



Fourth Quarter 2021

February 25, 2022—11 am ET

YOUR CATALYST FOR POSITIVE CHANGE™



Legal Discussion

Continuing Operations

Financial results for 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, strategies, capital allocation programs, product and service offerings, including the impact of COVID-19 pandemic on such items, expected end use demand trends, financial 2022 outlook, and 2025 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 the ongoing COVID-19 pandemic, tariffs, and trade disputes, currency exchange rates 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. 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, adjusted EBITDA margin, adjusted free cash flow, 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. 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.

Zeolyst Joint Venture

Zeolyst International and Zeolyst C.V. (our 50% owned joint ventures that we refer to collectively as the “Zeolyst Joint Venture”), are accounted for as an equity method investment in accordance with GAAP. The presentation of the Zeolyst Joint Venture’s sales in this presentation represents 50% of the sales of the Zeolyst Joint Venture. We do not record sales by the Zeolyst Joint Venture as revenue and such sales are not consolidated within our results of operations. However, our adjusted EBITDA reflects our share of the earnings of the Zeolyst Joint Venture that have been recorded as equity in net income from affiliated companies in our consolidated statements of income for such periods and includes Zeolyst Joint Venture adjustments on a proportionate basis based on our 50% ownership interest. Accordingly, our adjusted EBITDA margins are calculated including 50% of the sales of the Zeolyst Joint Venture for the relevant periods in the denominator.



Key Messages

- 1 Completed Successful Transformation
- 2 Launched Ambitious 2025 and 2030 Sustainability Targets
- 3 Achieved Industry-Leading Operational and Safety performance
- 4 Delivered a Strong Finish to the Year; Exceeded 2021 Financial Guidance
- 5 Expect Strong Momentum to Continue in 2022



Delivered Strong Operating and Financial Performance

2021 Key Highlights¹

19%

Sales Growth
vs. 2020²

18%

Adj. EBITDA Growth
vs. 2020²

31%

Adj. EBITDA
Margin²



73%

Cash
Conversion³

#1 or #2

Supply share position
in >90% of sales

0.11

Recordable
Safety Rate



1. See Appendix for Reconciliations of non-GAAP measures.

2. Sales change percentage, Adjusted EBITDA change percentage, and Adjusted EBITDA margin calculation includes proportionate 50% share of sales from Zeolyst Joint Venture

3. Cash Conversion = (Adjusted EBITDA – CapEx) / Adjusted EBITDA

Successful Transformation Complete: Pivoting to Growing + Greening



2019 – 2021

Successful Transformation

2022+

Growing + **Greening** ^{G²}



- Delayed organization
- Improved commercial and operational performance; reduced capital intensity
- Divested non-core assets
- Divested Performance Materials & Performance Chemicals
- Acquired niche catalyst activation business to create a platform for growth



Market Fundamentals and Drivers Support our Growth Ambition

- High single-digit top line growth plus additional inorganic growth opportunities
- High revenue visibility from customer collaborations, specified products, and long-term protected contracts
- Strong sustainable margins and cash flows
- Environmental sustainability and energy transition enabling catalysts, solutions and services
- Innovative and proprietary technologies and processes driving disruption in the catalyst business



An Attractive Growth Platform

Driving Customer Solutions in High-growth, Higher Margin Industry Segments

Increase Share in Attractive Growth Industries

- Growth above underlying industry growth in polyethylene
- Advantaged virgin acid asset footprint positioned to capture growth tied to electrification
- Leverage Chem32 acquisition for international growth and diversification

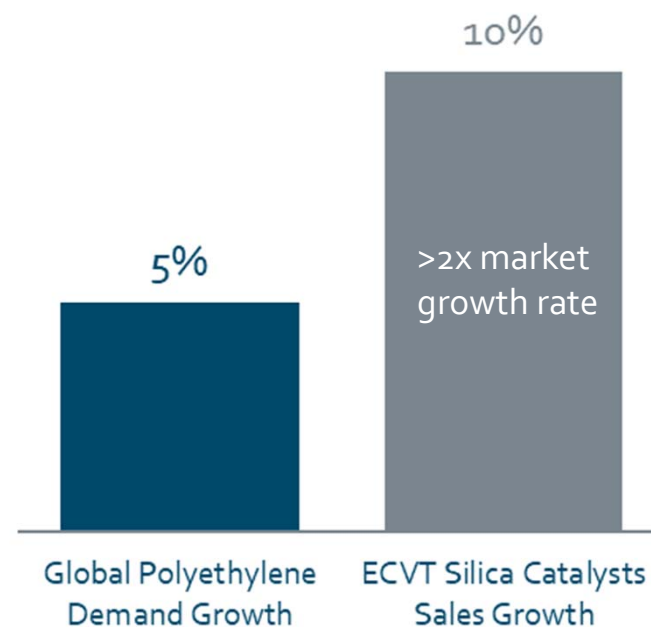
Sustainability-Driven Innovation

- Catalysts and services that support renewable fuel production
- Product improvements to meet new emission regulations
- Catalysts that position Ecovyst to be a leader in a circular economy, with a focus on plastics recycling and next generation bioplastics

Capital-Efficient Expansion and Inorganic Growth

- Catalyst capacity expansion, debottlenecking alkylation and treatment services capabilities
- Attractive bolt-on M&A strategy

Example: Above-Market Silica Catalysts Growth
2017 – 2021 CAGR





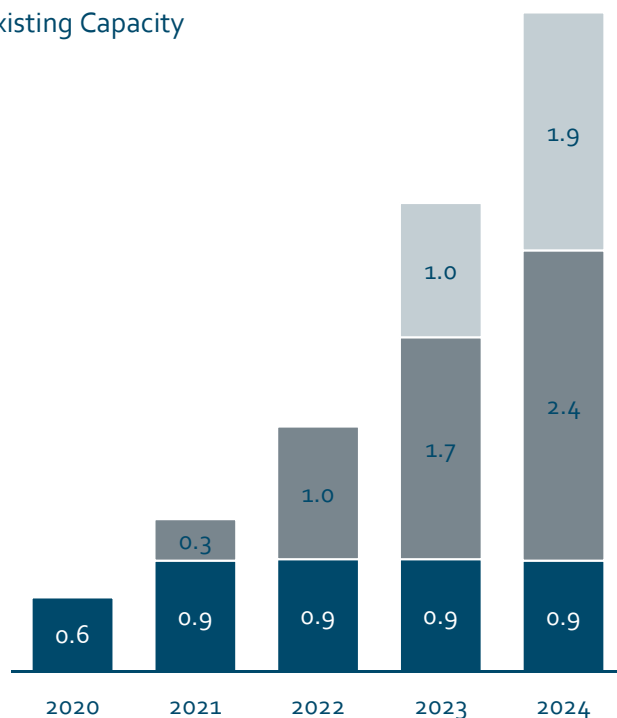
Enabling High-Growth, Sustainable Energy Solutions

Business Case: Snapshot of Renewable Fuels Opportunity

US Renewable Diesel Production

Billion gallons per year

- Proposed or Announced
- Currently Under Construction
- Existing Capacity



Source: US Energy Information Administration



Renewable Diesel is a Game Changer

- A low-carbon intensity transportation fuel produced from biomass, used cooking oil and inedible corn oil
- A drop-in replacement for traditional diesel
- Global low-carbon fuel policies are driving rapid demand growth

Our Technology is a Differentiator

- Novel materials; Intellectual property; Customization
- Our innovations drive yield and product quality benefits
- Joint development efforts for next generation catalyst materials

Driving Sales Growth and Profitability

- Initial product commercialized in 2019
- Renewable fuel sales nearly tripled in 2021 vs. 2020
- Strong outlook for renewable aviation fuel development and growth



Strong Margin and Cash Conversion Profile

Pricing power and contractual cost pass through enable stable, high margin performance

Serving High-Growth, High Margin Segments

- Catalyst Technologies is a high-growth, high margin catalyst business with leading, differentiated technologies
- Ecoservices is uniquely positioned with the strongest US refiners, and has the #1 position in merchant acid

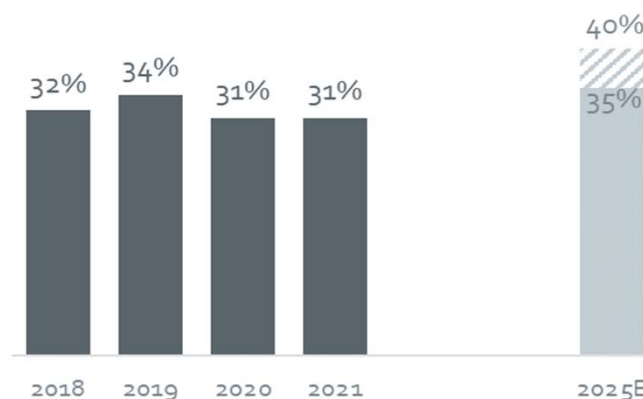
Unique Value Proposition

- Strong earnings visibility and predictability driven by long term contracts, customer collaborations, and portfolio of “specified-in” products
- Customer-driven innovation enables us to maintain attractive returns through pricing and new product launches

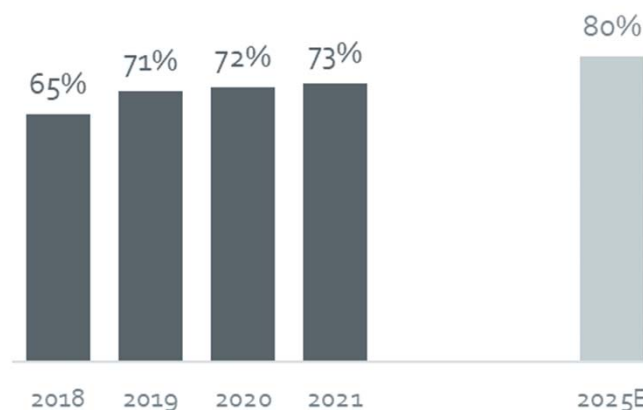
Focus on Execution Drives Strong Cash Conversion

- Efficiently allocated capital to debottleneck our production capacity
- Disciplined capital allocation framework

High, Stable Adjusted EBITDA Margins^{1,2}



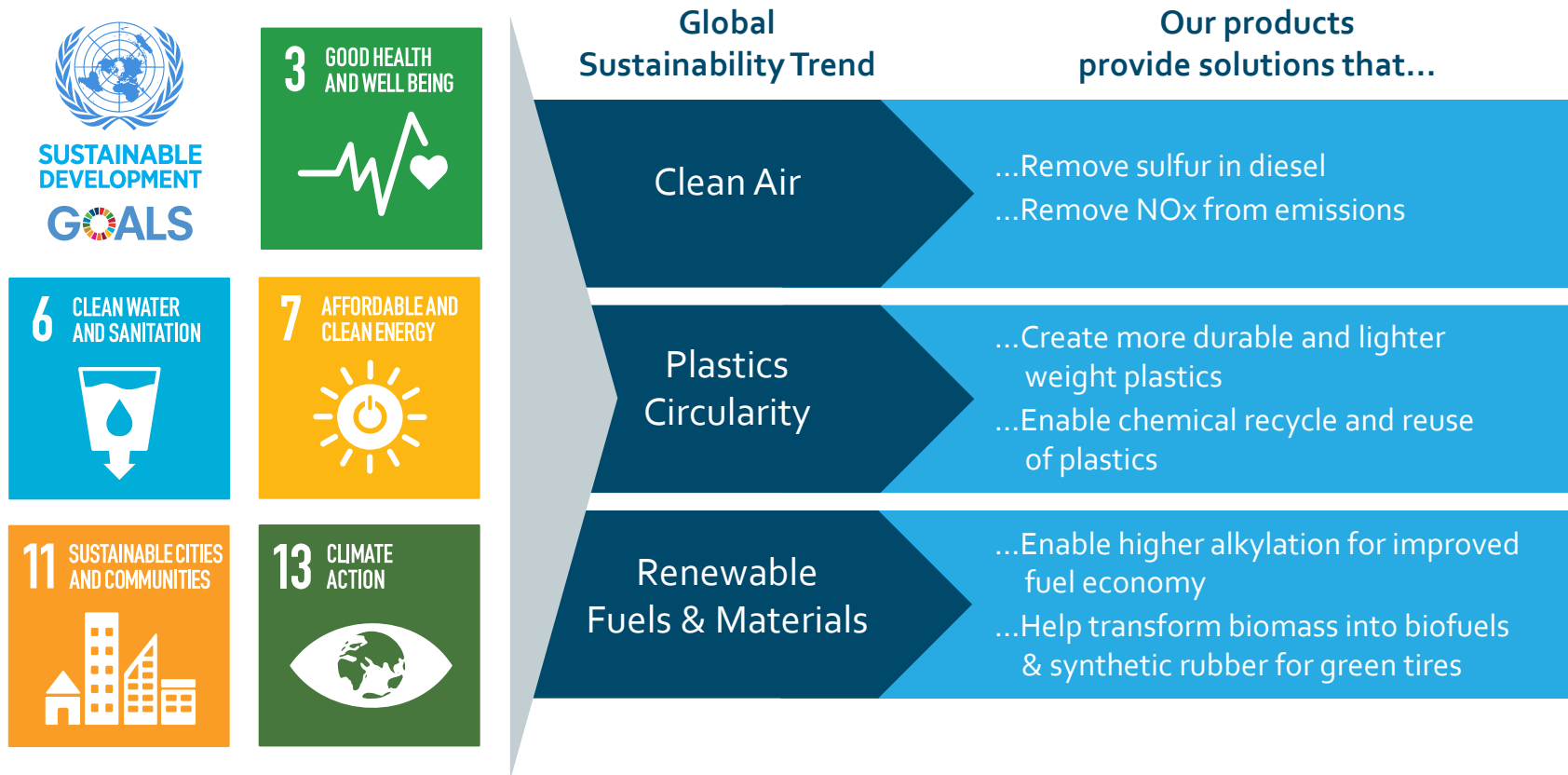
Growing Cash Conversion³



1. See Appendix for Reconciliations of non-GAAP measures.
2. Adjusted EBITDA margin calculation includes proportionate 50% share of sales from Zeolyst Joint Venture
3. Cash Conversion = (Adjusted EBITDA – CapEx) / Adjusted EBITDA

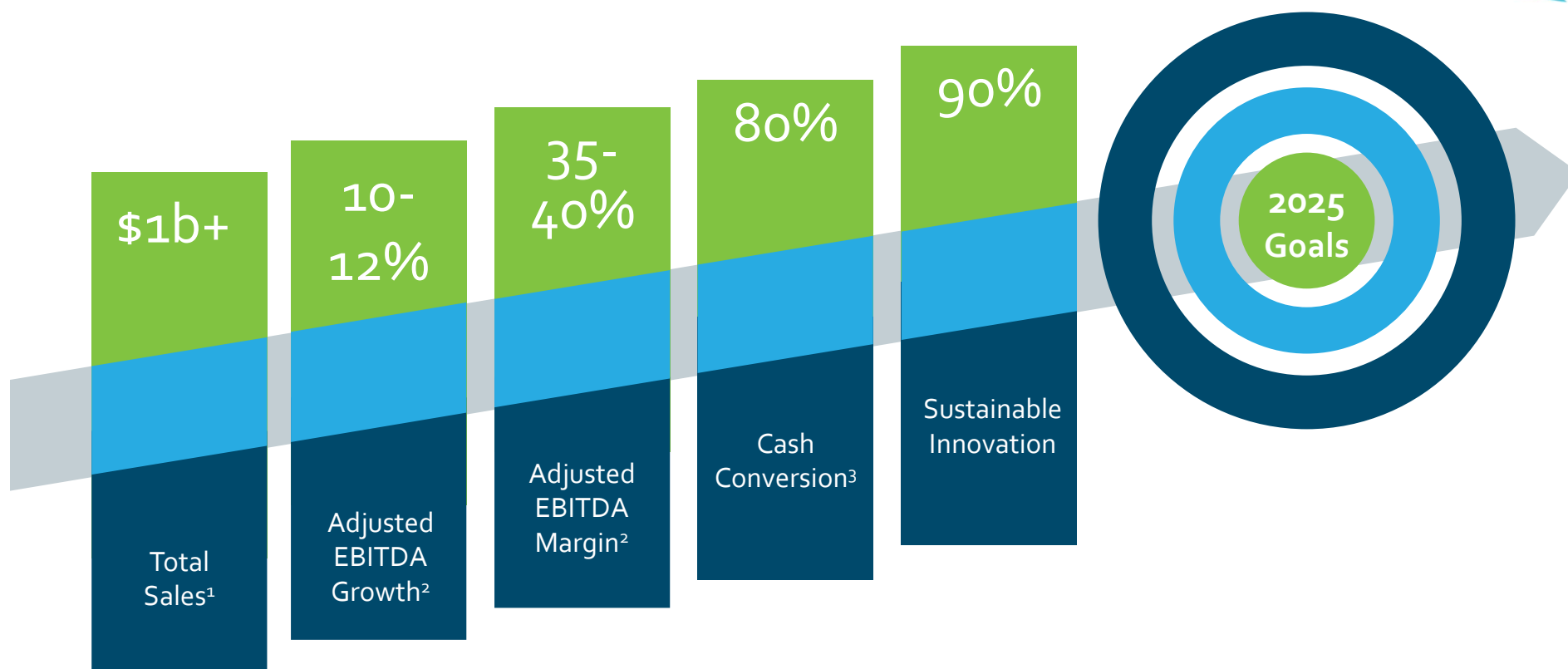


Driving Meaningful Sustainability Improvement





On Pace to Achieve Ambitious 2025 Goals



1. Total sales represents Ecovyst, 50% share of Zeolyst Joint Venture, and 10% projected inorganic growth
2. Adjusted EBITDA growth percentage, and Adjusted EBITDA margin calculation includes proportionate 50% share of sales from the Zeolyst Joint Venture
3. Cash Conversion = (Adjusted EBITDA – CapEx) / Adjusted EBITDA

Robust Demand Recovery



			END USE DEMAND RECOVERY		
	End Use	Key Products	2021 % Total Sales	Demand Trend	
				'21 vs '20	'22 vs '21
Ecoservices	CLEAN FUELS	Regen for Fuel Catalyst Recycling	~32%		Refinery Utilization >90% in 2022 – Vehicle Miles traveled to exceed 2019 levels
	INDUSTRIAL	Virgin Sulfuric Acid for Automotive, Electronics & Industrial	~28%		Automotive Rebound and Vehicle electrification driving high mining metals demand
	WT/CR	Waste Treatment & Catalyst Regeneration	~7%		Global Renewable Diesel share of total Diesel to increase from 2% in 2019 to 5% in 2022; renewable diesel capacities to grow 20% YoY
Catalyst Technologies	POLYMERS	Packaging and Engineered Plastics	~14%		PE Demand growth ~4% in 2022 driven by COVID-driven shift in consumer; global film/sheet demand to grow ~6% YoY
	CLEAN FUELS/AIR	Catalyst for Emissions Control and Fuel production	~15%		Increased conversion of refineries for renewable diesel and SAF leading demand CAGR to exceed more than 24% through 2025
	NICHE CUSTOM	Catalyst Niche applications i.e. MMA, AIX, Aromatics	~3%		Resumption of catalyst replacement and R&D activity expected to increase niche catalyst demand

Flat or low single digit increase

Mid/High Single digit increase

Double digit increase



Sources: EIA; Goldman Sachs; IHS; LMC, IMF, IEA, Global Data, BCC, EPA,



Fourth Quarter and Full-Year 2021 Financial Performance





Strong Financial Performance in 2021

Fourth Quarter Financial Results

(\$ in millions)	Fourth Quarter 2021	Fourth Quarter 2020	\$ Change	% Change
Ecovyst Sales	170.2	124.1	46.1	37.1
Zeolyst JV Sales	36.3	28.9	7.4	25.6
Adjusted EBITDA ¹	63.2	45.9	17.3	37.7
Adjusted EBITDA Margin ^{1,2} (%)	30.6	30.0		60 bps

(\$ in millions)	\$ Change	% Change
Sales Change Factors ³		
Volume	13.4	10.8
Price	15.2	12.3
Sulfur Pass Through	17.4	14.0
Currency	0.1	—

Full Year Financial Results

(\$ in millions)	Full Year 2021	Full Year 2020	\$ Change	% Change
Ecovyst Sales	611.2	495.9	115.3	23.3
Zeolyst JV Sales	131.3	128.6	2.7	2.1
Adjusted EBITDA ¹	227.6	192.6	35.0	18.2
Adjusted EBITDA Margin ^{1,2} (%)	30.7	30.8		(10 bps)

(\$ in millions)	\$ Change	% Change
Sales Change Factors ³		
Volume	43.2	8.7
Price	21.5	4.3
Sulfur Pass Through	49.0	9.9
Currency	1.6	0.3



1. See Appendix for Reconciliations of non-GAAP measures.
2. Adjusted EBITDA margin calculation includes proportionate 50% share of sales from Zeolyst Joint Venture
3. Sales Change Factors exclude the Zeolyst Joint Venture

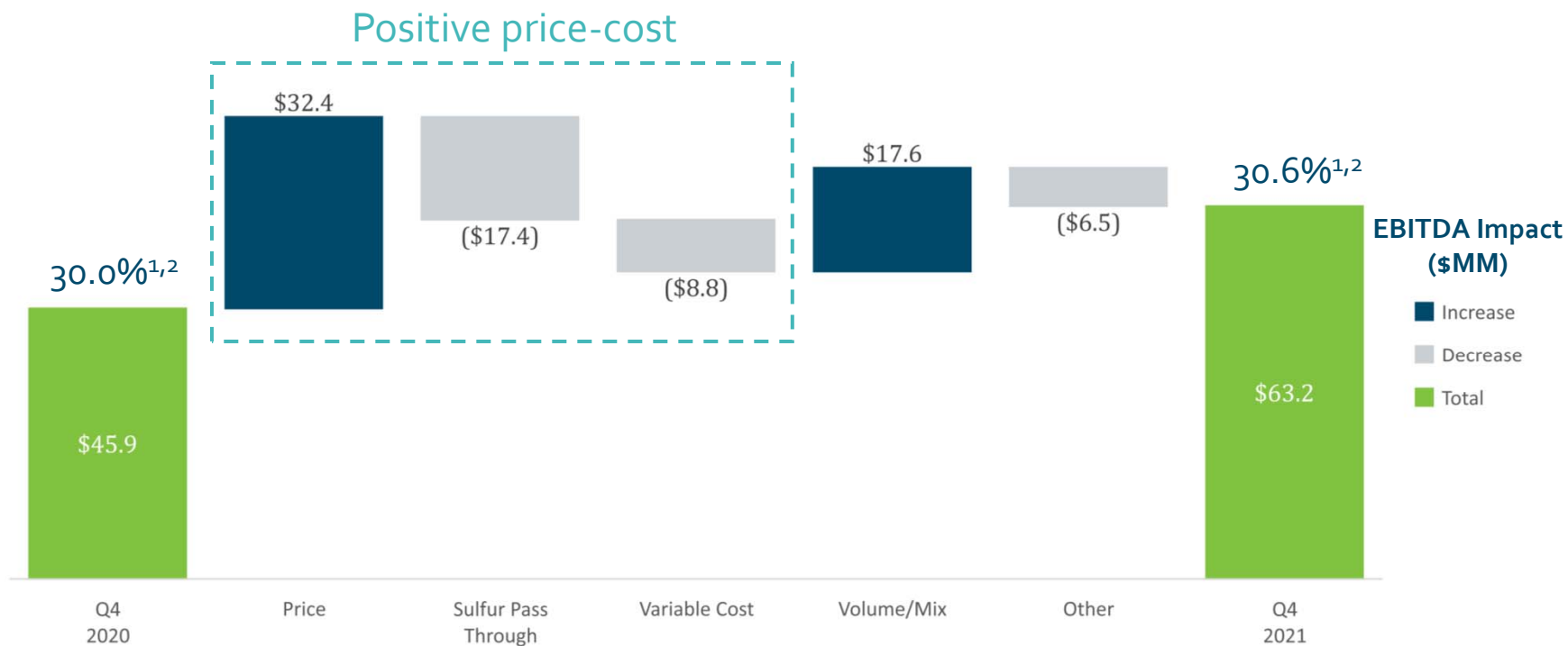


High and Growing Profitability

Adjusted EBITDA margins 60bps higher despite 280bps impact from sulfur pass through



High margin performance from proven pricing power and contractual cost pass through





Ecoservices

(\$ in millions)	Fourth Quarter 2021	Fourth Quarter 2020	\$ Change	% Change
Sales				
Ecoservices	142.0	103.2	38.8	37.6
Adjusted EBITDA ¹	52.3	40.7	11.6	28.5
Adjusted EBITDA Margin ¹ (%)	36.8	39.4		(270 bps)

(\$ in millions)	\$ Change	% Change
Sales Change Factors		
Volume	9.9	9.6
Price	11.4	11.1
Sulfur Pass Through	17.4	16.9

Ecoservices Highlights

- Increased demand for alkylate and the broad macroeconomic recovery drove significant growth in regeneration services volume with an increased use of virgin sulfuric acid in mining, nylon, and other industrial uses
- Favorable pricing was largely a result of the pass through of higher sulfur, labor and energy indexed costs.
- Segment profitability improved as a result of higher volume, favorable pricing, and the benefit of the Chem32 acquisition. The pass through of higher sulfur costs (\$17M) had a 570 bps impact on Adjusted EBITDA margins
- Expect improved EBITDA / per ton in 2022 from favorable pricing momentum in regeneration services and virgin sulfuric acid



Catalyst Technologies

(\$ in millions)	Fourth Quarter 2021	Fourth Quarter 2020	\$ Change	% Change
Silica Catalysts Sales	28.2	20.9	7.3	34.9
Zeolyst JV Sales	36.3	28.9	7.4	25.7
Adjusted EBITDA ¹	23.4	14.8	8.6	58.1
Adjusted EBITDA Margin ^{1,2} (%)	36.3	29.7		660 bps

(\$ in millions)	\$ Change	% Change
Sales Change Factors ³		
Volume	3.5	16.7
Price	3.8	17.9
Currency	0.1	0.3

Catalyst Technologies Highlights

- Strong sales growth driven by polyethylene demand and improved refinery utilization resulting in higher hydrocracking catalysts sales in Zeolyst JV
- Expanded Adjusted EBITDA margins 660 bps to 36% on volume growth and higher pricing. Targeted price increases and emphasis on cost management more than offset inflationary cost and logistics headwinds
- Confident in 2022 trajectory with an expectation to achieve continued growth in polyethylene and renewable fuel catalysts



1. See Appendix for Reconciliations of non-GAAP measures.
2. Adjusted EBITDA margin calculation includes proportionate 50% share of sales from Zeolyst Joint Venture
3. Sales Change Factors exclude the Zeolyst Joint Venture



2022 Financial Outlook

Ecovyst		
(\$ in millions, except per share)	2021 Actual	2022 Guidance
Sales ¹	\$611	\$730 – 750
Zeolyst JV Sales	\$131	\$150 – 160
Adjusted EBITDA ²	\$228	\$260 – 270
Adjusted Free Cash Flow ^{2,3}	\$93	\$115 – 125
Capital Expenditures	\$62	\$55 – 65
Depreciation & Amortization		
Ecovyst	\$80	\$80 – 90
Zeolyst JV	\$16	\$15 – 18

Sales Growth of ~20%
Adjusted EBITDA Growth of ~16%
Adjusted FCF Growth of ~30%
(2022 v. 2021 assuming midpoint of guidance)

- Key assumptions for 2022 outlook
 - Continued recovery in refinery utilization and robust demand for polyethylene
 - Resilient profitability – focused on offsetting inflationary elements with price and cost management
 - Forecasted sales in 2022 for the full year are expected to be higher by ~ \$60 million due the pass through of higher sulfur costs. This is expected to negatively impact our Adjusted EBITDA margins by over 200 basis points, but not negatively impact Adjusted EBITDA.



1. GAAP sales only; Excludes proportionate 50% share of Zeolyst Joint Venture sales
2. See Appendix for Reconciliations of non-GAAP measures
3. Includes proportionate shares of cash generation from discontinued operations for the period presented. 2021 actual includes Performance Chemicals through transaction close date of August, 1, 2021



Summary

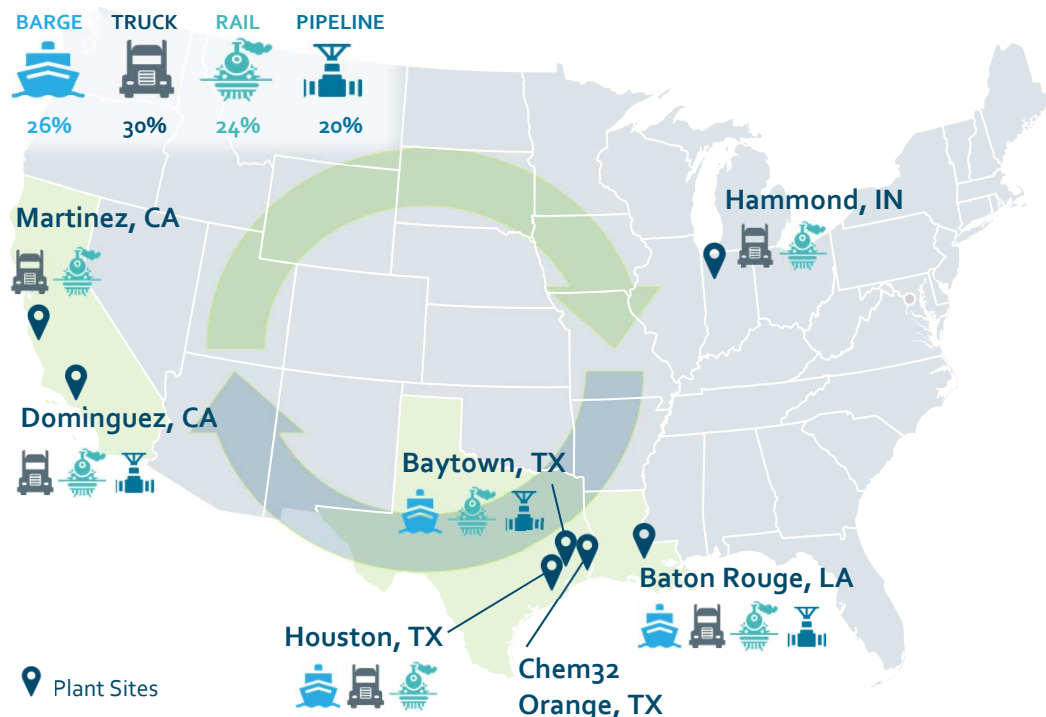
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|---|--|--|
| 1 | Strong Market Fundamentals Highlight Attractiveness of Portfolio | |
| 2 | Solid Execution Despite Challenging Environment | |
| 3 | Expect Momentum to Continue in 2022 | |
| 4 | Reaffirming Growing + Greening Strategy | |

APPENDIX

Ecoservices: North American Leader in Sulfuric Acid Recycling and Related Services with Key Competitive Position in Gulf Coast and California

NEAR-TERM GROWTH FACTORS

- New long-term large customer contract, existing customer re-contracting, and favorable alkylate fundamentals expected to drive mid-to-high single digit volume growth for regeneration services
- Rising virgin acid consumption for electrification and green infrastructure enabling materials mining
- Increasing demand for sustainable waste solutions from industrials benefitting Treatment Services
- Accelerating off site Catalyst Activation demand from renewable fuels producers and traditional refineries



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
- 100% of customer requirements
- Take-or-pay and capacity reservation fees



Catalyst Technologies: Global Leader in Tailored Catalyst Solutions

NEAR-TERM GROWTH FACTORS

- Preferred technology and increasing product offerings projected to drive high single digit growth in Clean Fuels & Air, Engineered Polymers, and Custom Catalyst
- New product launches planned in 2022 supporting the ongoing product development and collaboration with customers
- Disruptions caused by COVID-19 expected to be fully recovered across all business lines by 2H 2022



FLEXIBLE MANUFACTURING NETWORK

- Improved manufacturing network efficiencies following 2020/2021 disruption returning segment margins to high 30%s
- Continued debottlenecking production capacity for sold out product lines

FAVORABLE CUSTOMER POSITIONS

- Growing faster than market with existing polyethylene customers
- Strong growth in custom catalysts expected in 2022; diversified across multiple chemical processes
- Collaborating on multiple product development projects for new offerings in renewable fuels and materials and recycling of polymers



Quarterly Segment Sales, Adjusted EBITDA and Margins

(\$ in millions, except %)	Three Months Ended				Twelve Months Ended	Three Months Ended				Twelve Months Ended
	March 31, 2021	June 30, 2021	September 30, 2021	December 31, 2021	December 31, 2021	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020	December 31, 2020
Sales:										
Ecoservices	100.2	120.8	137.5	142.0	500.5	100.7	90.4	107.6	103.2	401.9
Silica Catalysts	26.4	26.2	29.9	28.2	110.7	24.9	25.2	23.1	20.9	94.0
Total sales	126.6	147.0	167.4	170.2	611.2	125.6	115.6	130.7	124.1	495.9
Zeolyst Joint Venture sales	29.0	33.2	32.8	36.3	131.3	32.3	40.9	26.6	28.9	128.6
Adjusted EBITDA:										
Ecoservices	33.0	40.5	51.9	52.3	177.7	37.2	35.0	44.3	40.7	157.2
Catalyst Technologies	18.5	20.7	25.5	23.4	88.0	22.7	25.3	11.8	14.8	74.5
Unallocated corporate expense	(9.2)	(8.5)	(8.0)	(12.5)	(38.1)	(11.3)	(10.3)	(8.0)	(9.6)	(39.1)
Total Adjusted EBITDA	42.3	52.7	69.4	63.2	227.6	48.6	50.0	48.1	45.9	192.6
Adjusted EBITDA Margin:										
Ecoservices	32.9%	33.5%	37.7%	36.8%	35.5%	36.9%	38.7%	41.2%	39.4%	39.1%
Catalyst Technologies ^{1,2}	33.4%	34.8%	40.7%	36.3%	36.4%	39.7%	38.3%	23.7%	29.7%	33.5%
Total Adjusted EBITDA Margin^{1,2}	27.2%	29.2%	34.7%	30.6%	30.7%	30.8%	32.0%	30.5%	30.0%	30.8%



Sales and Adjusted EBITDA Major Change Factors

Sales

Sales (in \$ millions and %)	Three Months Ended December 31, 2021						Twelve Months Ended December 31, 2021					
	Ecovyst		Ecoservices		Silica Catalysts		Ecovyst		Ecoservices		Silica Catalysts	
Sales:	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Volume	13.4	10.8	9.9	9.6	3.5	16.7	43.2	8.7	29.2	7.3	14.0	14.9
Price	32.7	26.3	28.9	28.0	3.8	17.9	70.5	14.3	69.4	17.2	1.1	1.2
Currency	0.1	—	—	—	0.1	0.3	1.6	0.3	—	—	1.6	1.7
Sales Change	46.1	37.1	38.8	37.6	7.3	34.9	115.3	23.3	98.6	24.5	16.7	17.8

Adjusted EBITDA

Adj. EBITDA (in \$ millions and %)	Three Months Ended December 31, 2021						Twelve Months Ended December 31, 2021					
	Ecovyst ²		Ecoservices		Catalyst Technologies		Ecovyst ²		Ecoservices		Catalyst Technologies	
Adj EBITDA:	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Volume/Mix	17.5	38.1	5.1	12.5	12.5	84.5	33.3	17.3	17.3	11.0	16.1	21.6
Price	32.4	70.6	28.9	71.0	3.6	24.3	69.1	35.9	69.4	44.1	(0.3)	(0.4)
Variable Cost	(26.1)	(56.9)	(16.8)	(41.3)	(9.4)	(63.5)	(55.4)	(28.8)	(48.1)	(30.6)	(7.9)	(10.6)
Currency	(0.1)	(0.2)	—	—	(0.1)	(0.7)	0.9	0.5	—	—	0.9	1.2
Other	(6.4)	(13.9)	(5.6)	(13.7)	2.0	13.5	(12.9)	(6.7)	(18.1)	(11.5)	4.7	6.3
Adj EBITDA Change	17.3	37.7	11.6	28.5	8.6	58.1	35.0	18.2	20.5	13.0	13.5	18.1



1. See Appendix for Reconciliations of non-GAAP measures.

2. Totals include corporate costs

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



Reconciliation of Net (Loss) Income to Segment Adjusted EBITDA

	Three Months Ended				Twelve Months Ended	Three Months Ended				Twelve Months Ended
(\$ in millions, except %)	March 31, 2021	June 30, 2021	September 30, 2021	December 31, 2021	December 31, 2021	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020	December 31, 2020
Reconciliation of net (loss) income from continuing operations to Segment Adjusted EBITDA										
Net (loss) income from continuing operations	(2.8)	(7.9)	4.7	7.8	1.8	(3.3)	34.3	(22.7)	46.0	54.3
(Benefit) provision for income taxes	(5.2)	7.7	2.6	7.0	12.1	(1.7)	(24.6)	21.3	(47.1)	(52.1)
Interest expense, net	10.5	8.7	9.0	8.8	37.0	15.3	15.1	10.4	9.5	50.4
Depreciation and amortization	19.5	20.0	20.6	19.6	79.7	18.7	18.8	19.2	20.4	76.9
EBITDA	22.0	28.5	36.9	43.2	130.6	29.0	43.6	28.2	28.8	129.5
Joint venture depreciation, amortization and interest(a)	3.6	3.7	4.1	4.2	15.6	3.7	3.7	3.6	3.6	14.7
Amortization of investment in affiliate step-up(b)	1.7	1.6	1.6	1.6	6.5	1.7	1.7	1.7	1.6	6.6
Debt extinguishment costs	—	11.7	15.2	—	26.9	2.5	—	14.0	8.5	25.0
Net loss on asset disposals(c)	0.8	1.6	2.2	1.2	5.7	0.2	0.4	0.6	3.5	4.7
Foreign currency exchange loss (gain)(d)	5.1	(1.2)	0.9	(0.1)	4.7	7.1	(3.4)	(4.3)	(4.7)	(5.3)
LIFO benefit(e)	(0.3)	(0.5)	(1.3)	0.1	(1.9)	(1.7)	(2.0)	(1.3)	(0.4)	(5.3)
Transaction and other related costs(f)	0.5	0.6	0.5	0.4	2.0	0.8	0.4	0.2	(0.3)	1.1
Equity-based compensation	6.3	6.3	10.2	9.0	31.8	4.3	4.6	4.4	3.9	17.2
Restructuring, integration and business optimization expenses(g)	2.3	0.1	0.1	0.6	3.0	0.3	0.8	0.3	0.6	2.0
Defined benefit plan pension benefit(i)	(0.6)	(0.6)	(1.0)	1.3	(0.9)	(0.1)	(0.2)	(0.2)	(0.1)	(0.6)
Other(j)	0.9	0.9	—	1.7	3.6	0.8	0.4	0.9	0.9	3.0
Adjusted EBITDA	42.3	52.7	69.4	63.2	227.6	48.6	50.0	48.1	45.9	192.6



Historical Reconciliation of Net (Loss) Income to Segment Adjusted EBITDA

(\$ in millions, except %)	Twelve Months Ended		
	December 31, 2018	December 31, 2019	December 31, 2020
Sales:			
Ecoservices	455.6	447.1	401.9
Silica Catalysts	72.1	85.7	94.0
Total sales	527.7	532.8	495.9
Zeolyst Joint Venture sales	156.7	170.3	128.6

Adjusted EBITDA:			
Ecoservices	176.5	175.6	157.2
Catalyst Technologies	81.1	107.8	74.5
Corporate	(39.4)	(43.3)	(39.1)
Total Adjusted EBITDA	218.2	240.1	192.6

Adjusted EBITDA Margin:			
Ecoservices	38.7%	39.3%	39.1%
Catalyst Technologies ^{1,2}	35.4%	42.1%	33.5%
Total Adjusted EBITDA Margin^{1,2}	31.9%	34.1%	30.8%

Capital Expenditures			
Ecovyst	57.4	54.0	46.2

(\$ in millions, except %)	Twelve Months Ended		
	December 31, 2018	December 31, 2019	December 31, 2020
Reconciliation of net (loss) income from continuing operations to Segment Adjusted EBITDA			
Net (loss) income from continuing operations	5.3	31.1	54.3
(Benefit) provision for income taxes	8.0	12.3	(52.1)
Interest expense, net	72.3	66.9	50.4
Depreciation and amortization	72.2	74.8	76.9
EBITDA	157.8	185.1	129.5
Joint venture depreciation, amortization and interest(a)	12.6	14.7	14.7
Amortization of investment in affiliate step-up(b)	6.6	7.5	6.6
Debt extinguishment costs	7.8	3.4	25.0
Net loss on asset disposals(c)	10.4	4.6	4.7
Foreign currency exchange loss (gain)(d)	13.9	1.2	(5.3)
LIFO benefit(e)	0.8	6.5	(5.3)
Transaction and other related costs(f)	0.5	0.2	1.1
Equity-based compensation	16.9	13.3	17.2
Restructuring, integration and business optimization expenses(g)	6.8	2.6	2.0
Gain on contract termination(h)	(20.6)	—	—
Defined benefit plan pension benefit(i)	(0.2)	0.6	(0.6)
Other(j)	5.0	0.4	3.0
Adjusted EBITDA	218.2	240.1	192.6



1. For additional information with respect to each adjustment, see "Reconciliation of Non-GAAP Financial Measures"

2. Other expense (income), net includes debt extinguishment costs

* 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 the 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 Ecovyst 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 fixed assets and 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 primarily 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, 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) Represents adjustments for defined benefit pension plan (benefit) costs in our statements of income. All of our defined benefit pension plan obligations are under defined benefit pension plans that are frozen. As such, we do not view such income or expenses as core to our ongoing business operations.
- j) Other costs consist of certain expenses that are not core to our ongoing business operations, including environmental remediation-related costs, capital and franchise taxes. Included in this line-item are rounding discrepancies that may arise from rounding from dollars (in thousands) to dollars (in millions).



Adjusted Free Cash Flow

(\$ in millions)	2021 ¹
Cash Flow from Operations before interest and tax	200.7
Less: Cash paid for taxes	11.8
Less: Cash paid for interest ²	59.0
Cash Flow from Operations	129.9
Less: Purchases of property, plant and equipment ³	91.0
Free Cash Flow	38.9
Plus: Proceeds from sale of assets	0.3
Plus: Net interest proceeds on currency swaps	2.3
Plus: Cash paid for costs related to segment disposals	46.0
Plus: Cash paid for debt financing costs included in cash from operating activities	5.7
Adjusted Free Cash Flow	93.2

1. Includes proportionate shares of cash generation from discontinued operations for the period presented. 2021 actual includes Performance Chemicals through transaction close date of August, 1, 2021
 2. Excludes net interest proceeds on swaps designated as net investment hedges
 3. Excludes the Company's proportionate 50% share of capital expenditures from the Zeolyst Joint Venture
- * Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)



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