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

FORM 8-K

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

Date of Report (Date of earliest event reported): February 25, 2022

ECOVYST INC.

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)

(610) 651-4400
(Registrant's telephone number, including area code)

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:

Title of each class	Trading symbol	Name of each exchange on which registered
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.

Item 2.02 Results of Operations and Financial Condition.

On February 25, 2022, Ecovyst Inc. issued a press release announcing the reporting of its financial results for the quarter and year ended December 31, 2021. A copy of the press release is furnished with this Current Report on Form 8-K as Exhibit 99.1 and is incorporated herein by reference.

The information in this Current Report on Form 8-K (including the exhibit 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 exhibit 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

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press release issued by Ecovyst Inc. announcing financial results for the quarter and year ended December 31, 2021
104	The cover page from this Current Report on Form 8-K of Ecovyst Inc., formatted in Inline XBRL and included as Exhibit 101

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: February 25, 2022

Ecovyst Inc.

By: /s/ MICHAEL FEEHAN
Name: Michael Feehan
Title: Vice President and Chief Financial
Officer

Ecovyst Reports Strong Fourth Quarter and Full Year 2021 Results as Growth Momentum Boosted Profitability
Expect 16% Adjusted EBITDA Growth in 2022 at Guidance Mid-Point

Full Year 2021 Results & Highlights

- Sales of \$611.2 million, up 23% year-over-year;
- Net income of \$1.8 million with diluted income per share of \$0.01. Adjusted net income of \$69.6 million with Adjusted diluted income per share of \$0.51;
- Adjusted EBITDA of \$227.6 million, up 18% year-over-year;
- Net cash from operations of \$129.9 million, Adjusted Free Cash Flow of \$93.2 million, and reduced net debt leverage ratio to 3.3x at year-end;
- Successful Transformation Complete – Launched Ecovyst as a High Growth, Pure-Play Catalysts and Services Company;
- Sales growth in catalyst used for renewable fuels nearly tripled from the prior year;

Fourth Quarter 2021 Results & Highlights

- Sales of \$170.2 million, up 37% year-over-year;
- Net income of \$7.8 million with diluted income per share of \$0.06. Adjusted net income of \$22.9 million with Adjusted diluted income per share of \$0.17;
- Adjusted EBITDA of \$63.2 million, up 38% year-over-year;
- Adjusted EBITDA margins of 30.6%, up 60 bps year-over-year (inclusive of 280 bps negative impact from sulfur cost pass through) as price more than offset higher costs, demonstrating resilient profitability;

2022 Financial Outlook

- Sales of \$730 million to \$750 million¹, up 21% from 2021 at the mid-point of the range;
- Sales of \$150 million to \$160 million for proportionate 50% share of Zeolyst Joint Venture, which is excluded from GAAP Sales;
- Adjusted EBITDA of \$260 million to \$270 million, up 16% from 2021 at the mid-point of the range;
- Adjusted Free Cash Flow of \$115 million to \$125 million;

¹Sales outlook for 2022 includes approximately \$60 million of higher sales related to the pass through of higher sulfur costs, which negatively impact Adjusted EBITDA margin by over 200 basis points, but do not negatively impact Adjusted EBITDA.

Ecovyst results reflect continuing operations for the Ecoservices and Catalyst Technologies businesses, renamed from Refining Services and Catalysts, respectively. Financial results are on a continuing operations basis, which excludes the Performance Materials and Performance Chemicals businesses from all quarterly and yearly results presented, unless otherwise indicated.

Financial results and outlook include non-GAAP financial measures. These non-GAAP measures are more fully described and are reconciled from the respective measures determined under GAAP in “Presentation of Non-GAAP Financial Measures” and the attached appendix.

MALVERN, PA, February 25, 2022 -- Ecovyst Inc. (NYSE:ECVT) (“Ecovyst” or the “Company”) today reported results for the fourth quarter and year ended December 31, 2021.

For the fourth quarter, sales of \$170.2 million increased 37%, primarily by higher pricing to cover increased costs (inclusive of 14% from sulfur cost pass through) and stronger volumes, reflecting higher polyethylene catalyst and virgin acid demand as well as a broad-based rebound in demand across most other product categories. Net income was \$7.8 million, a decrease of 83%, or \$38 million, with \$0.06 diluted income per share and Adjusted net income was \$22.9 million with Adjusted diluted income per share of \$0.17. Adjusted EBITDA totaled \$63.2 million, an increase of 38%, or \$17.3 million, driven by increased volumes, along with favorable earnings from the Zeolyst JV on higher demand for hydrocracking catalyst, and favorable product mix. Higher variable costs from inflationary items such as sulfur, natural gas, and logistics were offset by quarterly price adjustments with contracted customers. Adjusted EBITDA margins of 30.6% increased 60 bps versus the prior year

period as stronger volume and price more than offset higher variable costs and the margin impact from the pass through of higher sulfur costs.

For the year, sales of \$611.2 million increased 23%, a result of strong demand for polyethylene catalyst and higher regeneration services volume along with higher pricing (inclusive of 10% from sulfur cost pass through). The global macroeconomic recovery supported demand growth across both businesses. Net income was \$1.8 million, a decrease of 97%, or \$53 million, with \$0.01 diluted income per share. Adjusted net income was \$69.6 million with Adjusted diluted income per share of \$0.51. Adjusted EBITDA totaled \$227.6 million, an increase of 18% year-over-year, or \$35.0 million, driven by stronger volumes across the portfolio and favorable product mix. These factors more than offset headwinds from higher variable cost and elevated fixed costs driven by Winter Storm Uri in early 2021. Adjusted EBITDA margins of 30.7% are inclusive of 220 bps margin headwind from the pass through of higher sulfur costs.

“2021 was a highly successful and transformational year as the Ecovyst team achieved remarkable financial performance and delivered on our strategic vision to create a **Simpler + Stronger** enterprise” said Belgacem Chariag, Ecovyst Chairman, President and Chief Executive Officer. “We are dedicated to the growth and success of our customers through operational excellence, customer centricity, and our innovation engine focused on sustainable solutions, which together enabled significant growth in 2021. Momentum built through the year and boosted profitability to pre-pandemic levels. Adjusted EBITDA in the second-half grew 40% compared to the first half, representative of the earnings potential of this high-quality portfolio, and demonstrating our resilience to inflating raw material and logistic costs. We enter 2022 with a compelling strategy, supportive secular trends, and confidence in our ability to achieve another year of strong earnings growth and cash generation.”

Review of Segment Results and Business Trends

The macroeconomic recovery gained momentum throughout 2021 and drove improved demand across most product categories, end-uses, and customers. Sequential quarterly sales continued to improve resulting in a strong second half of 2021. Inflationary factors increased through the year, namely from higher sulfur and energy costs, but customer contractual pass through mechanisms preserved earnings in Ecoservices, while targeted price increases addressed cost pressures in Catalyst Technologies.

Ecoservices

Our regeneration services support the production of alkylate, a high value gasoline component critical for meeting stringent gasoline standards and for producing premium grade gasoline. Tightening gasoline standards and growing demand for premium grade gasoline to power fuel efficient engines is supporting high alkylation utilization rates. Increased mining for metals and minerals to support low carbon technologies as well as strong demand for construction related materials is benefiting virgin sulfuric acid. Sustainability trends continue to favor the treatment services business because customers are seeking more sustainable waste solutions as offered by Ecoservices.

For the quarter ended December 31, 2021, sales of \$142.0 million increased 38%. Sales increased on higher volumes of virgin sulfuric acid, favorable virgin sulfuric acid pricing, including pass-through of higher sulfur costs of approximately \$17 million, as well as pass-through of higher labor and energy indexed costs in regeneration services. Adjusted EBITDA of \$52.3 million increased 29% as a result of higher volume, favorable pricing and the benefit of the Chem32 acquisition that closed in March 2021.

For the year, sales of \$500.5 million increased 25%. With the onset of the global pandemic, demand for regeneration services was impacted by lower refinery utilization rates as fewer miles driven resulted in high gasoline inventories. Demand for regeneration services increased in 2021 as the recovery from the global pandemic resulted in higher demand for alkylate used to produce premium grade gasoline. Virgin sulfuric acid volumes improved slightly as the pandemic impact on industrial and automotive applications early in the year gave way to a recovery in the second half of the year. Adjusted EBITDA of \$177.7 million increased 13.0% due to higher overall volumes, favorable pricing, improved cost efficiencies, and the benefit of the Chem32 acquisition.

Catalyst Technologies

Polyethylene demand remained resilient, driven by the growing consumer demand for films and packaging. Higher refinery utilization rates are expected to continue to increase catalyst demand for both traditional and renewable fuels as overall energy demand was strong during the beginning of 2022. Our catalyst sales into renewable diesel nearly tripled from the prior year. Emission control catalyst demand is expected to improve throughout 2022 as production of heavy duty diesel vehicles is anticipated to increase to satisfy pent up demand.

For the quarter ended December 31, 2021, Silica Catalysts sales of \$28.2 million increased 35%. Polyethylene catalyst sales were strong in the fourth quarter with sales up over 20% driven by higher demand and share gains. Pricing was a favorable contributor as actions taken to offset inflationary pressure were realized in the quarter. Zeolyst JV sales of \$36.3 million increased 26% driven largely by strong hydrocracking sales following improvements in refinery utilization. Catalyst Technologies Adjusted EBITDA of \$23.4 million increased 58% driven primarily by volume growth and favorable mix.

For the year, Silica Catalysts sales of \$110.7 million increased 18%, benefiting from higher sales volumes for polyethylene catalysts. Zeolyst JV sales of \$131.3 million increased slightly on improved volumes. Strong demand for catalyst used in renewable fuels and emission control were partially offset by lower specialty and hydrocracking catalyst on timing of customer fixed bed change-outs. Adjusted EBITDA of \$88.0 million increased 18% driven by the higher volumes and favorable mix.

Executing on our ESG Ambitions

We are focused on implementing and accelerating sustainability initiatives. We tailor our products for the specific needs of our customers and support them in addressing their technical and operational challenges. Through close collaboration with our global customers, we have been long standing suppliers of sustainability products and services, helping to address tightening global regulatory standards and changing consumer preferences.

For example, we continue to develop products that improve air quality through lower sulfur and NOx emissions in fuels. We are focused on the development of catalysts that help make plastics stronger and lighter enabling the recycling of mixed plastics to complete the plastics circularity curve. We also help enable higher alkylation for improved fuel economy and transform biomass into biofuels and synthetic rubber for green tires.

We also set clear and aggressive targets to address our own footprint related to GHG emissions, waste management, and product sustainability. With greater focus and resources, Ecovyst has expanded and accelerated the commercialization of its portfolio of sustainable products and solutions. Our innovation investment ratio, defined as the weighted average sustainability impact our projects will have on the environment, on new sustainable products is 85% in 2021, and we anticipate further advancement in the future. Fundamental to our future is the fact that approximately 75% of our end use sales for the year ended December 31, 2021 served consumer demand for more sustainable products and services.

Cash Flows and Balance Sheet

For the year ended December 31, 2021, consolidated cash flows from operating activities decreased \$93.7 million to \$129.9 million, compared to \$223.6 million for the same period in 2020.

At December 31, 2021, the Company had cash and cash equivalents of \$140.9 million and total debt outstanding of \$895.5 million. The net debt to Adjusted EBITDA ratio was 3.3x as of December 31, 2021.

Conference Call and Webcast Details

On Friday, February 25, 2022, Ecovyst management will release its fourth quarter and full year 2021 results from continuing operations during a conference call and audio-only webcast scheduled for 11:00 a.m. Eastern Time.

Investors may listen to the conference call live via telephone by dialing 1 (866) 342-8591 (domestic) or 1 (203) 518-9713 (international) and using the participant code ECVTQ421.

An audio-only live webcast of the conference call and presentation materials can be accessed at <https://investor.ecovyst.com>. A replay of the conference call/webcast will be made available at <https://investor.ecovyst.com/events-presentations>.

Investor Contact:

Christopher M. Evans
(484) 617-1225
Chris.Evans@ecovyst.com

General Investor Inquiries:

InvestorRelations@ecovyst.com

About Ecovyst Inc.

Ecovyst Inc. and subsidiaries is a leading integrated and innovative global provider of specialty catalysts and services. We support customers globally through our strategically located network of manufacturing facilities. We believe that our products, which are predominantly inorganic, and services contribute to improving the sustainability of the environment.

We have two uniquely positioned specialty businesses: *Ecoseervices* provides sulfuric acid recycling to the North American refining industry for the production of alkylate and provides on-purpose virgin sulfuric acid for water treatment, mining, and industrial applications; and *Catalyst Technologies* provides finished silica catalysts and catalyst supports necessary to produce high strength and high stiffness plastics and, through its Zeolyst joint venture, supplies zeolites used for catalysts that remove nitric oxide from diesel engine emissions as well as sulfur from fuels during the refining process. For more information, see our website at <https://www.ecovyst.com>.

Presentation of Non-GAAP Financial Measures

In addition to the results provided in accordance with U.S. generally accepted accounting principles ("GAAP") throughout this press release, the Company has provided non-GAAP financial measures — Adjusted EBITDA, Adjusted EBITDA margin, Adjusted free cash flow, Adjusted net income, Adjusted EPS, Adjusted diluted EPS, and net debt (collectively, "Non-GAAP Financial Measures") — which present results on a basis adjusted for certain items. The Company uses these Non-GAAP Financial Measures for business planning purposes and in measuring its performance relative to that of its competitors. The Company believes that these Non-GAAP Financial Measures are useful financial metrics to assess its operating performance from period-to-period by excluding certain items that the Company believes are not representative of its core business. These Non-GAAP Financial Measures are not intended to replace, and should not be considered superior to, the presentation of the Company's financial results in accordance with GAAP. The use of the Non-GAAP Financial Measures terms may differ from similar measures reported by other companies and may not be comparable to other similarly titled measures. These Non-GAAP Financial Measures are reconciled from the respective measures under GAAP in the appendix below.

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

The company's zeolite catalysts product group operates through its Zeolyst Joint Venture, which is accounted for as an equity method investment in accordance with GAAP. The presentation of the Zeolyst Joint Venture's sales represents 50% of the sales of the Zeolyst Joint Venture. The Company does not record sales by the Zeolyst Joint Venture as revenue and such sales are not consolidated within the company's results of operations. However, the company's Adjusted EBITDA reflects the share of earnings of the Zeolyst Joint Venture that have been recorded as equity in net income from affiliated companies in the company's consolidated statements of income for such periods and includes Zeolyst Joint Venture adjustments on a proportionate basis based on the company's 50% ownership interest. Accordingly, the company's Adjusted EBITDA margins are calculated including 50% of the sales of the Zeolyst Joint Venture for the relevant periods in the denominator.

Note on Forward-Looking Statements

Some of the information contained in this press release 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, statements regarding our future results of operations, financial condition, liquidity, prospects, growth, strategies, capital allocation program, product and service offerings, including the impact of the COVID-19 pandemic on such items, expected demand trends and our 2022 financial outlook. 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. These forward-looking statements speak only as of the date of this release. 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.



ECOVYST INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(on a continuing operations basis)

	Three months ended December 31,			Years ended December 31,		
	2021	2020	%	2021	2020	%
			Change			Change
	(in millions, except percentages, share and per share amounts)					
Sales	\$ 170.2	\$ 124.1	37.1 %	\$ 611.2	\$ 495.9	23.3 %
Cost of goods sold	115.7	86.4	33.9 %	434.5	345.0	25.9 %
Gross profit	54.5	37.5	45.3 %	176.7	150.9	17.1 %
Selling, general and administrative expenses	29.0	20.0	45.0 %	97.8	81.5	20.0 %
Other operating expense, net	7.5	6.5	15.4 %	24.3	17.8	36.5 %
Operating income	18.0	11.0	63.6 %	54.6	51.6	5.8 %
Equity in net income from affiliated companies	(7.0)	(1.1)	536.4 %	(27.7)	(21.0)	31.9 %
Interest expense, net	8.8	9.5	(7.4)%	37.0	50.4	(26.6)%
Debt extinguishment costs	—	8.5	(100.0)%	26.9	25.0	7.6 %
Other (income) expense, net	1.4	(4.8)	(129.2)%	4.5	(5.0)	(190.0)%
Income (loss) before income taxes	14.8	(1.1)	NM	13.9	2.2	531.8 %
Provision (benefit) for income taxes	7.0	(47.1)	(114.9)%	12.1	(52.1)	(123.2)%
<i>Effective tax rate</i>	47.3 %	4,281.8 %		87.1 %	(2,350.6)%	
Net income	7.8	46.0	(83.0)%	1.8	54.3	(96.7)%
Net income per share:						
Basic income per share - continuing operations	\$ 0.06	\$ 0.34		\$ 0.01	\$ 0.40	
Diluted income per share - continuing operations	\$ 0.06	\$ 0.34		\$ 0.01	\$ 0.40	
Weighted average shares outstanding:						
Basic	136,256,601	135,406,081		136,167,384	135,528,977	
Diluted	137,528,028	136,284,272		137,708,931	136,450,953	



ECOVYST INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions, except share and per share amounts)

	December 31, 2021	December 31, 2020
ASSETS		
Cash and cash equivalents	\$ 140.9	\$ 113.4
Accounts receivables, net	80.8	45.9
Inventories, net	53.8	52.8
Prepaid and other current assets	16.2	11.5
Current assets held for sale	—	205.1
Total current assets	291.7	428.7
Investments in affiliated companies	446.1	458.1
Property, plant and equipment, net	596.2	591.7
Goodwill	406.1	391.6
Other intangible assets, net	145.6	137.4
Right-of-use lease assets	30.1	28.9
Other long-term assets	15.4	12.5
Long-term assets held for sale	—	1,149.4
Total assets	\$ 1,931.2	\$ 3,198.3
LIABILITIES		
Current maturities of long-term debt	\$ 9.0	\$ —
Accounts payable	51.9	38.1
Operating lease liabilities—current	8.3	6.7
Accrued liabilities	75.9	48.5
Current liabilities held for sale	—	108.5
Total current liabilities	145.1	201.8
Long-term debt, excluding current portion	872.8	1,400.4
Deferred income taxes	126.7	126.2
Operating lease liabilities—noncurrent	21.7	22.0
Other long-term liabilities	24.2	15.3
Long-term liabilities of held for sale	—	155.4
Total liabilities	1,190.5	1,921.1
Commitments and contingencies		
EQUITY		
Common stock (\$0.01 par); authorized shares 450,000,000; issued shares 137,820,971 and 137,102,143 on December 31, 2021 and 2020, respectively; outstanding shares 136,938,758 and 136,318,557 on December 31, 2021 and 2020, respectively	1.4	1.4
Preferred stock (\$0.01 par); authorized shares 50,000,000; no shares issued or outstanding on December 31, 2021 and 2020, respectively	—	—
Additional paid-in capital	1,073.4	1,477.9
Accumulated deficit	(315.7)	(175.8)
Treasury stock, at cost; shares 882,213 and 783,586 on December 31, 2021 and 2020, respectively	(12.6)	(11.1)
Accumulated other comprehensive loss	(5.8)	(15.3)
Total Ecovyst Inc. equity	740.7	1,277.1
Noncontrolling interest	—	0.1
Total equity	740.7	1,277.2
Total liabilities and equity	\$ 1,931.2	\$ 3,198.3

ECOVYST INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years ended December 31,	
	2021	2020
	(in millions)	
Cash flows from operating activities:		
Net loss	\$ (139.6)	\$ (281.7)
Net loss from discontinued operations	141.4	336.0
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation	66.0	65.3
Amortization	13.8	11.6
Amortization of deferred financing costs and original issue discount	1.9	2.5
Debt extinguishment costs	21.2	22.7
Foreign currency exchange loss (gain)	4.7	(5.3)
Pension and postretirement healthcare benefit expense	(0.3)	0.4
Pension and postretirement healthcare benefit funding	—	(3.3)
Deferred income tax provision (benefit)	4.5	(60.1)
Net loss on asset disposals	5.7	4.7
Stock compensation	31.8	17.2
Equity in net income from affiliated companies	(27.7)	(21.1)
Dividends received from affiliated companies	35.0	40.0
Other, net	(3.0)	(3.5)
Working capital changes that provided (used) cash, excluding the effect of acquisitions and dispositions:		
Receivables	(33.5)	7.0
Inventories	0.6	(3.0)
Prepays and other current assets	(7.8)	(1.4)
Accounts payable	10.0	6.9
Accrued liabilities	12.6	5.0
Net cash provided by operating activities, continuing operations	137.3	140.1
Net cash (used in) provided by operating activities, discontinued operations	(7.4)	83.5
Net cash provided by operating activities	129.9	223.6
Cash flows from investing activities:		
Purchases of property, plant and equipment	(60.0)	(54.8)
Proceeds from business divestiture, net of cash and indebtedness	978.4	624.3
Proceeds from sale of assets	—	2.4
Business combinations, net of cash acquired	(42.6)	—
Other, net	(0.1)	(0.1)
Net cash provided by investing activities, continuing operations	875.7	571.8
Net cash (used in) investing activities, discontinued operations	(40.0)	(20.3)
Net cash provided by investing activities	835.7	551.5

	Years ended December 31,	
	2021	2020
Cash flows from financing activities:		
Draw down of revolving credit facilities	—	126.5
Repayments of revolving credit facilities	—	(126.5)
Issuance of long-term debt, net of original issue discount and financing fees	897.8	640.3
Debt issuance costs	(1.3)	(9.0)
Debt prepayment fees	(8.5)	(10.6)
Repayments of long-term debt	(1,430.9)	(1,091.1)
Proceeds from financing obligation	16.0	—
Dividends paid to stockholders	(435.6)	(243.7)
Repurchases of common shares	—	(2.1)
Tax withholdings on equity award vesting	(1.5)	(2.5)
Proceeds from stock options exercised	0.7	0.4
Repayments of finance lease obligations	(1.4)	—
Other	1.5	(1.9)
Net cash provided by financing activities, continuing operations	(963.1)	(720.2)
Net cash provided by financing activities, discontinued operations	(1.1)	(2.6)
Net cash provided by financing activities	(964.2)	(722.8)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	2.3	11.1
Net change in cash, cash equivalents and restricted cash	3.7	63.3
Cash, cash equivalents and restricted cash at beginning of period	137.2	73.9
Cash, cash equivalents and restricted cash at end of period	140.9	137.2
Less cash, cash equivalents and restricted cash of discontinued operations	—	(22.2)
Cash, cash equivalents and restricted cash at end of period of continuing operations	\$ 140.9	\$ 115.0

Appendix Table A-1: Reconciliation of Net Income to Adjusted EBITDA

	Three months ended December 31,		Years ended December 31,	
	2021	2020	2021	2020
	(in millions)			
Reconciliation of net income to Adjusted EBITDA				
Net income from continuing operations	\$ 7.8	\$ 46.0	\$ 1.8	\$ 54.3
Provision (benefit) for income taxes	7.0	(47.1)	12.1	(52.1)
Interest expense, net	8.8	9.5	37.0	50.4
Depreciation and amortization	19.6	20.4	79.7	76.9
EBITDA	43.2	28.8	130.6	129.5
Joint venture depreciation, amortization and interest ^(a)	4.2	3.6	15.6	14.7
Amortization of investment in affiliate step-up ^(b)	1.6	1.6	6.5	6.6
Debt extinguishment costs	—	8.5	26.9	25.0
Net loss on asset disposals ^(c)	1.2	3.5	5.7	4.7
Foreign currency exchange (gain) loss ^(d)	(0.1)	(4.7)	4.7	(5.3)
LIFO expense (benefit) ^(e)	0.1	(0.4)	(1.9)	(5.3)
Transaction and other related costs ^(f)	0.4	(0.3)	2.0	1.1
Equity-based compensation	9.0	3.9	31.8	17.2
Restructuring, integration and business optimization expenses ^(g)	0.6	0.6	3.0	2.0
Defined benefit plan pension cost (benefit) ^(h)	1.3	(0.1)	(0.9)	(0.6)
Other ⁽ⁱ⁾	1.7	0.9	3.6	3.0
Adjusted EBITDA	\$ 63.2	\$ 45.9	\$ 227.6	\$ 192.6

Descriptions to Ecovyst Non-GAAP Reconciliations

- (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 Ecovyst Inc. and Eco Services Operations LLC (“Eco”) 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 adjustments for defined benefit pension plan (benefit) costs in our statement 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.
- (i) 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).

Appendix Table A-2: Reconciliation of Net Income to Adjusted Net Income⁽¹⁾

	Three months ended December 31,					
	2021			2020		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Net income from continuing operations	\$ 14.8	\$ 7.0	\$ 7.8	\$ (1.1)	\$ (47.1)	\$ 46.0
Earnings per share:						
Basic income per share - continuing operations			\$ 0.06			\$ 0.34
Diluted income per share - continuing operations			\$ 0.06			\$ 0.34
Net income from continuing operations	14.8	7.0	7.8	(1.1)	(47.1)	46.0
Amortization of investment in affiliate step-up ^(b)	1.6	0.2	1.4	1.7	(0.1)	1.8
Debt extinguishment costs	—	(0.9)	0.9	8.5	0.2	8.3
Net loss on asset disposals ^(c)	1.1	0.1	1.0	3.5	0.7	2.8
Foreign currency exchange gain ^(d)	—	—	—	(4.7)	(0.4)	(4.3)
LIFO benefit ^(e)	—	—	—	(0.4)	0.4	(0.8)
Transaction and other related costs ^(f)	0.4	(0.1)	0.5	(0.3)	(0.2)	(0.1)
Equity-based compensation	9.0	1.3	7.7	3.9	(0.8)	4.7
Restructuring, integration and business optimization expenses ^(g)	0.6	0.1	0.5	0.5	(0.1)	0.6
Defined benefit plan pension cost (benefit) ^(h)	1.4	0.4	1.0	(0.1)	—	(0.1)
Other ⁽ⁱ⁾	1.8	0.5	1.3	0.8	0.2	0.6
Adjusted net income, includes Impact of Discrete Tax Items	30.7	8.6	22.1	12.3	(47.2)	59.5
Impact of Discrete Tax Items ⁽²⁾	—	(0.8)	0.8	—	(6.2)	6.2
Adjusted net income ⁽¹⁾	<u>\$ 30.7</u>	<u>\$ 7.8</u>	<u>\$ 22.9</u>	<u>\$ 12.3</u>	<u>\$ (53.4)</u>	<u>\$ 65.7</u>
Adjusted net income per share:						
Basic income per share			\$ 0.17			\$ 0.49
Diluted income per share			\$ 0.17			\$ 0.48
Weighted average shares outstanding:						
Basic			136,256,601			135,406,081
Diluted			137,528,028			136,284,272

See Appendix Table A-1 for Descriptions to Ecovyst Non-GAAP Reconciliations in the table above.

	Years ended December 31,					
	2021			2020		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Net income from continuing operations	\$ 13.9	\$ 12.1	\$ 1.8	\$ 2.2	\$ (52.1)	\$ 54.3
Earnings per share:						
Basic income per share - continuing operations			\$ 0.01			\$ 0.40
Diluted income per share - continuing operations			\$ 0.01			\$ 0.40
Net income from continuing operations	13.9	12.1	1.8	2.2	(52.1)	54.3
Amortization of investment in affiliate step-up ^(b)	6.5	1.6	4.9	6.6	1.7	4.9
Debt extinguishment costs	26.9	6.6	20.3	25.0	6.3	18.7
Net loss on asset disposals ^(c)	5.7	1.4	4.3	4.7	1.2	3.5
Foreign currency exchange loss (gain) ^(d)	4.7	1.0	3.7	(5.3)	(0.6)	(4.7)
LIFO benefit ^(c)	(1.9)	(0.5)	(1.4)	(5.3)	(1.3)	(4.0)
Transaction and other related costs ^(f)	2.0	0.5	1.5	1.1	0.3	0.8
Equity-based compensation	31.8	7.7	24.1	17.2	4.0	13.2
Restructuring, integration and business optimization expenses ^(g)	3.0	0.7	2.3	2.0	0.5	1.5
Defined benefit plan pension (benefit) cost ^(h)	(0.9)	(0.2)	(0.7)	(0.6)	(0.2)	(0.4)
Other ⁽ⁱ⁾	3.6	0.9	2.7	3.0	0.7	2.3
Adjusted net income, includes Impact of Discrete Tax Items	95.3	31.8	63.5	50.6	(39.5)	90.1
Impact of Discrete Tax Items ⁽²⁾	—	(6.1)	6.1	—	—	—
Adjusted net income ⁽¹⁾	\$ 95.3	\$ 25.7	\$ 69.6	\$ 50.6	\$ (39.5)	\$ 90.1
Adjusted net income per share:						
Basic income per share			\$ 0.51			\$ 0.66
Diluted income per share			\$ 0.51			\$ 0.66
Weighted average shares outstanding:						
Basic			136,167,384			135,528,977
Diluted			137,708,931			136,450,953

(1) We define adjusted net income as net income attributable to Ecovyst adjusted for non-operating income or expense and the impact of certain non-cash or other items that are included in net income that we do not consider indicative of our ongoing operating performance. Adjusted net income is presented as a key performance indicator as we believe it will enhance a prospective investor's understanding of our results of operations and financial condition. Adjusted net income may not be comparable with net income or adjusted net income as defined by other companies.

(2) Represents intraperiod allocation rules related to a change in the UK legislature, which increased the UK corporate rate as well as the German Uncertain Tax Position.

Appendix Table A-3: Business Segment Sales and Adjusted EBITDA

	Three months ended December 31,			Years ended December 31,		
	2021	2020	% Change	2021	2020	% Change
Sales:						
Ecoservices	\$ 142.0	\$ 103.2	37.6 %	\$ 500.5	\$ 401.9	24.5 %
Silica Catalysts	28.2	20.9	34.9 %	110.7	94.0	17.8 %
Total sales	<u>\$ 170.2</u>	<u>\$ 124.1</u>	<u>37.1 %</u>	<u>\$ 611.2</u>	<u>\$ 495.9</u>	<u>23.3 %</u>
Zeolyst joint venture sales	\$ 36.3	\$ 28.9	25.6 %	\$ 131.3	\$ 128.6	2.1 %
Adjusted EBITDA:						
Ecoservices	\$ 52.3	\$ 40.7	28.5 %	\$ 177.7	\$ 157.2	13.0 %
Catalyst Technologies	23.4	14.8	58.1 %	88.0	74.5	18.1 %
Unallocated corporate expense	(12.5)	(9.6)	30.2 %	(38.1)	(39.1)	(2.6)%
Total Adjusted EBITDA	<u>\$ 63.2</u>	<u>\$ 45.9</u>	<u>37.7 %</u>	<u>\$ 227.6</u>	<u>\$ 192.6</u>	<u>18.2 %</u>
Adjusted EBITDA Margin:						
Ecoservices	36.8 %	39.4 %		35.5 %	39.1 %	
Catalyst Technologies ⁽¹⁾	36.3 %	29.7 %		36.4 %	33.5 %	
Total Adjusted EBITDA Margin⁽¹⁾	<u>30.6 %</u>	<u>30.0 %</u>		<u>30.7 %</u>	<u>30.8 %</u>	

⁽¹⁾ Adjusted EBITDA margin calculation includes proportionate 50% share of sales from the Zeolyst Joint Venture.

Appendix Table A-4: Adjusted Free Cash Flow

	Years ended December 31,	
	2021	2020
	(in millions)	
Net cash provided by operating activities, continuing operations	\$ 137.3	\$ 140.1
Net cash (used in) provided by operating activities, discontinued operations	(7.4)	83.5
Net cash provided by operating activities	<u>129.9</u>	<u>223.6</u>
Less:		
Purchases of property, plant and equipment, continuing operations	(60.0)	(54.8)
Purchases of property, plant and equipment, discontinued operations	(31.0)	(54.8)
Purchases of property, plant and equipment ⁽¹⁾	<u>(91.0)</u>	<u>(109.6)</u>
Free cash flow	<u>38.9</u>	<u>114.0</u>
Adjustments to free cash flow:		
Proceeds from sale of assets	0.3	11.1
Net interest proceeds on currency swaps	2.3	5.0
Cash paid for costs related to segment disposals	46.0	22.5
Cash paid for debt financing costs included in cash from operating activities	5.7	—
Adjusted free cash flow ⁽²⁾	<u>\$ 93.2</u>	<u>\$ 152.5</u>
Net cash provided by investing activities ⁽³⁾	\$ 835.7	\$ 551.5
Net cash used in financing activities	\$ (964.2)	\$ (722.8)

(1) Excludes the Company's proportionate 50% share of capital expenditures from the Zeolyst joint venture.

(2) We define adjusted free cash flow as net cash provided by operating activities less purchases of property, plant and equipment, adjusted for proceeds from sale of assets and net interest proceeds on swaps designated as net investment hedges and the cash paid for costs related to segment disposals. Adjusted free cash flow is a non-GAAP financial measure that we believe will enhance a prospective investor's understanding of our ability to generate additional cash from operations, including the reduction in cash paid for interest related to our cross-currency interest rate swaps, and is an important financial measure for use in evaluating our financial performance. Our presentation of adjusted free cash flow is not intended to replace, and should not be considered superior to, the presentation of our net cash provided by operating activities determined in accordance with GAAP. Additionally, our definition of adjusted free cash flow is limited, in that it does not represent residual cash flows available for discretionary expenditures, due to the fact that the measure does not deduct the payments required for debt service and other contractual obligations or payments made for business acquisitions. Therefore, we believe it is important to view adjusted free cash flow as a measure that provides supplemental information to our consolidated statements of cash flows.

(3) Net cash used in investing activities includes purchases of property, plant and equipment, proceeds from sale of assets, and net interest proceeds on swaps designated as net investment hedges, which are also included in our computation of adjusted free cash flow.