conditions, including tariffs and trade disputes, currency exchange rates, effects of inflation, and other factors, including those described in the sections titled "Risk Factors" and "Management's Discussion & Analysis of Financial Condition and Results of Operations" in our filings with the SEC, which are available on the SEC's website at [www.sec.gov](http://www.sec.gov). Any forward-looking statement made by us in this presentation, the conference call during which this presentation is reviewed and any discussions that follow speaks only as of the date on which it is made. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by applicable law.

**Non-GAAP Financial Measures** This presentation includes certain non-GAAP financial measures, including adjusted EBITDA, Organic Adjusted EBITDA margin, adjusted free cash flow, net debt leverage ratio, return on average net tangible assets, and cash conversion, which are provided to assist in an understanding of our business and its performance. These non-GAAP financial measures should be considered only as supplemental to, and not as superior to, financial measures prepared in accordance with GAAP. Non-GAAP financial measures should be read only in conjunction with consolidated financials prepared in accordance with GAAP. Reconciliations of non-GAAP measures to the relevant GAAP measures are provided in the appendix of this presentation. In reliance upon the unreasonable efforts exemption provided under Item 10(e)(1)(i)(B) of Regulation S-K, the Company is not able to provide a reconciliation of the Company's non-GAAP financial guidance to the corresponding GAAP measures without unreasonable effort because of the inherent difficulty in forecasting and quantifying certain amounts necessary for such a reconciliation such as certain non-cash, nonrecurring or other items that are included in net income and EBITDA as well as the related tax impacts of these items and asset dispositions / acquisitions and changes in foreign currency exchange rates that are included in cash flow, due to the uncertainty and variability of the nature and amount of these future charges and costs. Because this information is uncertain, the Company is unable to address the probable significance of the unavailable information, which could be material to future results.



# Agenda

9:00am – 9:05am	<b>Introduction and FLS</b>	Gene Shiels, Director of Investor Relations
9:05am – 9:25am	<b>Strategy Update</b>	Kurt Bitting, Chief Executive Officer
9:25am – 9:35am	<b>Sustainability Framework</b>	Colleen Donofrio, VP, Environment & Sustainability
9:35am – 10:00am	<b>Ecoservices Overview</b>	George L. Vann, President, Ecoservices
10:00am – 10:10am	<b>Break</b>	
10:10am – 10:35am	<b>Advanced Materials &amp; Catalysts Overview</b>	Paul Whittleston, President, Advanced Materials & Catalysts
10:35am – 10:50am	<b>Financial Overview and Long-Term Targets</b>	Mike Feehan, Chief Financial Officer
10:50am – 11:30am	<b>Q&amp;A</b>	All Speakers

# Kurt Bitting, CEO

- More than **25 years** of experience
- Originally joined the company in **2006**, serving in Ecoservices, at the time a division of Rhodia, as **Sulfur Products Manager, Business Director and Vice President**
- Played a key role in **Ecoservices' divestiture** from Solvay and eventual merger with PQ Corp
- Appointed President, Ecoservices in **2019**
- Promoted to Chief Executive Officer in **April 2022**



# Strategy Update

**Kurt Bitting**

Chief Executive Officer



# Company Overview



## Ecovyst

by the numbers

**\$953M**

2022 Sales<sup>1</sup>

**\$277M**

2022 Adjusted EBITDA<sup>2</sup>

**10**

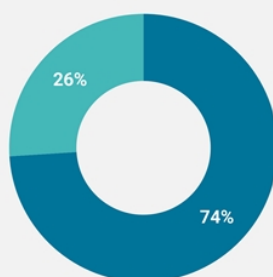
Manufacturing Facilities

**~880**

Employees

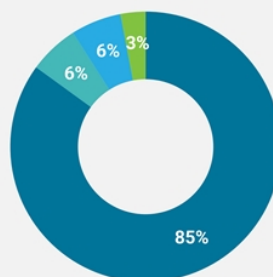
## 2022 Sales<sup>1</sup>

Segment



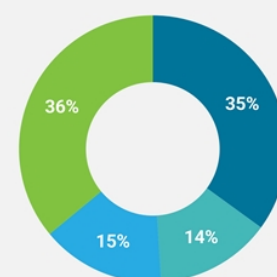
■ Ecoservices  
■ Advanced Materials & Catalysts

Geography



■ North America ■ Europe  
■ Asia ■ Rest of World

End Use



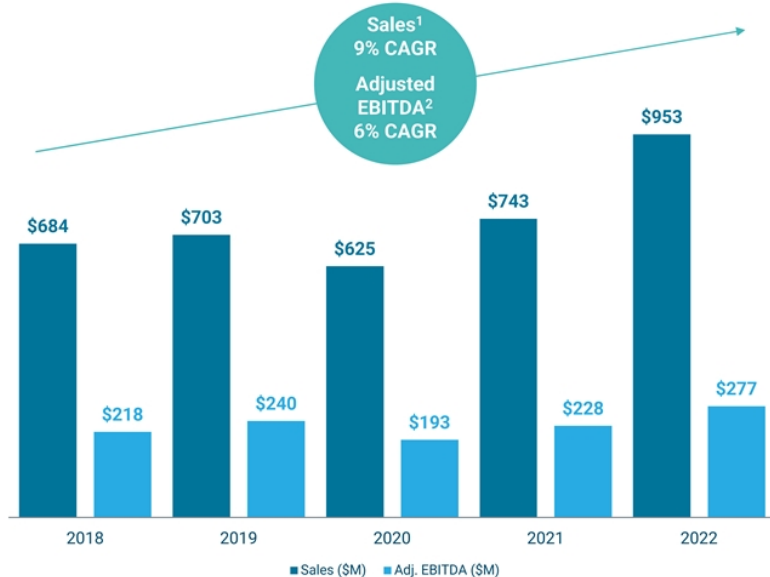
■ Industrial, Mining & automotive  
■ Clean Fuels, Emission Control & Other  
■ Polymers & Engineered Plastics  
■ Regeneration and Treatment Services

Company-Wide Commitment to **Sustainability** with a Focus on **Environmental Stewardship**



1. Calculations include \$133M of total sales attributable to the Zeolyst Joint Venture ("Zeolyst JV"), although such sales are not consolidated with our results or operations  
2. See Appendix for reconciliation of non-GAAP measures

# Historical Financial Performance



1. Includes 50% share of sales from Zeolyst Joint Venture
2. See Appendix for reconciliation of non-GAAP measures
3. Cash conversion % = (Adjusted EBITDA - CapEx) / (Adjusted EBITDA)

2018-2022

**6%**  
Adjusted EBITDA CAGR<sup>2</sup>

**~30%**  
Adjusted EBITDA Margins<sup>2</sup>

**~70%**  
Cash Conversion<sup>2,3</sup>

**~24**  
Million Shares Repurchased  
since April 2022

## Key Supplier of Essential Products And Services



### Advanced Materials & Catalysts

Formerly Catalyst Technologies

Silica Catalysts for HDPE

Hydrocracking Catalysts

Renewable Fuels Materials



### Ecoservices

Regeneration for North American  
Refining, Supplying Leading Refineries

Largest Producer  
of Merchant Sulfuric Acid

Leader in Catalyst Activation Technologies



## Competitive Advantages Drive Value Proposition



Core material science expertise highly aligned with decarbonization technologies



Established solutions in sustainable segments with large growth potential



Longstanding, sticky relationships with high barriers to entry



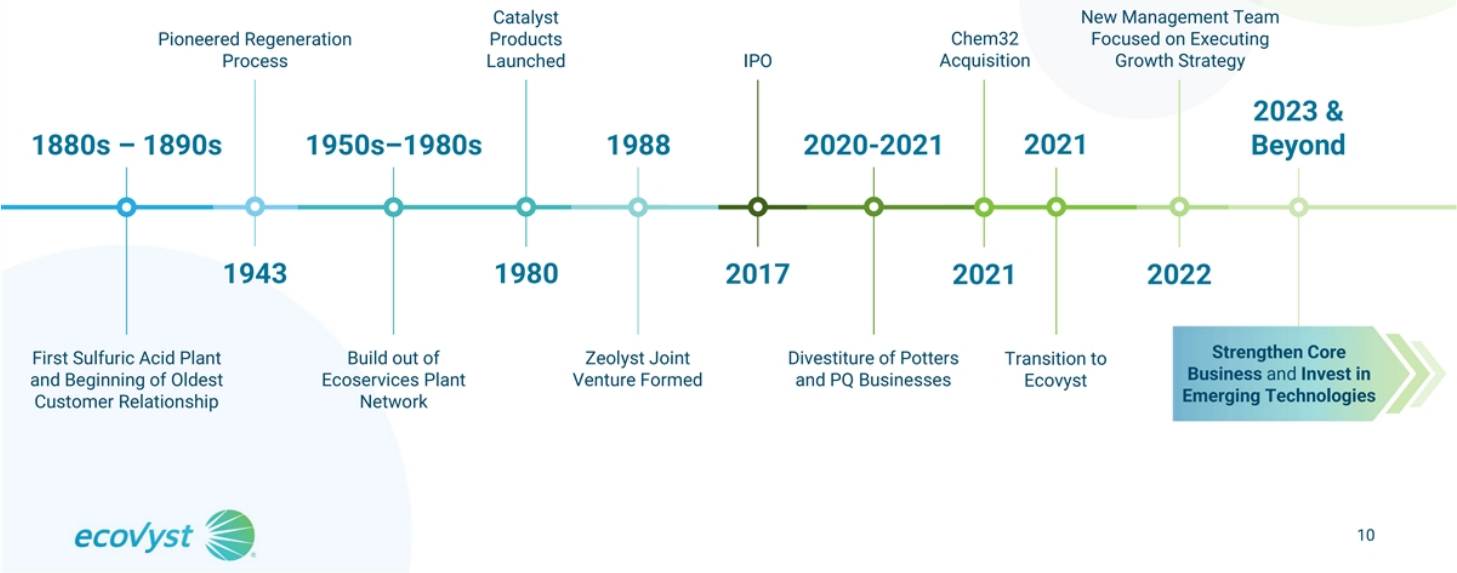
Favorable industry structures that protect margins and balance sheet



Unrivaled supply infrastructure and manufacturing networks



# Decades of History, Adapting to Solve the Problems of the Future



# Strategy for Creating Shareholder Value



## Strengthen Leading Positions in Core Segments

- Maximize production capabilities and reliability via digitization, AI, and efficiency gains
- Deliver strong margins and cash generation through commercial excellence



## Capture Share in Industrial Segments

- Growth through capacity expansion and debottlenecking
- Leverage technology and service advantages to capture share



## Accelerate Growth in Emerging Sustainable and Low Carbon Segments

- Drive innovation through material science expertise
- Commercialize new products through deep customer relationships
- Expand capacity and technology via organic and inorganic investments



## Sustain an industry-leading safe and responsible workplace



Regeneration  
Hydrocracking  
Treatment Services  
Emissions Controls

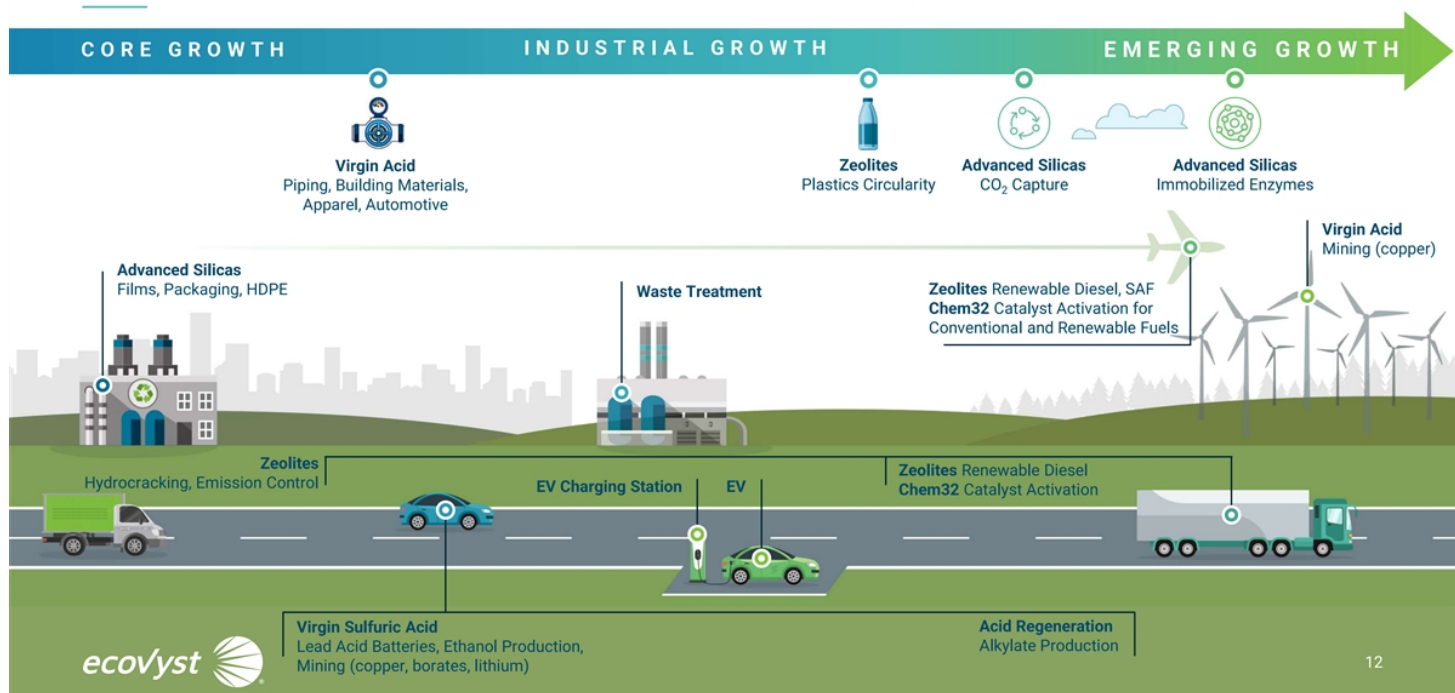


Polyethylene  
Virgin Acid  
Custom & Chemical Catalysts



Renewable Fuels  
Functional Silica/Enzymes  
Advanced Plastics Recycling  
Activation and Services  
Carbon Capture

# Enabling Customers to Solve Complex, Everyday Challenges

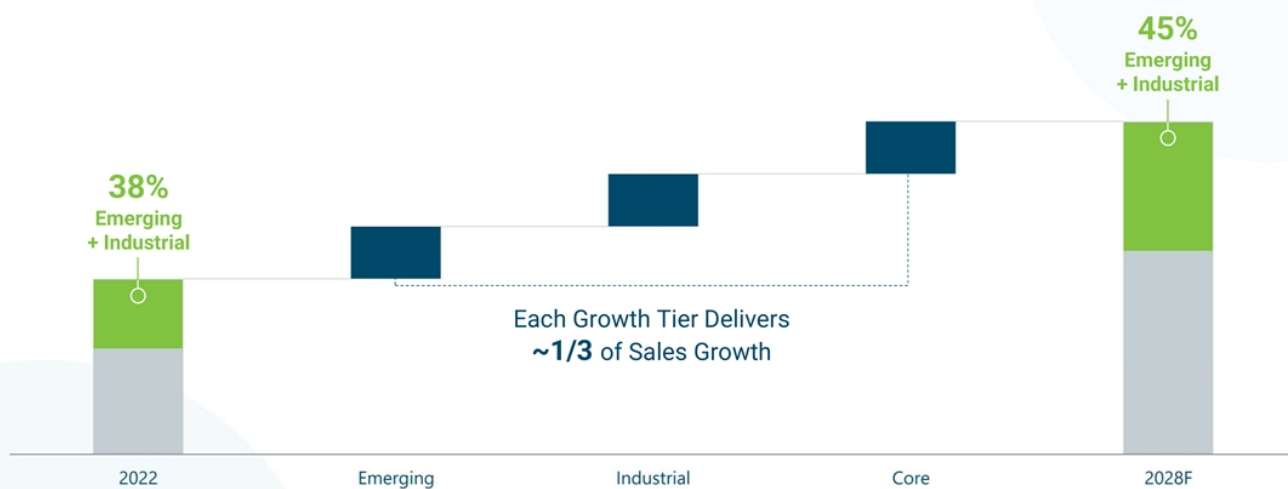


# Well-Positioned to Capitalize on Global Demand

Fundamental Growth Drivers Expected to Remain Favorable

	Industry Trend	Key Ecovyst Exposure	Ecovyst Growth Projection
Core	Clean Fuels	Regeneration, Hydrocracking	GDP+
Industrial	Green Infrastructure/EVs — Global Firm and Packaging	Virgin Acid — Advanced Silicas	GDP++
Emerging	Renewable Fuels and Sustainable Aviation Fuel — Plastics Circularity — Bio & Green Chemistry — Carbon Capture/Clean Water	Zeolites — Functionalized Silica for Immobilized Enzymes — Silica for Adsorbents	GDP+++

## Balanced Growth from Emerging and Leadership Segments



Attractive Organic Growth, Best-in-Class Margins, Strong Cash Generation



Compounding Shareholder Returns

# Ecoservices



**\$603 Million**  
September 2023  
TTM Sales<sup>1</sup>



**\$206 Million**  
September 2023 TTM  
Segment Adjusted  
EBITDA<sup>1</sup>



Applications



**Regeneration Services**  
Regeneration services for  
refinery alkylation



**Virgin Sulfuric Acid**  
Oleum  
High strength for mining minerals  
and metals production  
Electrolyte grades (for water treatment,  
semiconductors, and lead acid batteries)



**Catalyst Activation**  
Hydro-processing  
Renewable fuel production



**Treatment Services**  
Hazardous and non-  
hazardous waste



1. See Appendix for Reconciliation of non-GAAP measures

# Ecoservices Growth Drivers

Driven by a Changing and Charging World

Favorable Industry Structure	Regeneration Services	Favorable alkylate demand for high-octane fuels — High industry utilization	Expected Growth Rates 2022-2028 Gasoline Exports <sup>1</sup> : <b>+800 KBPD</b> <b>+1300 KBPD by 2040</b> Refinery Utilization <sup>1</sup> : <b>92%</b>
	Virgin Sulfuric Acid	Electrification and growing needs for industrial applications (mining, nylon)	Copper Production <sup>2</sup> : <b>+3%</b>
	Catalyst Activation	Growing demand for ex-situ activation in both traditional and renewable fuels	Activation <sup>3</sup> : <b>+17%</b>
	Treatment Services	Debottlenecking providing for further growth opportunities	<b>\$19B</b> : North American Chemical Expansions by 2025 <sup>4</sup>



1. 2023 EIA Annual Energy Outlook. KBPD = thousands of barrels per day.  
2. Bloomberg, Refined Copper Demand from traditional versus energy transition sectors  
3. Management Estimate  
4. American Chemistry Council - Chemistry Outlook June 2023

# Advanced Materials & Catalysts



**\$242 Million**

September 2023  
TTM Sales<sup>1,2</sup>



**\$75 Million**

September 2023 TTM  
Segment Adjusted  
EBITDA<sup>2</sup>

## Applications



### Advanced Silicas (100% Ownership)

HDPE and LLDPE production

Chemical Catalysts

Functionalized Silicas

Carbon Capture



### Zeolyst International (50% Ownership)

Hydrocracking

Renewable Fuels

Emission Control Technologies

Advanced Plastics Recycling



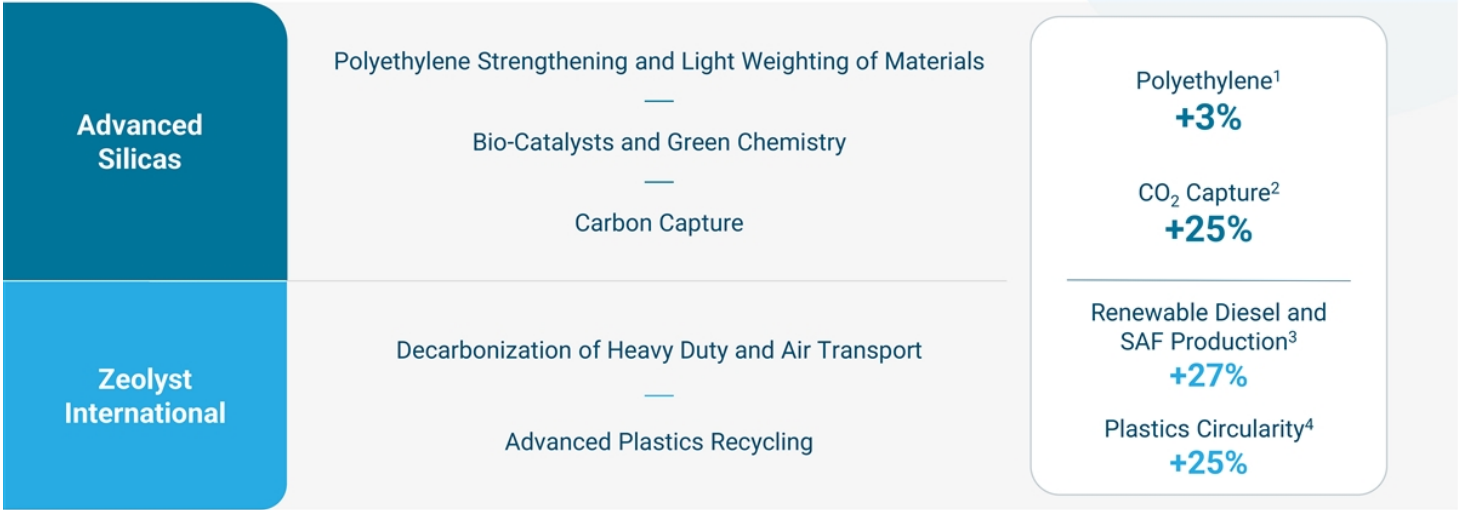
1. Includes 50% share of sales from the Zeolyst Joint Venture  
2. See Appendix for Reconciliation of non-GAAP measures



# Advanced Materials and Catalysts Growth Drivers

Global Sustainability Initiatives Boosting Growth

Expected CAGR 2022-2028



1. Chemical Market Analysis by OPS April 23  
2. Bloomberg NEF, Global Carbon Capture to Rise Six Fold  
3. Bloomberg Renewable Fuels Announced Capacity Database Oct 23  
4. Bloomberg NEF and Management Estimates

## Vision for Long-Term Sustainable Growth



## Culture of Purpose is Driving Success



Flat operational hierarchy with strong focus on **developing lasting customer relationships**



Empowered employees are driven to execute with **speed** and **efficiency**



High number of customer touchpoints leading to **meaningful partnerships** and **innovative solutions**

# Committed to Implementing the Ecovyst Strategy and Creating Value for Shareholders



**Kurt Bitting**  
Chief Executive Officer  
25 Years of Experience



**Mike Feehan**  
Chief Financial Officer  
25 Years of Experience



**George L. Vann**  
President, Ecoservices  
30+ Years of Experience



**Paul Whittleston**  
President, Advanced  
Materials & Catalysts  
30 Years of Experience



**Sean Dineen**  
Vice President, Strategy  
and Business Development  
25+ Years of Experience



**Colleen Donofrio**  
Vice President, Environment  
& Sustainability  
35+ Years of Experience



**Joseph S. Koscinski**  
Chief Administrative Officer, Vice  
President, Secretary & General  
Counsel  
25+ Years of Experience

## ALSO IN ATTENDANCE:

Board Chair  
**Kevin Fogarty**

Board Members  
**David Bradley**  
**Anna Catalano**





## Attractive Investment Case Driven by Profitable Growth

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1

Products and technology already capitalizing on  
**global sustainability trends**

2

Industry leadership positions provide durable  
**competitive advantages**

3

**Attractive** and **stable margins**

4

**Strong** free cash flow generation

5

**Ability to reinvest earnings** into business, funding  
**strong organic growth opportunities**

6

**Balanced** capital allocation strategy



# Sustainability

**Colleen Grace Donofrio**

VP, Environment & Sustainability



# Focusing on Sustainability Internally & Externally Through our Operations and Products

## ECOSERVICES

### Spent Sulfuric Acid Regeneration

- Recycles **1.5M** tons of spent acid each year
- Provides steam to reduce carbon footprint
- Processes for heat, steam, and electricity generation could power **~11,000 homes per year**

### Treatment Services (TS)

- Accepts customers high heat value waste

### Virgin Acid Production

- Supports electrification end uses

### Catalyst Activation

- Supports renewable diesel production



### R&D Investment in Sustainability

2015: 60%    **2022: 83%**

### Advanced Silicas & Supports – Alpha™

- Adsorb contaminants in produced water from oil and gas production
- Carbon capture
- Immobilize enzymes for bio-catalysis
- Capture and recover metals from waste streams

### Zeolites – Opal™

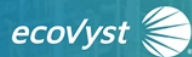
- Decrease energy intensity of plastics recycling
- Support sustainable aviation fuel (SAF) production
- Foster NOx emissions abatement for diesel vehicles



Inorganic Solutions

# Internal Sustainability through Operations

## 2021-2022 Furnace Optimization Project



Inaugural **Ecovyst Environmental Initiative Award** for the Most Impactful Climate Change Reduction Project



2021-2022 Baton Rouge furnace optimization project: Addition of temperature and oxygen controls to **reduce natural gas consumption**



Automation driven optimizations in natural gas usage exceeded our target by **over 20%** in the first year



Deployed at another **Baton Rouge furnace** and the **Dominguez furnace**



Plans for the remaining Ecoservices acid plants by 2028



# External Sustainability through Products: R&D Collaborations & Innovative Products Drive Sustainability

## Demand Stemming from Customers and the Environment

- Decarbonization requires transitioning to cleaner fuels

## Zeolites Meet the Demand

- Improve fuel properties to meet regulatorily-set fuel specifications
- Contribute to meeting US challenges and proposed EU mandates

Our Zeolites and Catalysts for SAF and Renewable Diesel production are used at **over 15 customer locations** with **more than 30 additional customer projects** in the pipeline



# Award-Winning Sustainability Program



### 2022 EcoVadis Gold Sustainability Rating

Achievements in environmental,  
labor & human rights, ethics and  
sustainable procurement

**2022 Gold Rating**  
**Top 3%** in our peer group



### 2022 American Chemistry Council Certificates of Excellence & Achievement

Recognition of safety, culture, and  
results

**Excellence 7** U.S. Sites  
**Achievement 2** U.S. Sites



### 2022-2023 Transportation Product Stewardship & Safe Handling

Daily commitment to safety beyond  
our facility borders & a testament  
to Ecovyst's safety culture

**BNSF Product Stewardship**  
**Canadian National Safe Handling**  
**Union Pacific Pinnacle Safety Award**  
**9,222** Incident-free Shipments in 2022  
**>99.9%**

## Our Sustainable Program Aligns With Recognized Standards





Sustainability Accounting  
Standards Board (SASB)

Global Reporting Initiative  
(GRI) Standards

UN Sustainable Development  
Goals (SDGs)



# Innovating for a Sustainable Future

		2025	2030	Sustainability Goals Reduction of ~66,000 mt CO <sub>2</sub> Emissions Equivalent of ~16,000 Cars
Sustainability Goals	FUEL USAGE	 Implement a <b>network-wide</b> natural gas optimization plan	Achieve <b>~10% reduction</b> in natural gas usage or obtain equivalent offsets	
	POWER USAGE	 Achieve <b>65-70%</b> of electricity usage from on-site generation and/or renewable energy by EOY	Achieve <b>75-80%</b> of electricity usage from on-site generation and/or renewable energy	
	HEALTH, SAFETY & ENVIRONMENT	 Achieve Perfect Days within each business segment of <b>≥ 92%</b>	Achieve Perfect Days within each business segment of <b>≥ 95%</b>	
	COMMUNITY ENGAGEMENT	 Standardize tracking of all community engagement activities & permit all employees to take up to <b>8 hrs/yr</b> paid volunteer leave	Target <b>1,800 hours</b> of volunteer time per year	



# Ecoservices Overview

**George L. Vann, Jr**

President, Ecoservices

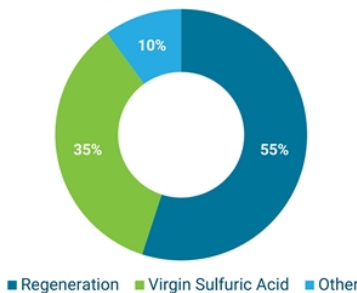


# Established Leadership Position in Essential and Growing End Uses

**#1** Supplier of **Regen** and **Virgin Acid**

Serving  
**6 of 10**  
Largest NA Refineries

Q3 2023 TTM Sales



**Competitive Advantages**



Long-term viability of US refining customer base and demand growth for alkylate



High barriers-to-entry



High switching costs



Strategic geographic positioning



State-of-the-art facilities



# Diverse, Industry-Leading Business Units



# Network Agility Provides Competitive Advantage

Service provider model designed to drive higher margins



## UNRIVALED SUPPLY INFRASTRUCTURE

Managing end to end supply chain & customer inventories

Production redundancy in key refining locations enables the highest degree of reliability



## FAVORABLE CUSTOMER POSITIONS

Long-term contracts with cost pass-through

Typically, majority share of supply for customers

Take-or-pay and capacity reservation fees

32





## Strategic Initiatives for Organic Growth



**Operational Excellence  
and Enhanced Reliability**  
Expected to increase Operational  
Efficiency >10% by 2028



**Automation of Sites to  
Improve Operating Efficiency**  
Expected capacity increase >70kt by 2028,  
with improved on-stream time



**Expansion of Catalyst Activation  
Production Capability**  
Expected to double catalyst activation  
capacity by 2027



# Tightening Regulations Driving Global Alkylate Demand

**Regular Gasoline** — 12-13% alkylate content p/g gasoline | **Premium Gasoline** — 40-45% alkylate content p/g gasoline

**7.5%<sup>3</sup>**

Increase in smaller engines (4-cylinder/turbo charged) which require premium gasoline



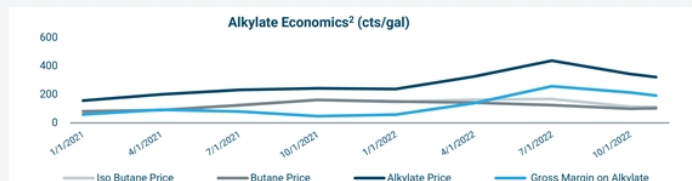
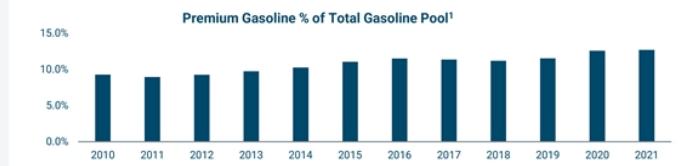
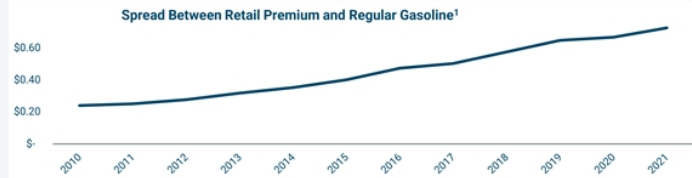
Expanding and strengthening supply chain operations to maintain logistics advantage

**10.5% CAGR**

2010-2020  
US Exports of Finished Motor Gasoline

Alkylate is the most desirable blending component because it increases octane while keeping other clean fuel parameters in specification

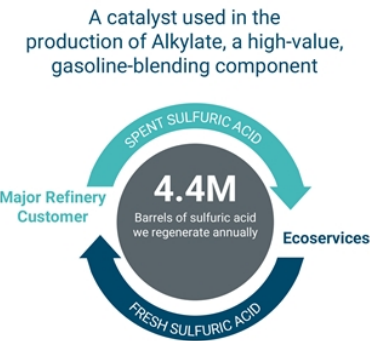
	Alkylate	FCC/Coker Naphtha	Butane/Butene	Reformate	Naphtha Isomerate	Ethanol
Olefins	✓	✗	--	✓	✓	✓
Aromatics	✓	✗	✓	✗	✓	✓
RON/MON	✓	✗	✓	✗	✓	✗
Octane	✓	--	✓	✓	--	✓
Sulfur	✓	--	✗	✓	✓	✓
Vapor Pressure	✓	✗	✗	✓	✗	✗



1. EIA
2. Bloomberg
3. LMC

# Regeneration Services Mirrors Industrial Gas Business Model

## Sulfuric Acid



## How We Win

Reliability improves on-stream time delivering  
**>10% volume increase**

Expansion of logistics capability enable **capture of customer's additional volume**

Capital plan to upgrade major equipment, **increasing operational efficiency**

## Growth Drivers

Pricing increases

Opportunities for spot business based on constrained assets at other suppliers

Additional volume based on customers' expansions

## Strategic Initiatives Impact




- Operational Excellence and Enhanced Reliability
- Automation

## Growth Through

- Price & Customer Expansions

## Virgin Sulfuric Acid Serves Growing, Diverse Industries



Sulfuric Acid Product		
Electrolyte	High Strength	Oleum
Industries		
Industrial	Mining	Nylon Intermediates
End Use		
 <ul style="list-style-type: none"> <li>• Pet Chem and Chemical</li> <li>• Lead Acid Batteries</li> <li>• Water Treatment</li> <li>• Semiconductors</li> </ul>	 <ul style="list-style-type: none"> <li>• Electrification</li> <li>• Construction / Infrastructure</li> <li>• Personal Devices</li> </ul>	 <ul style="list-style-type: none"> <li>• Vehicle lightweighting</li> <li>• Construction</li> <li>• Coatings and Packaging</li> </ul>
Ecoservices Advantages		
High purity acid is used for Lead Acid Batteries, water treatment, and other growing industrial segments including pet chem and semiconductors	High strength acid is used in mining applications for copper leaching and borate production (electric vehicles, tech devices, and construction)	Largest producer of Oleum, a super saturated sulfuric acid primarily used for Nylon production

# Virgin Sulfuric Acid Business Grows with Industrial End Use



## How We Win

Additional volume with increased on-stream time

Better operational efficiency with reliability and automation initiatives

Expand logistics capacity and infrastructure  
Loading Racks | Tanks | Etc.

## Growth Drivers

Demand growth for copper, borates and lithium

GDP growth in other segments  
Nylon | Chlor-alkali | Water Treatment | Ethanol | Batteries

GDP growth in petrochemical/chemical segments

## Strategic Initiatives Impact

Operational Excellence and Enhanced Reliability

Automation

## Growth Through

Volume & Price

# Catalyst Activation Serves Growing Renewable Segment

## Benefits

International  
Renewable Fuels  
Leverage Our Refining Relationships  
and Sulfur Knowhow

## Demand Drivers

Enables Refineries to Outsource  
Difficult Task of Sulfiding  
Quicker Reactor Startups  
Growth in Renewables  
Cleaner Fuels - Hydroprocessing

Global Renewable Fuels  
Hydroprocessing Sites<sup>1</sup>



# Catalyst Activation Expanding in High-Growth Segment Fuels Performance

## How We Win

Expansion of reactor capacity to meet customer demand

Reliability improves on-stream time delivering **>10%** increased volume on existing assets

Gain new business as more refineries look to outsource catalyst activation

## Growth Drivers

Increasing demand for catalysts for renewable fuels

Continued outsourcing of catalyst activation

Expand customer base to end users and gain new customers

## Strategic Initiatives Impact



Operational Excellence and Enhanced Reliability



Automation



Expansion

## Growth Through



Volume & Price

# Treatment Services is the Go-To Solution for Chemical Waste Management

## Benefits

- 1 Leader in the treatment of unique chemical waste
- 2 Capability to dispose of hard-to-handle materials
- 3 Repurposes hazardous waste that otherwise could go to deep well injection



Revenue growth of **>50%** last several years



Forecasted growth continues of more than **10%** over next five years

## Demand Drivers

Consumer spending  
Housing | Construction  
Packaging | Hygiene

Preferable to other waste treatment drivers

## Growth Opportunities

Only permitted NA producer that processes hazardous wastes, providing for additional opportunities

Growing chemical production in Gulf Coast will increase waste generated

## Strategic Initiatives Impact



Operational Excellence and Enhanced Reliability



Automation

## Growth Through

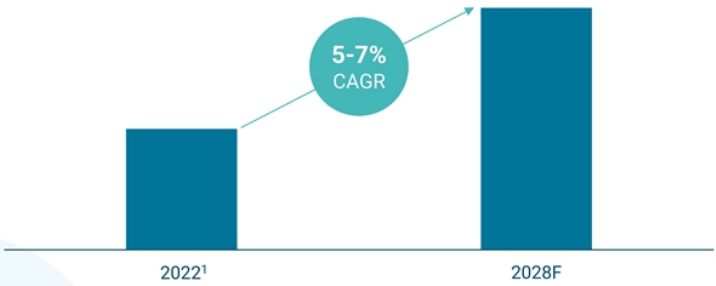


Volume & Price

# Primed to Deliver Attractive Growth

Margin expansion driven by price and volume increases

Projected Adjusted EBITDA Growth



1. See Appendix for Reconciliations of non-GAAP measures



## Sales Growth

accelerate volume growth through increased on-stream time and additional logistics capability



## Operating Leverage

maintain strategic pricing and contract structure, leveraging operational excellence initiative



## Strong Visibility

into necessary capital requirements to capitalize on growth opportunities



## Key Takeaways



**Strong Performance** Across  
Business Segments



**Continued Growth**  
in Markets Served



**Strategic Initiatives**  
Enable Our Growth Plan



**10 MINUTE BREAK**

# Advanced Materials & Catalysts

**Paul Whittleston**

President, Advanced Materials & Catalysts



# Ecovyst Advanced Materials & Catalysts – Leveraging The Unique Properties Of Zeolites & Silicas



40+ Year Legacy  
In Silica Chemistry

**Advanced Silicas**



Expertise in development and synthesis of Silica-based supports & catalysts and commercial management

<b>Silica Feedstock Produced by Ecovyst</b>	Polyethylene Catalysts	Chemical Catalysts
	Polyethylene Supports	Sustainable Catalysts
	Antiblocks	Functional Silicas

- Research, development & scale up
- Manufacturing at Kansas City and across global network of contract manufacturers
- Commercial responsibility



35+ Year 50-50  
Partnership



Expertise in catalysts for refinery & petrochemical



Expertise in development and synthesis of Zeolite structures & catalysts, and commercial management outside of HCC and Specialty



Shell Catalysts & Technologies

<b>Zeolite Feedstock Produced by Zeolyst</b>	Hydro Cracking Catalysts	Advanced Recycling	Renewable Fuels
	Specialty Catalysts	Merchant Y Powder	Custom Zeolites & Catalysts
		Emission Control	

- R&D activities
- Tolerated catalyst production
- Sales within Shell & to 3<sup>rd</sup> parties

- R&D activities including Y Powders & scale up
- Manufacturing at Delfzijl, NL & Kansas City, USA
- Sales to Hydrocracking co-producers
- Commercial responsibility

# Deep Materials Science & Complex Manufacturing Process Know-How

## Advanced Silica

### Simple Materials, High Complexity Processes

Heat

Aggregate

Process

Form

Crystalline Silica (Sand)

Water glass

Amorphous Silica building block

Aggregated Silica

Formed Silica

### Many Different Forms of Silicas From Ecovyst

Types	ES	EP	MS	Granular	Beads	Extrudates
Shape						

## Zeolyst

### Porous Materials, High Complexity Processes

Mixing

Crystallization

Process

Silica Alumina

Gel Formulation

Structure Formation

Zeolite Crystals

### Many Different Types of Zeolites From Ecovyst

Types	FAU Y Powder	BEA Beta	MOR Mordenite	MFI ZSM-5	FER Ferrierite
Pores					



## New Name Reflects Our Competencies, Heritage And Future

### Our Core Competencies

Deep R&D expertise in Silica  
and Zeolite materials

Analytical processing technologies

Rapidly develop and  
and scale new technologies

Our **core ability** to  
modify materials using science to  
**create products** with significantly  
different functionality & **higher**  
**value is differentiating**

### Our Legacy & Heart

35-year+ partnership for Zeolite-  
based catalysts

40+ years Silica  
catalysts & additives  
for Polyethylene

Flexible manufacturing assets

We **create value** for our customers  
through the development and sale  
of catalysts and supports **that**  
**enable catalyzed reactions**

### Our Competency & Future



### Our Legacy & Heart



### Advanced Materials & Catalysts

# Launching New Product Branding Alongside New Name

Business Unit	Advanced Materials & Catalysts	
Sub-Business Unit	Advanced Silicas	Zeolyst International®
Brand	Alpha™ Alpha™ carries the concept of leadership and being first	Opal™ Opal™ carries the concepts of specialty products, purity and high value
Application & Product Focus	<p> Polyethylene Catalysts</p> <p> Polyethylene Supports</p> <p> Anti-blocking Silicas</p> <p> Chemical / Bio-Catalysts &amp; Supports</p> <p> Functionalized Silicas</p>	<p> Sustainable Fuels</p> <p> Advanced Recycling</p> <p> Emission Control</p> <p> Custom Zeolites</p> <p> Hydrocracking &amp; MACH</p> <p> Oparis™, Zataris™, &amp; ATA</p>

# Customized Solutions From Lab To Commercial With Speed & Quality

## Customer Need

Ecovyst and customer team define problem & potential solution

## Laboratory Scale (Grams)

Bench scale equipment used to develop concept and prepare first solutions

## Commercialization (Tons)

Commercialization plants mirror pilot assets, ensuring consistent quality and rapid scalability

## Pilot Plant (Kilograms)

Stage Gate review confirms business case before rapidly introducing pilot scale production



Depth in Advanced  
Material Science  
capabilities



Same team develops,  
scales, and technically  
supports launch



Global collaboration  
between R&D  
centers



Highly experienced &  
qualified team, with 11 PhD,  
9 MS & 14 BSc, averaging  
16 years with Ecovyst

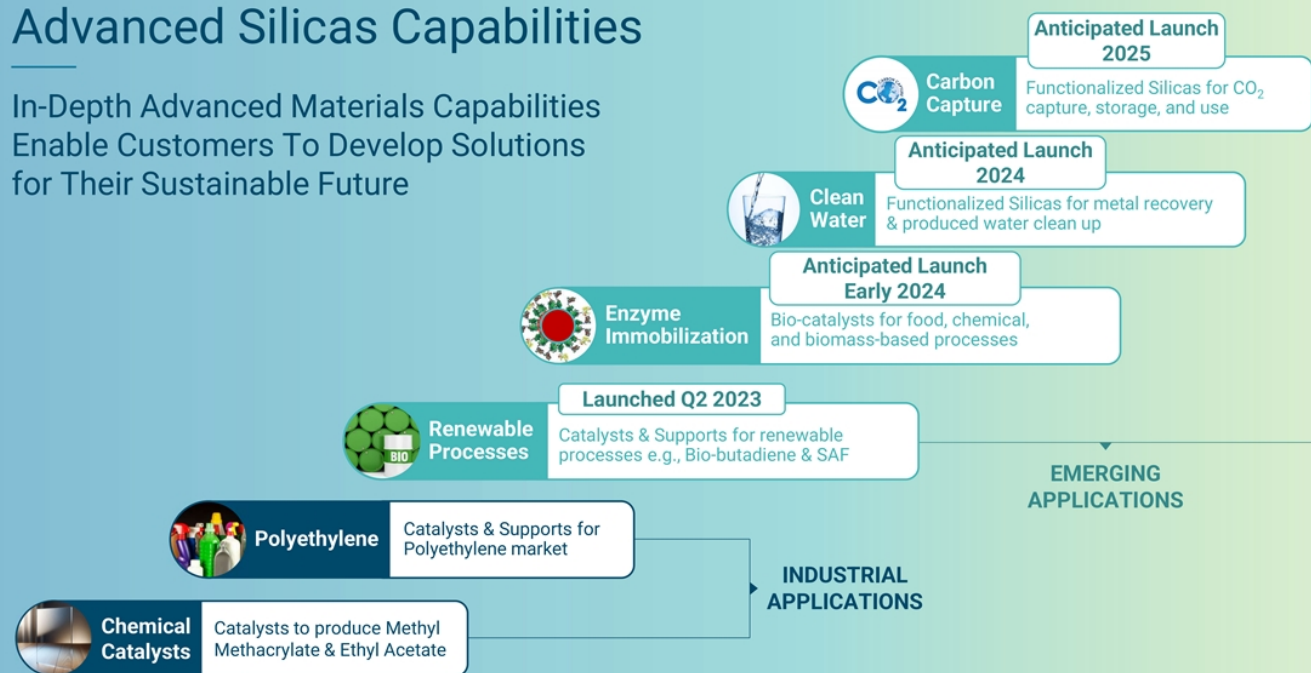


Pilot facilities co-  
located with R&D  
team enabling rapid  
scale up



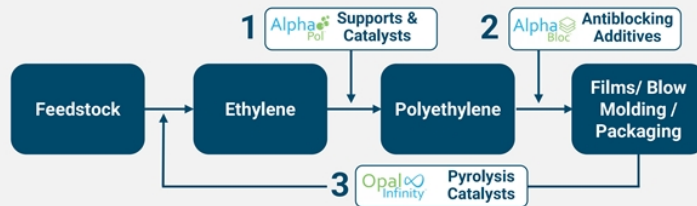
# Advanced Silicas Capabilities

In-Depth Advanced Materials Capabilities  
Enable Customers To Develop Solutions  
for Their Sustainable Future



# Customized Solutions Addressing Polyethylene Market Needs, Targeting 2-3x Market Growth Rate

## Where We Play



## Polyethylene (PE) Potential Demand

Source: Chemical Market Analytics by OPS  
April 2023 & Ecovyst Management Estimates



Positioned to deliver 2 – 3x industry growth

## Key Drivers

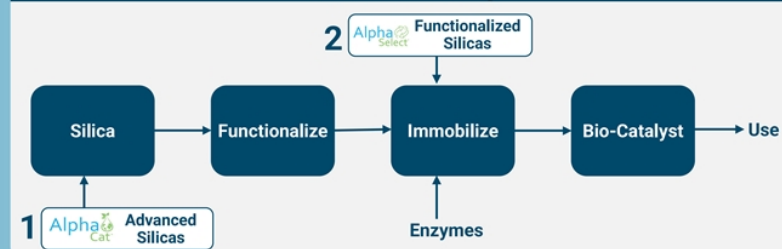
- Increasing global use of Polyethylene
- Food storage & preservation needs
- Light weighting of materials

## How We Win

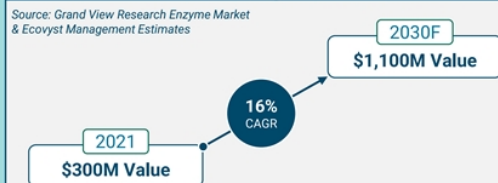
- Partner with key technology licensors & producers
- Develop new products in partnership with customers
- Reliable, quality, and cost-effective supply

# Advanced Silicas Are Enabling Enzyme Immobilization Technology To Rapidly Commercialize

## Where We Play



## Immobilized Enzymes Potential



Focus on **immobilized Silica** for food applications

## Key Drivers

- Increasing demand for cost-effective food
- Emerging technology to modify & test enzymes
- Energy intensity, HSE profile & ease-of-use

## How We Win

- Execute current project pipeline, then broaden
- Rapid R&D & qualification meeting customer needs
- Scale commercial & technical expertise

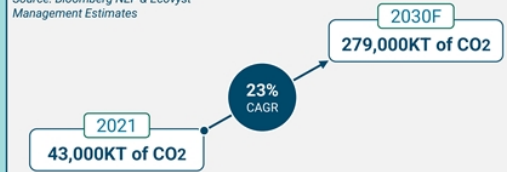
# Advanced Silicas Are Enabling Efficient Capture Of CO<sub>2</sub> Produced From Power Generation

## Where We Play



## Carbon Capture Potential

Source: Bloomberg NEF & Ecovyst Management Estimates



Focus on CO<sub>2</sub> emissions from Power Generation

## Key Drivers

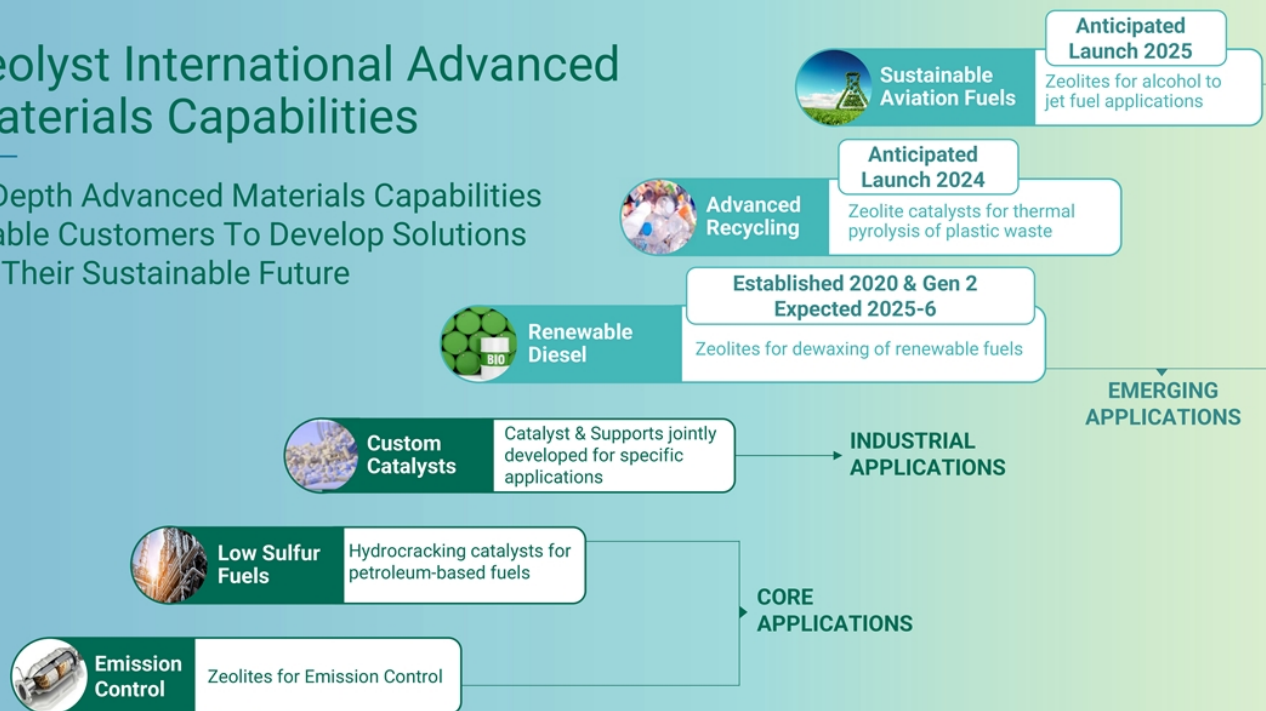
- Global regulatory and social initiatives to lower CO<sub>2</sub>
- High value of CO<sub>2</sub> credits
- Recovered CO<sub>2</sub> for downstream chemical production

## How We Win

- Execute current project pipeline, then broaden
- Identify technology leaders and develop new systems
- Scale commercial & technical team

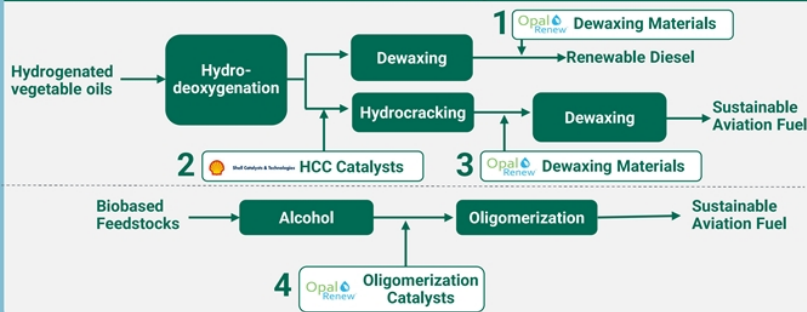
# Zeolyst International Advanced Materials Capabilities

In-Depth Advanced Materials Capabilities Enable Customers To Develop Solutions for Their Sustainable Future



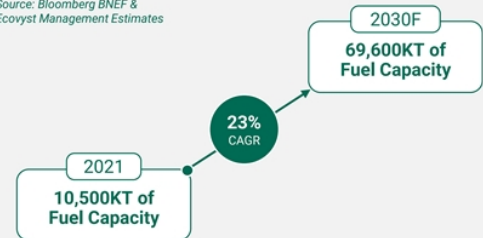
# Zeolyst Advanced Material Science Is A Key Enabler For Global Decarbonization Efforts

## Where We Play



## Renewable Diesel & Sustainable Aviation Fuels

Source: Bloomberg BNEF & Ecovyst Management Estimates



Focus on **growing** with current & new licensors

## Key Drivers

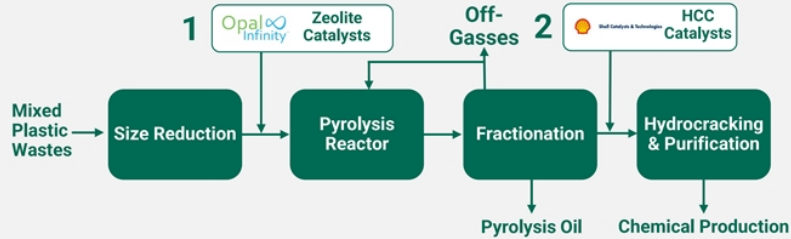
- Regulatory requirements promoting decarbonization
- Commitment of airlines to decarbonize fuels
- Food vs. fuel pressures enabling new technologies

## How We Win

- Established partnerships with technology licensors
- Staying ahead through innovation
- Propriety manufacturing know-how

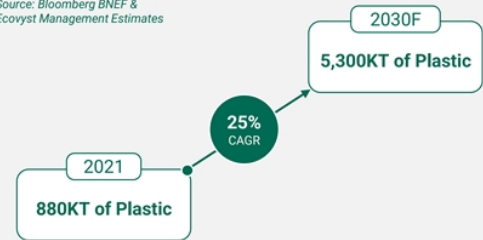
# Zeolyst Technologies Are Improving The Cost-Effectiveness To Recycle Plastic Waste

## Where We Play



## Advanced Recycling Potential

Source: Bloomberg BNEF & Ecovyst Management Estimates



Focus on catalyzed thermal processes

## Key Drivers

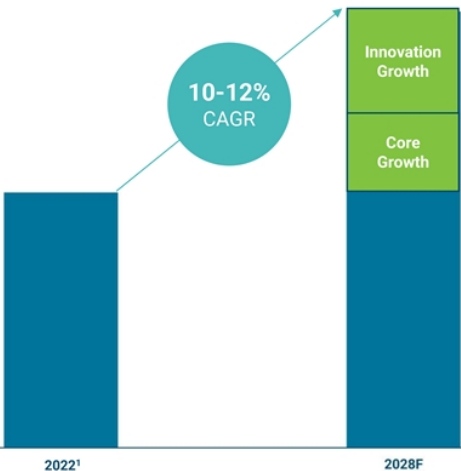
- Global regulatory and social initiatives
- Inefficiencies of existing processes
- Need & willingness of companies to innovate

## How We Win

- Partner with processors with access to capital and plastic collection infrastructure
- Utilize existing technology and manufacturing footprint
- Scale commercial & technical teams

# Strong Team Developed And Positive Momentum Built, With A Relentless Focus on Execution

AM&C Projected Adjusted EBITDA Growth



## Key Takeaways



Organic growth in Polyethylene & Custom Catalysts continues to be robust



Our entry into renewable fuels is successful. We will profitably grow as capacity is added



Our deep Advanced Materials know-how enables expansion into emerging applications

- Sustainable Aviation Fuel
- Advanced Recycling
- Carbon Capture
- Enzyme Immobilization

**Our innovation capabilities, close partnerships with customers & unique production capabilities are key differentiators that will enable our continued success**



1. See Appendix for Reconciliations of non-GAAP measures



# Financial Outlook

**Mike Feehan**

Chief Financial Officer



## Premier Financial Profile



### Strong business fundamentals

supported by global demand trends, leading supply positions, integrated supply network, favorable long-term contract structures, and innovative track record



**High growth** potential from favorable secular demand trends and compounding organic growth initiatives



**Resilient** financial profile with **mid-30%** average business segment margins from 2018-2022



Strong **cash flow** generation driven by healthy business profitability

2018-2022

**6%**

Adjusted EBITDA  
CAGR<sup>1,4</sup>

**71%**

Average Cash  
Conversion<sup>1,2</sup>

**29%**

Average Capital  
Intensity<sup>1,3</sup>

**31%**

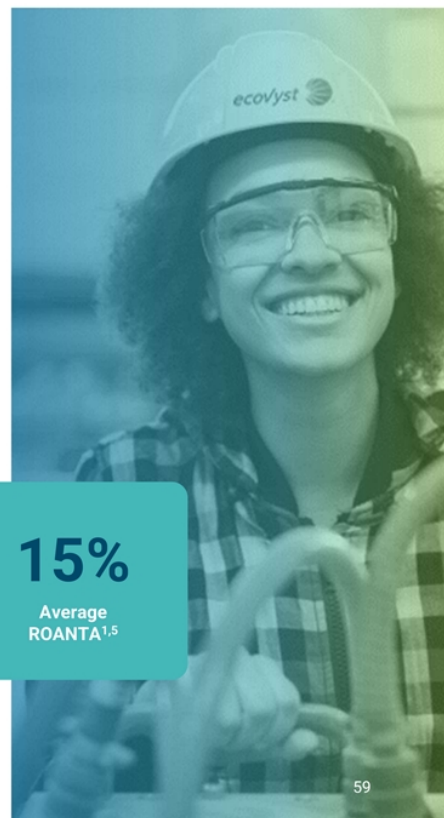
Average Adjusted  
EBITDA Margin<sup>1,4</sup>

**15%**

Average  
ROANTA<sup>1,5</sup>

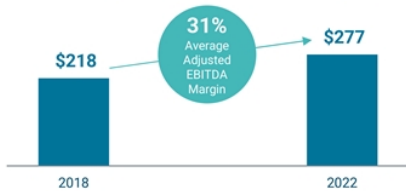


1. See Appendix for Reconciliations of non-GAAP measures
2. Cash Conversion % = (Adjusted EBITDA - Capex)/(Adjusted EBITDA)
3. Capital Intensity = Capital expenditures as percentage of Adjusted EBITDA
4. Adjusted EBITDA calculation includes proportionate 50% share of sales from the Zeolyst Joint Venture
5. ROANTA = Return on Average Net Tangible Assets

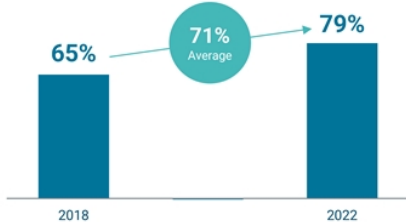


# Strong Track Record of Performance vs. Peers

Ecovyst Adjusted EBITDA<sup>1,2</sup> (\$M)

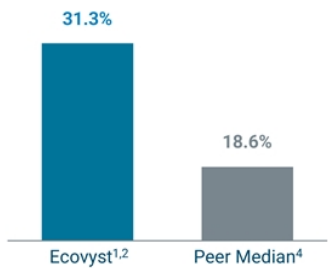


Ecovyst Cash Conversion<sup>1,3</sup>

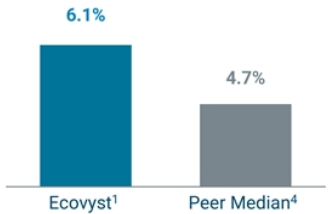


Ecovyst Peer Comparison

Adjusted EBITDA Margin  
(2018 – 2022 Average)



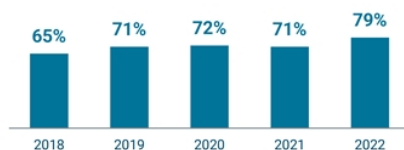
Adjusted EBITDA CAGR  
(2018 – 2022)



1. See Appendix for Reconciliations of non-GAAP measures  
2. Adjusted EBITDA margin calculation includes 50% share of sales from the Zeolyst Joint Venture  
3. Cash Conversion % = (Adjusted EBITDA-Capex)/(Adjusted EBITDA). See appendix for reconciliation of non-GAAP measures  
4. Represents the median companies in the S&P 1500 Specialty Chemicals Index as reported by FactSet

# Strong Cash Generation Driving Investment for Growth & Enhanced Shareholder Value

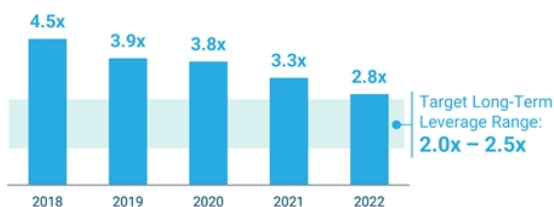
Cash Conversion<sup>1,3</sup>



## Cash Generation Driven By

- Growth in Adjusted EBITDA
- Historically modest capital spending

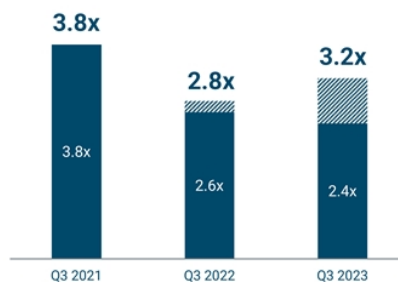
Net Debt Leverage Ratio<sup>2</sup>



## Deleveraging

- No significant debt maturities until 2028
- Interest rate caps limit rate exposure
- Current cost of debt ~5%

Net Leverage Excluding Impact of Share Repurchases<sup>4</sup>



1. Cash Conversion % = (Adjusted EBITDA-Capex)/(Adjusted EBITDA). See appendix for reconciliation of non-GAAP measures
2. Net Debt Leverage Ratio = (Total debt – cash and cash equivalents) / TTM Adjusted EBITDA. See appendix for reconciliation of non-GAAP measures
3. See Appendix for Reconciliations of non-GAAP measures
4. Q3 2022 Share Repurchases = \$73.7M ; Q3 2023 Share Repurchases \$215.4M

## 2028 Financial Goals



**6-8%**

Organic Adjusted  
EBITDA Growth



**75%**

Average Cash Conversion



**2.0x-2.5x**

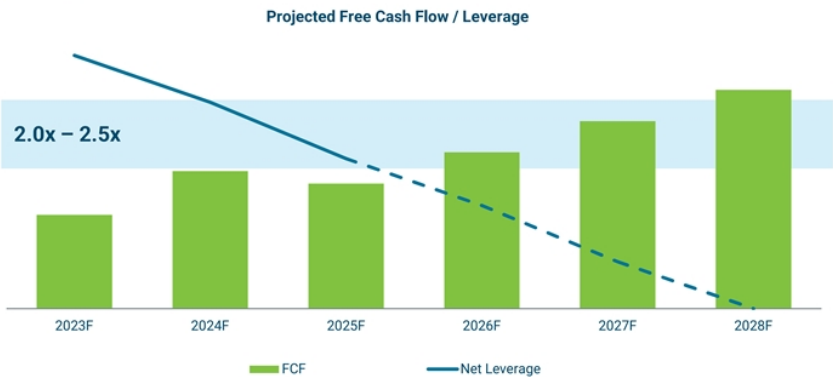
Net Debt Leverage Ratio



**>20%**

ROANTA Average

# Capital Allocation Strategy Focused on Maximizing Shareholder Value



Adjusted EBITDA Growth and Cash Conversion to drive **Free Cash Flow Generation**

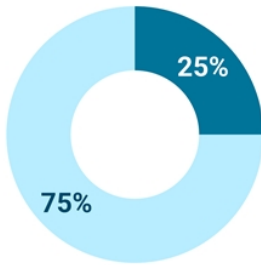
Target Net Leverage of **2.0x-2.5x** Early in Projection Period

Allows for **Flexible Capital Allocation** Strategy to Include Bolt-On Acquisitions and Share Repurchases



# Focusing Capital Investments to Drive Growth

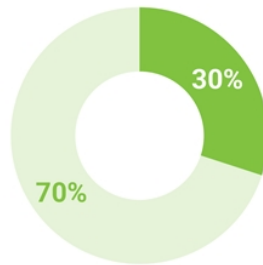
2018-2022 Average



■ Growth Capital  
■ Maintenance Capital

29% Average Capital Intensity<sup>1</sup>

2023 - 2028 Projected



■ Growth Capital  
■ Maintenance Capital

25% Average Capital Intensity<sup>1</sup>

- Increase focus on **growth capital**, while maintaining appropriate levels for maintenance capital
  - ~**50% increase** in average growth capital
  - ~**30% increase** in average maintenance capital
- Emphasize **high growth projects** in associated growth markets
- Favorable expected **financial investment returns**



1. Capital Intensity % = Capital expenditures as a percentage of Adjusted EBITDA. See Appendix for Reconciliations of non-GAAP measures

# Key Initiatives to Drive Organic Growth

Preferred technology and increasing sustainable product offerings projected to drive growth through 2028

## ECOSERVICES

Expansion of catalyst activation for hydroprocessing and renewable fuel production

Debottlenecking virgin sulfuric acid production to meet demand in mining and industrials

Favorable pricing benefit from inflation through long-term contract structure

## Advanced Materials & Catalysts

Grow at above market rates in polyethylene through know-how and customer partnerships

Continue growth of product offerings in renewable fuels driven by global decarbonization

Expand commercial technology of advanced recycling for plastic pyrolysis

Drive chemical catalyst growth in sustainable processes for new novel catalysts, such as enzyme development

Advance functionalized silicas to capture demand from electrification and carbon capture



# Opportunistic Bolt-on M&A Strategy

## Advanced Materials & Catalysts

New catalyst technology platforms for building on or adjacent to Zeolite and Silica capabilities

New services associated with efficient catalyst lifecycle









## Ecoservices

Expansion of virgin acid capabilities

Geographic reach

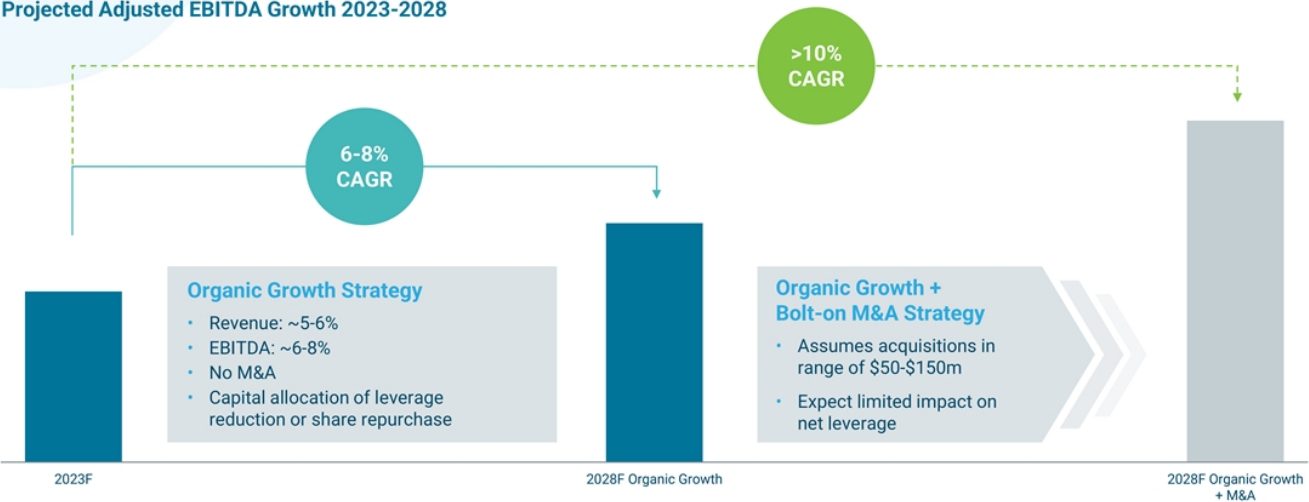
Expansion into adjacent services and technologies



Strategic Criteria	 Exposure to emerging trends and areas of growth in sustainable markets	Financial Criteria	 Return on investment > cost of capital	
	 Adjacent or complementary technologies or services		 Sustainable growth and margin profile	
	 Differentiated intellectual property and application know-how/expertise		 Synergy opportunities	
	 Cultural fit/High customer intimacy		 Financially accretive	

# Measuring Our Success

Projected Adjusted EBITDA Growth 2023-2028



# Creating Lasting Shareholder Value



**Durable**  
Business  
Model with  
**Differentiated**  
**Competitive**  
**Advantages**



**Favorable**  
**Industry Trends**  
Driving Demand  
for Products and  
Services



Broad-Based  
**Growth Across**  
**All Segments,**  
Building a More  
Evolved  
Business Mix



**Strong Cash**  
**Generation**  
Funding a  
Balanced  
Capital  
Allocation  
Strategy

# Q&A



# Appendix

## Annual Segment Sales, Adjusted EBITDA and Margins



(\$ in millions, except %)	TTM	Year Ended December 31,				
	September 30, 2023	2022	2021	2020	2019	2018
<b>Sales:</b>						
Ecoservices	603.3	702.5	500.5	401.9	447.1	455.6
Advanced Silica	97.8	117.7	110.7	94.0	85.7	72.1
<b>Total sales</b>	<b>701.1</b>	<b>820.2</b>	<b>611.2</b>	<b>495.9</b>	<b>532.8</b>	<b>527.7</b>
Zeolyst Joint Venture sales	143.7	132.6	131.3	128.6	170.3	156.7
<b>Adjusted EBITDA<sup>1</sup>:</b>						
Ecoservices	206.0	227.8	177.7	157.2	175.6	176.5
Advanced Materials & Catalysts	75.1	78.0	88.0	74.5	107.8	81.1
Unallocated corporate expenses	(21.8)	(29.0)	(38.1)	(39.1)	(43.3)	(39.4)
<b>Total Adjusted EBITDA</b>	<b>259.3</b>	<b>276.8</b>	<b>227.6</b>	<b>192.6</b>	<b>240.1</b>	<b>218.2</b>
<b>Adjusted EBITDA Margin<sup>1</sup>:</b>						
Ecoservices	34.1%	32.4%	35.5%	39.1%	39.3%	38.7%
Advanced Materials & Catalysts <sup>3</sup>	31.1%	31.2%	36.4%	33.5%	42.1%	35.4%
<b>Total Adjusted EBITDA Margin<sup>1,2</sup></b>	<b>30.7%</b>	<b>29.0%</b>	<b>30.7%</b>	<b>30.8%</b>	<b>34.1%</b>	<b>31.9%</b>

1. See Appendix for Reconciliations of non-GAAP measures

2. Totals include corporate costs

3. Adjusted EBITDA includes proportionate 50% share of sales from the Zeolyst Joint Venture

\* Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)

## Reconciliation of Net Income to Adjusted EBITDA



(\$ in millions, except %)	TTM				Year Ended			
	September 30, 2023	September 30, 2022	September 30, 2021	December 31, 2022	December 31, 2021	December 31, 2020	December 31, 2019	December 31, 2018
<b>Reconciliation of net income to Adjusted EBITDA</b>								
Net income	62.7	56.2	40.0	69.8	1.8	54.3	31.1	5.3
Provision (benefit) for income taxes	20.5	29.0	(42.0)	24.9	12.1	(52.1)	12.3	8.0
Interest expense, net	41.2	35.7	37.7	37.2	37.0	50.4	66.9	72.3
Depreciation and amortization	82.9	78.4	80.5	79.2	79.7	76.9	74.8	72.2
<b>EBITDA</b>	<b>207.3</b>	<b>199.3</b>	<b>116.2</b>	<b>211.1</b>	<b>130.6</b>	<b>129.5</b>	<b>185.1</b>	<b>157.8</b>
Joint venture depreciation, amortization and interest <sup>(a)</sup>	14.1	16.2	15.0	16.0	15.6	14.7	14.7	12.6
Amortization of investment in affiliate step-up <sup>(b)</sup>	6.4	6.4	6.5	6.4	6.5	6.6	7.5	6.6
Debt extinguishment costs	—	—	35.4	—	26.9	25.0	3.4	7.8
Net loss on asset disposals <sup>(c)</sup>	5.7	2.4	8.1	3.6	5.7	4.7	4.6	10.4
Foreign currency exchange (gain) loss <sup>(d)</sup>	(1.1)	2.0	0.1	1.4	4.7	(5.3)	1.2	13.9
LIFO expense (benefit) <sup>(e)</sup>	2.3	0.1	(2.5)	(0.2)	(1.9)	(5.3)	6.5	0.8
Transaction and other related costs <sup>(f)</sup>	2.9	7.3	1.3	7.0	2.0	1.1	0.2	0.5
Equity-based compensation	15.8	26.4	26.7	20.6	31.8	17.2	13.3	16.9
Restructuring, integration and business optimization expenses <sup>(g)</sup>	6.0	8.6	3.1	11.6	3.0	2.0	2.6	6.8
Gain on contract termination <sup>(h)</sup>	—	—	—	—	—	—	—	(20.6)
Other <sup>(i)</sup>	(0.1)	2.0	0.4	(0.7)	2.7	2.4	1.0	4.7
<b>Adjusted EBITDA*</b>	<b>259.3</b>	<b>270.7</b>	<b>210.3</b>	<b>276.8</b>	<b>227.6</b>	<b>192.6</b>	<b>240.1</b>	<b>218.2</b>

1. For additional information with respect to each adjustment, see appendix "Descriptions for reconciliations of Non-GAAP financial measures"  
 \* Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)





## Descriptions for reconciliation of Non-GAAP financial measures

- a. We use Adjusted EBITDA as a performance measure to evaluate our financial results. Because our Catalyst Technologies segment includes our 50% interest in the Zeolyst Joint Venture, we include an adjustment for our 50% proportionate share of depreciation, amortization and interest expense of the Zeolyst Joint Venture.
- b. Represents the amortization of the fair value adjustments associated with the equity affiliate investment in the Zeolyst Joint Venture as a result of the combination of the businesses of PQ Holdings Inc. and Eco Services Operations LLC in May 2016. We determined the fair value of the equity affiliate investment and the fair value step-up was then attributed to the underlying assets of the Zeolyst Joint Venture. Amortization is primarily related to the fair value adjustments associated with intangible assets, including customer relationships and technical know-how.
- c. When asset disposals occur, we remove the impact of net gain/loss of the disposed asset because such impact primarily reflects the non-cash write-off of long-lived assets no longer in use.
- d. Reflects the exclusion of the foreign currency transaction gains and losses in the statements of income related to the non-permanent intercompany debt denominated in local currency translated to U.S. dollars.
- e. Represents non-cash adjustments to the Company's LIFO reserves for certain inventories in the U.S. that are valued using the LIFO method, effectively reflecting the results as if these inventories were valued using the FIFO method, which we believe provides a means of comparison to other companies that may not use the same basis of accounting for inventories.
- f. Relates to certain transaction costs, including debt financing, due diligence and other costs related to transactions that are completed, pending or abandoned, that we believe are not representative of our ongoing business operations.
- g. Includes the impact of restructuring, integration and business optimization expenses, which are incremental costs that are not representative of our ongoing business operations.
- h. Represents a non-cash gain on the write-off of the remaining liability under a contractual supply arrangement. As part of Eco Services LLC's acquisition of substantially all of the assets of Solvay USA Inc.'s sulfuric acid refining services business unit on December 1, 2014, we recognized a liability as part of business combination accounting related to our obligation to serve a customer under a pre-existing unfavorable supply agreement. In December 2018, the customer who was party to the agreement closed its facility, and as a result, we were relieved from our obligation to continue to supply the customer on the below market contract. Because the fair value of the unfavorable contract liability was recognized as part of the application of business combination accounting, and since the write-off of the remaining liability was non-cash in nature, we believe this gain is a special item that is not representative of our ongoing business operations.
- i. Other consists of adjustments for items that are not core to our ongoing business operations. These adjustments include environmental remediation and other legal costs, expenses for capital and franchise taxes, and defined benefit pension and postretirement plan (benefits) costs, for which our obligations are under plans that are frozen. Also included in this amount are adjustments to eliminate the benefit realized in cost of goods sold of the allocation of a portion of the contract manufacturing payments under the five-year agreement with the buyer of the Performance Chemicals business to the financing obligation under the failed sale-leaseback. Included in this line-item are rounding discrepancies that may arise from rounding from dollars (in thousands) to dollars (in millions).





## Cash Conversion & Net Debt Leverage Ratio

### Cash Conversion

(\$ in millions, except %)	Year Ended December 31,				
	2022	2021	2020	2019	2018
Adjusted EBITDA	276.8	227.6	192.6	240.1	218.2
Less: Capex <sup>1</sup>	59.5	66.4	54.5	70.3	77.0
<b>Cash Conversion</b>	<b>217.5</b>	<b>161.2</b>	<b>138.1</b>	<b>169.9</b>	<b>141.3</b>
<b>Cash Conversion %<sup>2</sup></b>	<b>79%</b>	<b>71%</b>	<b>72%</b>	<b>71%</b>	<b>65%</b>
<b>Capital Intensity %<sup>3</sup></b>	<b>21.5%</b>	<b>29.2%</b>	<b>28.3%</b>	<b>29.3%</b>	<b>35.3%</b>

### Net Debt Leverage Ratio

(\$ in millions, except %)	Year Ended December 31,					TTM	
	2022	2021	2020	2019	2018	Q3 2022	Q3 2021
Total debt <sup>4</sup>	886.4	895.5	1,426.4	1,932.1	2,148.4	879.8	888.8
Less: Cash and cash equivalents <sup>4</sup>	110.9	140.9	137.2	73.9	59.8	38.3	121.4
<b>Net debt</b>	<b>775.5</b>	<b>754.6</b>	<b>1,289.2</b>	<b>1,858.2</b>	<b>2,088.6</b>	<b>841.5</b>	<b>767.4</b>
Adjusted EBITDA - Continuing Operations	276.8	227.6	192.6	240.1	218.2	259.3	270.7
Adjusted EBITDA - Discontinued Operations	—	—	142.4	231.0	243.4	—	—
<b>Net Debt Leverage Ratio</b>	<b>2.8x</b>	<b>3.3x</b>	<b>3.8x</b>	<b>3.9x</b>	<b>4.5x</b>	<b>3.2x</b>	<b>2.8x</b>

1. Capex for cash conversion includes 50% of spend for the Zeolyst Joint Venture

2. Cash Conversion % = (Adjusted EBITDA - Capex) / (Adjusted EBITDA)

3. Capital Intensity % = (Capex / Adjusted EBITDA)

4. 2018-2020 Net Debt and Cash & Cash Equivalents includes discontinued operations

## ROANTA



### ROANTA<sup>1</sup>

	Year Ended December 31,				
(\$ in millions, except %)	2022	2021	2020	2019	2018
Adjusted EBITDA	276.8	227.6	192.6	240.1	218.2
Less: Depreciation	74.7	74.6	73.4	69.5	66.7
EBITA	202.3	153.0	119.2	170.7	151.6
Tax Rate	25%	25%	25%	25%	25%
<b>Numerator</b>	<b>151.7</b>	<b>114.8</b>	<b>89.4</b>	<b>128.0</b>	<b>113.7</b>
Property, Plant & Equipment, Net	642.8	661.7	663.1	690.2	683.5
Working Capital					
Accounts Receivable	117.8	116.0	62.7	93.0	84.4
Inventory	113.5	112.1	101.9	114.8	84.2
Accounts Payable	55.3	67.3	51.3	51.0	48.8
Net Working Capital	176.0	160.8	113.3	156.8	119.8
<b>Denominator</b>	<b>820.7</b>	<b>799.5</b>	<b>811.7</b>	<b>825.2</b>	
<b>ROANTA</b>	<b>18.5%</b>	<b>14.4%</b>	<b>11.0%</b>	<b>15.5%</b>	

1. ROANTA is calculated on a two year average and amounts presented includes 50% share of the Zeolyst Joint Venture