

Legal Discussion

Continuing Operations

Financial results for fiscal 2018A-2020A are presented on a continuing operations basis, which excludes the Performance Materials business from all yearly results presented unless otherwise indicated. Financial information for 2017 has been presented to exclude the Performance Materials and Performance Chemicals business segment, but do not reflect pro forma financial information presented pursuant to Article 11 of Regulation S-X.

Pro Forma Financial Information

Effective on August 1, 2021, Ecovyst Inc. completed the sale of its Performance Chemicals business to Sparta Aggregator L.P., a partnership established by Koch Minerals & Trading, LLC and Cerberus Capital Management, L.P. (the "Purchaser"), pursuant to a Stock Purchase Agreement (the "Purchase Agreement"), dated February 28, 2021, as amended, between the Company and the Purchaser, for a purchase price of \$1.1 billion in cash, subject to certain adjustments specified in the Purchase Agreement, including for indebtedness, cash, working capital and transaction expenses of the Performance Chemicals business at the closing of the transaction (the "Transaction"). Upon the close of the Transaction and finalization of net cash proceeds, the Company was required to use portions of the proceeds to repay the Company's outstanding debt, which was estimated to result in a debt reduction of \$450 million to \$550 million (the "Estimated Required Debt Repayment"). Upon the close of the Transaction, the Company repaid approximately \$526.3 million of its outstanding debt.

The unaudited pro forma financial information for 2018-2020 was prepared in accordance with Article 11 of Regulation S-X and have been derived from the historical financial statements prepared in accordance with GAAP and are presented based on available information and certain assumptions that management believes are reasonable. Information derived from the unaudited pro forma financials reflect the effect of the Transaction as well as the Estimated Required Debt Repayment. Information derived from the unaudited pro forma condensed consolidated statements of income reflects the effect of the Transaction as if it had occurred on January 1, 2018, the beginning of the earliest period presented. Information derived from the unaudited pro forma condensed consolidated balance sheet reflects the Company's financial position as if the Transaction and the Estimated Required Debt Repayment had occurred on December 31, 2020.

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," "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, investment proposition, capital allocation programs, product and service offerings, including the impact of COVID-19 pandemic on such items, and expected end use demand trends. 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 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, 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.



Ecovyst At-A-Glance: A Leading Pure-Play Catalyst and Services Company

OUR COMPANY

by the numbers





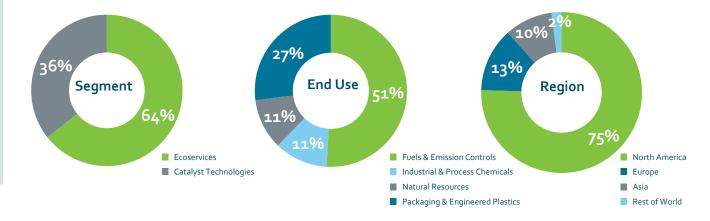


Sustainability Portfolio:

~75% of sales serves clean energy transition and circular plastics economy

- N.A. Sulfuric Acid Regeneration Services for Cleaner & Efficient Fuels
- Zeolite Catalysts for SOx Emission Reduction for Cleaner Fuels & Air
- Zeolite Catalysts for NOx Emission Controls for Cleaner Air
- Silica Catalysts for PE Lightweighting, Strengthening & Recycling

2020 Ecovyst Sales and Zeolyst JV Sales¹





Ecovyst Transformation Path and Value Creation

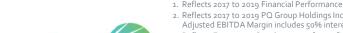
PORTFOLIO TRANSFORMATION ACTIONS

- Sold/exchanged 10 non-core assets and product line transactions, resulting in ~\$90 million
 - Completed Performance Materials sale for \$650 million
 - Completed Performance Chemicals sale for \$1.1 billion
 - Acquired strategic and accretive niche catalyst activation business for \$44 million

HIGHER GROWTH, MARGIN AND CASH CONVERSION¹







CASH CONVERSION⁴

71%

^{2.} Reflects 2017 to 2019 PQ Group Holdings Inc. financial performance. Sales CAGR, Segment Adjusted EBITDA CAGR, and Segment Adjusted EBITDA Margin includes 50% interest in Zeolyst JV.

^{3.} Reflects Ecovyst 2018 and 2019 pro forma financial performance. 2017 excludes Performance Materials and Performance Chemicals but does not reflect Article 11 pro forma adjustments. Sales CAGR, Segment Adjusted EBITDA CAGR, and Segment Adjusted EBITDA Margin includes 50% interest in Zeolyst JV.

^{4.} Cash Conversion = (Adjusted EBITDA - CapEx) / Adjusted EBITDA

Ecovyst is a High Growth Sustainability Focused Pure-Play Catalysts and Services Company



Our technologies support ecological health. We are well positioned and confident in Vying for and propelling customers' expansion and growth. We are a catalyst for positive change.

STRATEGY

- Focus on solutions and services for cleaner economy
- Targeting > 80% of innovation project pipeline and > 90% of R&D investment for customer sustainability transition
- Deliver leading organic growth and margins supplemented with strategic and/or accretive bolt-on inorganic acquisitions
- Allocate capital for business reinvestment and/or debt reduction

INVESTMENT PROPOSITION

- Competitively positioned specialty businesses, partnered with leading global customers
- Innovative proprietary technologies and processes driving disruption in the catalyst and services businesses
- High single digit top line, double digit Adjusted EBITDA 5-year CAGR with strong and sustainable margins in mid to high 30 percent level
- Strong cash flows and high revenue visibility from customer collaborations, specified products and long-term contracts



Ecoservices: Energy Transition, Green Infrastructure, and **Sustainability Trends Drive Increased Demand**



CLEAN FUELS

- Recovering gasoline demand with expected 2021 miles driven to exceed 2019; 2022 gasoline demand expected to surpass 2021 levels by ~3%
- Increasing gasoline exports, particularly to Mexico and Brazil
- Higher octane fuel blending to drive continued alkylate demand growth expected in 2021+

INDUSTRIAL SULFURIC ACID FOR AUTOMOTIVE & ELECTRONICS

- Rebounding global demand for industrial, mining, and agricultural applications
- Increasing mining for metals & minerals to support EV production and green infrastructure
- Increasing 2021 auto production (sales up 15% YOY) and strong consumer driven demand for construction materials

Alkylate Demand Growth (KMT)



4X more copper in EV than ICE (Kg)

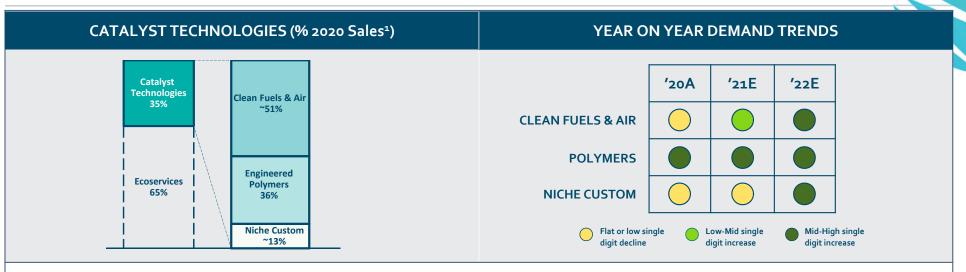


WASTE TREATMENT AND CATALYST ACTIVATION

- Stringent regulations and corporate initiatives driving need for sustainable waste treatment
- Double-digit renewable diesel capacity growth necessitating more catalyst pre-sulfiding
- Process technology leadership enables safe and efficient waste processing and catalysts activation solutions for customers



Catalyst Technologies: Proprietary Technology and Product **Customization Enables Growth Outpacing Market Trends**



CLEAN FUELS & AIR

- Strong growth in demand for renewable fuel catalysts (YoY YTD ~30% sales) combined with the recovery of hydrocracking and emission control catalysts provides a strong growth trajectory through 2022
- Demand for traditional hydrocracking catalysts recovery in 2H 2021 with 2022 expected to grow by double-digit %
- Emission control demand recovering in NA and Europe; expected double-digit HDD vehicle sales growth in 2021+

Global HCC Capacity (MB/d) ~5% CAGR 14.7 14.9 14.0 13.3 12.3 2020 2021E 2022E 2023E 2024E 2025E

PACKAGING AND ENGINEERED POLYMERS

- Polyethylene catalyst demand growth more than 2x polyethylene market growth of mid-single digit %
- Demand for film/sheet expected to grow ~6% YoY in 2022 as food and hygiene packaging products continue to play an important role in consumer well being post pandemic
- ~35% of sales driven by products introduced in the last 5 years, supporting continued above market growth



NICHE CUSTOM

- 2021 demand delays due to reduced catalyst development during the pandemic and lower production
- Expected recovery across multiple applications beginning in 2022 with continued double-digit percent growth



A Culture of Innovation and Customer Collaboration



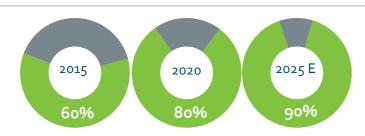
- Depth in product development and science competency
- Significant expertise in silica, zeolites, and catalyst technologies
- Expertise to tailor and scale specialty grades to meet changing demands
- Disciplined innovation process to reduce time to market
- Rich and relevant product development pipeline to drive new growth



Innovation Portfolio Focused on Sustainable Solutions and Services



Sustainability driven innovation investment ratio















Global Sustainability Trend

Our products provide solutions that...

Clean Air

...Remove sulfur in diesel ...Remove NOx from emissions

Plastics Circularity

...Create more durable and lighter weight plastics

...Enable chemical recycle and reuse of plastics

Renewable Fuels & Materials

...Enable higher alkylation for improved fuel economy ...Help transform biomass into biofuels & synthetic rubber for green tires



Sustainability Customer Portfolio: ~75% of end use sales solve customer needs and consumer demand for more sustainable products and services

CLEAN ENERGY TRANSITION: Evolving Fuels, Emission Reductions & Energy Storage

CIRCULAR PLASTICS ECONOMY: Lightweighting, Strengthening & Recycling

ECOSERVICES



Largest North American recycler of spent sulfuric acid, avoiding 1.5 million tons per year of landfill or deep well disposal



One of the largest consumers of refinery spent sulfur, converting for other uses



Converts by-product steam into 17MW/h of electricity used internally, with excess exported to grid



World class low SO₂ emissions

CATALYST TECHNOLOGIES



Removes sulfur from diesel fuel for land and marine transportation



Provides active component for > 90% reduction of NOx emissions from diesel engines



Provides technology to support chemical recycling of polyethylene



80% of 2020 R&D investment in product innovation linked to sustainability



Recyclability



Efficient Energy Usage



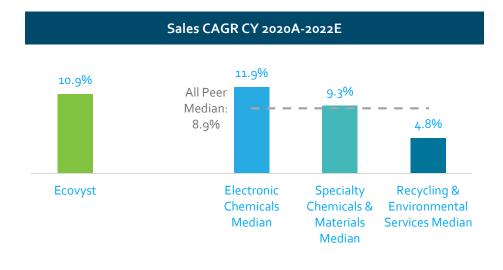
Emissions

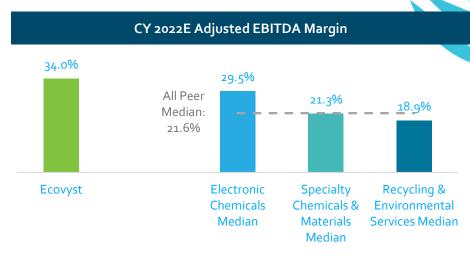


We partner with our customers in novel, chemistry-based technologies to address the increasing demand for high performing, sustainable products and services



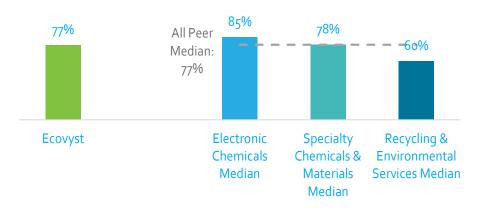
Ecovyst Leading in Financial Performance yet Undervalued versus Peer Comps

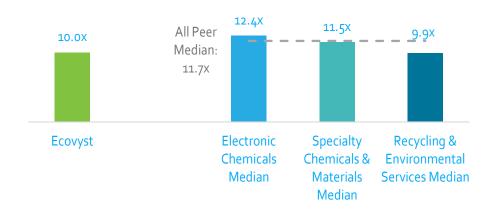




CY 2022E Cash Conversion¹

Enterprise Value / CY 2022E Adjusted EBITDA







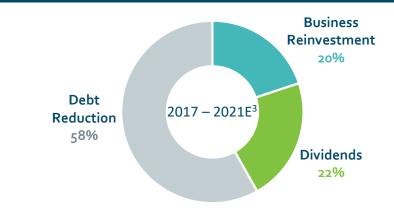
Source: Company filings for 2020A, otherwise information from Factset consensus and market data as of 9/9/2021. Comp Median excludes Ecovyst. Ecovyst reflects divestitures of Performance Chemicals and Performance Materials, and related debt reductions. Ecovyst consensus sales include Zeolyst JV. See appendix for individual companies within Specialty Chemicals & Materials, Electronic Chemicals, Recycling and Environmental Services

Cash Conversion defined as (EBITDA - Capex) / EBITDA. Although cash conversion is a standard financial measure, numerous methods exist for measuring a company's cash conversion. The method used by management to calculate its historical cash conversion and presented elsewhere in this presentation differs from the method used by Factset and illustrated on this slide.

Strong Adjusted Free Cash Flow and Balance Sheet Flexibility to Enable Opportunistic Capital Allocation Strategy

CAPITAL ALLOCATION

- Historical capital allocation from portfolio actions and cash flow¹
 - Reduced debt by ~\$1.8 billion
 - Returned cash to shareholders of \$5/ps² (~\$680 million)
 - Lowered cash interest costs by ~\$130 million
- Future adjusted free cash flow planned for debt reduction and/or bolt-on acquisitions



FINANCIAL FLEXIBILITY

- Refinanced term loan and amended and extended the ABL
 - Entered into a \$900 million term loan at L+275 (with a 50 bps floor)
 - Refinanced ABL to a \$100 million facility
 - No financial covenants required to maintain a leverage ratio below a particular level
 - No meaningful maturity until 2028
- Expect year-end 2021 leverage in the mid 3x range





- 2. Includes special cash dividend payments made in connection with the sale of the Performance Materials
- Uses of Adjusted Free Cash Flows and Net Sale Proceeds, since IPO September 2017 through estimated 2021; includes Chem32 acquisition and use of proceeds from sale of Performance Chemicals

Ecovyst: Leading in Sustainable High-Growth, High-Margin Segments



TARGET: 2025

- > \$ 1.0 B total Sales¹ with inorganic contribution
- High 30's Adjusted EBITDA margins
- Cash Conversion > 80%
- Growing share of transition driven products sales

SUSTAINABLE GROWTH / TRANSITION FOCUS

- 80% of innovation tied to sustainability
- Innovation in polymer recycling catalysts
- Development of novel renewable material catalysts
- Tailored proprietary customer solutions and services

NEAR TERM PROGRESS

- Regeneration demand nearly recovered and increasing
- Chem32 business integration ahead of plan
- Growing virgin sulfuric acid for uses in mining and waste treatment
- Above market growth in polyethylene
- Recovering hydrocracking catalyst demand 2H21+
- Increasing renewable fuels demand

Growing + GREENING



Target total sales represents Ecovyst, 50% share in Zeolyst Joint Venture and 10% projected inorganic growth

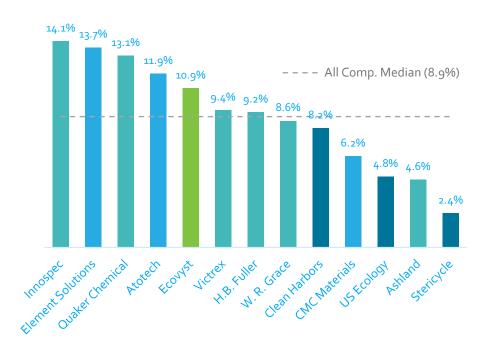


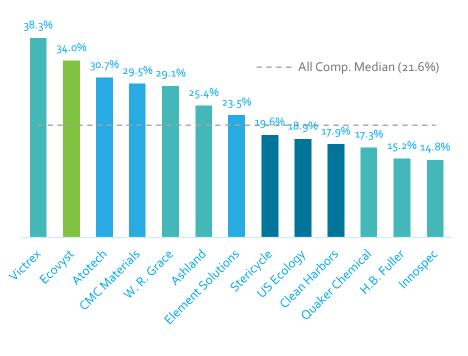


Ecovyst vs. Peer Comps Sales & Adjusted EBITDA Margin

Sales CAGR CY 2020A-2022E

CY 2022E Adjusted EBITDA Margin





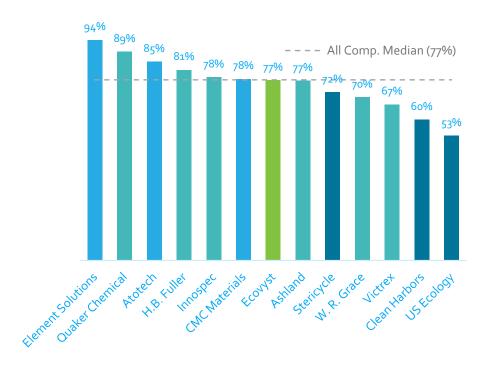


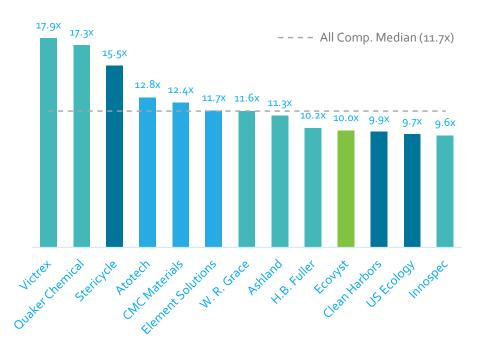


Ecovyst vs. Peer Comps Cash Conversion & EV/EBITDA Multiple

CY 2022E Cash Conversion¹

Enterprise Value / CY 2022E Adjusted EBITDA









Source: Company filings for 2020A, otherwise information from Factset consensus and market data as of 9/9/2021.

Note: Comp Median excludes Ecovyst. Ecovyst reflects divestitures of Performance Chemicals and Performance Materials, and related debt reductions. Ecovyst consensus sales include Zeolyst JV

Cash Conversion defined as (EBITDA – Capex) / EBITDA. Although cash conversion is a standard financial measure, numerous methods exist for measuring a company's cash conversion. The method used by management to calculate its historical cash conversion and presented elsewhere in this presentation differs from the method used by Factset and illustrated on this slide

Historical Financial Performance

	Year Ended				
(\$ in millions except %)	December 31,				
	2020	2019	2018	2017	
PQ Group Holdings Inc. Sales¹:					
Ecoservices (formerly Refining Services)	401.9	447.1	455.6	398.4	
Silica Catalysts	94.0	85.7	72.1	75.3	
Performance Materials	_	363.0	378.3	324.2	
Performance Chemicals	614.7	685.1	717.3	687.6	
Eliminations	(3.2)	(13.8)	(15.1)	(13.4)	
Total PQ Group Holdings Inc. sales	1,107.4	1,567.1	1,608.2	1,472.1	
Zeolyst joint venture sales	128.6	170.3	156.7	143.8	

Ecovyst Sales Pro Forma²:				
Ecoservices	401.9	447.1	455.6	398.4
Silica Catalysts	94.0	85.7	72.1	75.3
Total Ecovyst sales	495.9	532.8	527.7	473.7
Zeolyst joint venture sales	128.6	170.3	156.7	143.8

PQ Group Holdings Inc. Adjusted EBITDA¹:				
Ecoservices (formerly Refining Services)	157.2	175.6	176.5	154.2
Catalyst Technologies (formerly Catalysts)	74.5	107.8	81.1	89.4
Performance Materials	_	76.7	72.5	69.7
Performance Chemicals	142.4	154.3	170.9	170.5
Total PQ Group Holdings Inc. Segment Adjusted EBITDA	374.1	514.4	501.0	483.8
Corporate	(36.1)	(40.1)	(37.0)	(30.5)
Total PQ Group Holdings Inc. Adjusted EBITDA	338.0	474.3	464.0	453.3

157.2	175.6	176.5	154.2
74.5	107.8	81.1	89.4
231.7	283.4	257.6	243.6
(39.1)	(43.2)	(39.3)	(30.5)
192.6	240.3	218.3	213.1
	74.5 231.7 (39.1)	74.5 107.8 231.7 283.4 (39.1) (43.2)	74.5 107.8 81.1 231.7 283.4 257.6 (39.1) (43.2) (39.3)

Capital Expenditures				
PQ Group Holdings Inc.	\$87.1	\$124.8	\$132.9	\$141.1
Ecovyst	\$46.2	\$54.0	\$57.4	\$56.3

	Year Ended				
December 31,					
2020	2019	2018	2017		
PQ Group	Holding Inc. Ad	ljusted EBITDA	Margins ^{1,3}		
39.1%	39.3%	38.7%	38.7%		
33.5%	42.1%	35.4%	40.8%		
_	21.1%	19.2%	21.5%		
23.2%	22.5%	23.8%	24.8%		
33.8%	29.6%	28.4%	29.9%		
27.3%	27.3%	26.3%	28.1%		

Ecovyst Inc.	Adjusted EBITI	DA Margins – P	ro Forma ^{1,2,3}	
39.1%	39.3%	38.7%	38.7%	
33.5%	42.1%	35.4%	40.8%	
37.1%	40.3%	37.6%	39.5%	
30.8%	34.5%	32.2%	34.5%	



²⁰²⁰ Source: 2020 10-K. 2017 to 2019 Source: 2019 10-K, to provide historical financial performance prior to the impact of the discontinued operations. Pro forma financial information for 2018 to 2020 from Current Report on Form 8-K filed with the SEC on April 26, 2021. Financial information for 2017 excludes the Performance Materials and Performance Chemicals business segments, but do not reflect pro forma financial information presented

Adjusted EBITDA margin calculation includes proportionate 50% share of sales from Zeolyst Joint Venture

Reconciliation of Net income to Segment Adjusted EBITDA

	Continuing Operations ¹ Year Ended December		Legacy PQ ² Year Ended	
	31,		December 31,	
(\$ in millions)	2020 ³	2019 ⁴	2018 ⁴	2017 ⁴
Reconciliation of net income (loss) attributable to PQ Group Holdings Inc. to Segment Adjusted EBITDA				
Net (loss) income attributable to PQ Group Holdings Inc.	(176.3)	79-5	58.3	57.6
Provision for (benefit from) income taxes	(48.1)	40.7	29.0	(119.2)
Interest expense	67.0	111.5	113.7	179.0
Depreciation and amortization	151.8	182.1	185.2	177.1
EBITDA	(5.6)	413.8	386.2	294.5
Joint venture depreciation, amortization and interest ^a	14.7	14.7	12.6	11.1
Amortization of investment in affiliate step-up b	6.6	7.5	6.6	8.6
Amortization of inventory step-up ^c	_	_	1.6	0.9
Impairment of fixed assets, intangibles and goodwill	260.0	1.6	_	_
Debt extinguishment costs	25.0	3.4	7.8	61.9
Net (gain) loss on asset disposals ^d	(0.1)	(13.1)	6.6	5.8
Foreign currency exchange (gain) loss ^e	(4.2)	2.8	13.8	25.8
LIFO expense ^f	(5.2)	11.1	8.4	3.7
Management advisory fees ⁹	_	_	_	3.8
Transaction and other related costs ^h	8.6	3.6	0.9	7.4
Equity-based and other non-cash compensation	21.5	18.2	19.5	8.8
Restructuring, integration and business optimization expenses i	15.6	4.1	14.0	13.2
Defined benefit plan pension cost (benefit) ^j	_	3.1	(0.8)	2.9
Gain on contract termination ^k	_	_	(20.6)	_
Other ¹	1.1	3.5	7.4	4.9
Adjusted EBITDA	338.0	474-3	464.0	453-3
Unallocated corporate costs	36.1	40.1	37.0	30.5
Total Segment Adjusted EBITDA	374.1	514.4	501.0	483.8

- Continuing Operations includes Ecoservices (formerly Refining Services), Catalyst Technologies (formerly Catalysts) and Performance
- Legacy PQ includes Ecoservices (formerly Refining Services), Catalyst Technologies (formerly Catalysts), Performance Chemicals and
- Source: 2019 10-K, to provide historical financial performance prior to the impact of the discontinued operations
- For additional information with respect to each adjustment, see "Descriptions for historical reconciliation of Non-GAAP financial measures"



Pro Forma Reconciliation of Net income to Segment Adjusted EBITDA

	Pro	o Forma Ecovy	st¹
		Year Ended December 31,	
(\$ in millions)	2020	2019	2018
Reconciliation of net income (loss) attributable to Ecovyst Inc. to Pro Forma Segment Adjusted EBITDA			
Pro Forma net (loss) income attributable to Ecovyst Inc.	55-4	32.9	3.7
Provision for (benefit from) income taxes	(64.0)	9.3	8.6
Interest expense, net	52.7	68.5	73.2
Depreciation and amortization	76.9	74.8	72.2
Pro Forma EBITDA	121.0	185.5	157.7
Joint venture depreciation, amortization and interest ^a	14.7	14.7	12.6
Amortization of investment in affiliate step-up b	6.6	7.5	6.6
Debt extinguishment costs	32.9	3.4	7.8
Net (gain) loss on asset disposals ^d	4.7	4.6	10.3
Foreign currency exchange (gain) loss ^e	(5.3)	1.3	14.0
LIFO expense ^f	(4.0)	7.3	0.8
Transaction and other related costs h	1.1	0.2	0.5
Equity-based and other non-cash compensation	17.2	13.3	16.9
Restructuring, integration and business optimization expenses i	2.0	2.6	6.8
Defined benefit plan pension cost (benefit) j	(o.6)	0.6	(0.2)
Gain on contract termination ^k	-	-	(20.6)
Other ^I	2.2	(0.6)	5.1
Pro Forma Adjusted EBITDA	192.6	240.3	218.3
Unallocated corporate costs	39.1	43.2	39.3
Pro Forma Total Segment Adjusted EBITDA	231.7	283.4	257.6

For additional information with respect to each adjustment, see "Descriptions for historical reconciliation of Non-GAAP financial measures"



Pro forma financial information for 2018 to 2020 from Current Report on Form 8-K filed with the SEC on April 26, 2021

Descriptions for historical reconciliation of Non-GAAP financial measures

- We use Adjusted EBITDA as a performance measure to evaluate our financial results. Because our Catalysts 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.
- 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 ("Eco") in May 2016 (the "Business Combination"). 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.
- As a result of the Sovitec acquisition and the Business Combination, there was a step up in the fair value of inventory, which is amortized through cost of goods sold in the statement of income
- 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. During the year ended December 31, 2019, the net gain on asset disposals includes the gains related to the sale of a non-core product line and sale of property.
- 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.
- 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.
- Reflects consulting fees paid to CCMP and affiliates of INEOS for consulting services that include certain financial advisory and management services. These consulting agreements were terminated upon completion of our IPO on October 3, 2017.
- Represents the costs related to several transactions that are completed, pending or abandoned and that we believe are not representative of our ongoing business operations.
- Includes the impact of restructuring, integration and business optimization expenses which are incremental costs that are not representative of our ongoing business operations.
- Represents adjustments for defined benefit pension plan costs in our statement of income. More than two-thirds of our defined benefit pension plan obligations are under defined benefit pension plans that are frozen, and the remaining obligations primarily relate to plans operated in certain of our non-U.S. locations that, pursuant to jurisdictional requirements, cannot be frozen. As such, we do not view such expenses as core to our ongoing business operations.
- Represents a non-cash gain on the write-off of the remaining liability under a contractual supply arrangement. As part of the acquisition by Eco Services Operations LLC of substantially all of the assets of Solvay USA Inc.'s sulfuric acid refining 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.
- Other costs consist of certain expenses that are not core to our ongoing business operations, including environmental remediation-related costs associated with the legacy operations of our business prior to the Business Combination, capital and franchise taxes, and non-cash asset retirement obligation accretion. Included in this line-item are rounding discrepancies that may arise from rounding from dollars (in thousands) to dollars (in millions).



