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): May 28, 2020

PQ Group Holdings Inc.

Commission File Number: 001-38221

Delaware (State or other jurisdiction of incorporation)	**81-3406833** (IRS 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	**PQG**	**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 7.01 Regulation FD Disclosure.

On May 28, 2020, PQ Group Holdings Inc. (the "Company") will participate in investor meetings at the KeyBanc 2020 Industrials and Basic Materials Virtual Conference. A copy of the Company's presentation materials related to these meetings 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

Exhibit No.	Description
99.1	PQ Group Holdings Inc. Investor Presentation, dated May 2020
104	The cover page from this Current Report on Form 8-K of PQ Group Holdings 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: May 28, 2020

PQ Group Holdings Inc.

By: /s/ Joseph S. Koscinski
Vice President, Secretary and General Counsel

Exhibit 99.1

INVESTOR PRESENTATION

May 2020

PQ Corporation

LEGAL DISCLAIMER

Forward-Looking Statements

Some of the information contained in this presentation 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 results of operations, financial condition, liquidity, prospects, growth, strategies, product and service offerings and end use demand trends, including the impact of the COVID-19 pandemic on such items, and financial 2020 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. Any forward-looking statement made by us in this presentation 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.

Certain supply share statistics included in this presentation, including our estimated supply share positions, are based on management estimates.

Non-GAAP Financial Measures

This presentation includes certain non-GAAP financial measures, including adjusted EBITDA, adjusted EBITDA margin, adjusted diluted EPS, adjusted net income, constant currency sales and Adjusted EBITDA and adjusted free cash flow which are provided to assist in an understanding of our business and its performance. These non-GAAP financial measures should be considered only as supplemental to, and not as superior to, financial measures prepared in accordance with GAAP. Non-GAAP financial measures should be read only in conjunction with consolidated financials prepared in accordance with GAAP. Reconciliations of non-GAAP measures to the relevant GAAP measures are provided in the appendix of this presentation.

In discussing our operating results, the term currency exchange rates refers to the currency exchange rates we use to convert the operating results for all countries where the functional currency is not the U.S. dollar. We calculate constant currency sales and constant currency adjusted EBITDA by translating current period results at the prior period's currency exchange rates. When we refer to constant currency sales and constant currency adjusted EBITDA, this means sales and adjusted EBITDA without the impact of the currency exchange rate fluctuations from period-to-period.

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.

Non-GAAP Financial Measures – Business Combination

On May 4, 2016, we consummated a series of transactions (the "Business Combination") to reorganize and combine the businesses of PQ Holdings Inc. and Eco Services Operations LLC under a new holding company, PQ Group Holdings Inc. In this presentation, we present pro forma information for the years ended December 31, 2016 and 2015, which gives effect to the Business Combination and the related financing transactions as if they occurred on January 1, 2015. Such information is illustrative and not intended to represent what our results of operations would have been had the Business Combination and related financing transactions occurred at any time prior to May 4, 2016 or to project our results of operations for any future period. Such information may not be comparable to, or indicative of, future performance.

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.

PQ CORPORATION OVERVIEW

Long History: Founded in 1831

- Differentiated Specialty Businesses
- Innovation Culture
- Sustainable Products
- Track Record of Financial Stability

BY THE NUMBERS

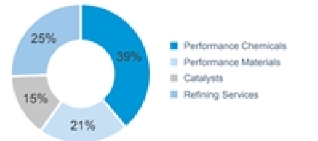
- **6** continents
- **~200** years in business
- **~4,000** global customers
- **~3,300** employees
- **~70** manufacturing facilities

2019 FINANCIAL HIGHLIGHTS

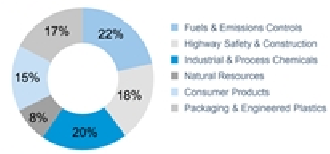
- Revenues[1]: ~ $1.6 Billion
- Adjusted EBITDA: ~$474 Million
- Adjusted EBITDA Margin: ~ 27%
- Cash from Operations: ~ $268 Million

2019 SALES AND ZEOLYST JV SALES[2]

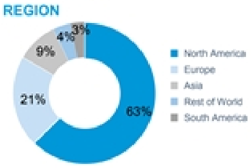
SEGMENT[3]



END USE



REGION



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(1) GAAP Sales; Excludes proportionate 50% share of sales from the Zeolyst JV Sales of ~$170 million
(2) Sales include proportionate 50% share of sales from the Zeolyst Joint venture
(3) Excludes inter-segment sales eliminations of ~$14 million

OUR DIVERSIFIED SPECIALTY BUSINESSES

 REFINING SERVICES	 CATALYSTS[1]	 PERFORMANCE MATERIALS	 PERFORMANCE CHEMICALS

COMPETITIVE STRENGTHS

REFINING SERVICES	CATALYSTS[1]	PERFORMANCE MATERIALS	PERFORMANCE CHEMICALS
o Supplier to largest North America refineries o Largest integrated supply network o Favorable long-term contracts	o Key supplier for global refineries o Leader in zeolite technology for heavy duty diesel o Specified with top polyethylene and methyl methacrylate producers	o Transportation safety lead bead supplier o Extensive global supply network o Co-production for industrial applications	o Strategic global infrastructure o Vertically integrated silicate expertise o 50+ years customer relationships

2017 – 2019 PERFORMANCE

Refining Services		Catalysts		Performance Materials		Performance Chemicals	
Sales CAGR	5.9%	Sales CAGR[1]	8.1%	Sales CAGR	5.8%	Sales CAGR	-0.2%
Adjusted EBITDA CAGR	6.7%	Adjusted EBITDA CAGR[1]	9.8%	Adjusted EBITDA CAGR	4.9%	Adjusted EBITDA CAGR	-4.9%
Adjusted EBITDA Margin	*~39%*	*Adjusted EBITDA Margin[2]*	*~39%*	*Adjusted EBITDA Margin*	*~21%*	*Adjusted EBITDA Margin*	*~24%*

LONG TERM GROWTH DRIVERS

REFINING SERVICES	CATALYSTS[1]	PERFORMANCE MATERIALS	PERFORMANCE CHEMICALS
o Shale oil share growth o Demand increase in premium gasoline o Rising gasoline exports	o Broader adoption of emissions standards o Tightening vehicle emission standards o Trend for lighter and stronger plastics	o Steady highway demand o Higher safety regulations o Lightweighting & materials substitution	o Shifting consumer preferences o Regulation driven substitution o Higher performance standards

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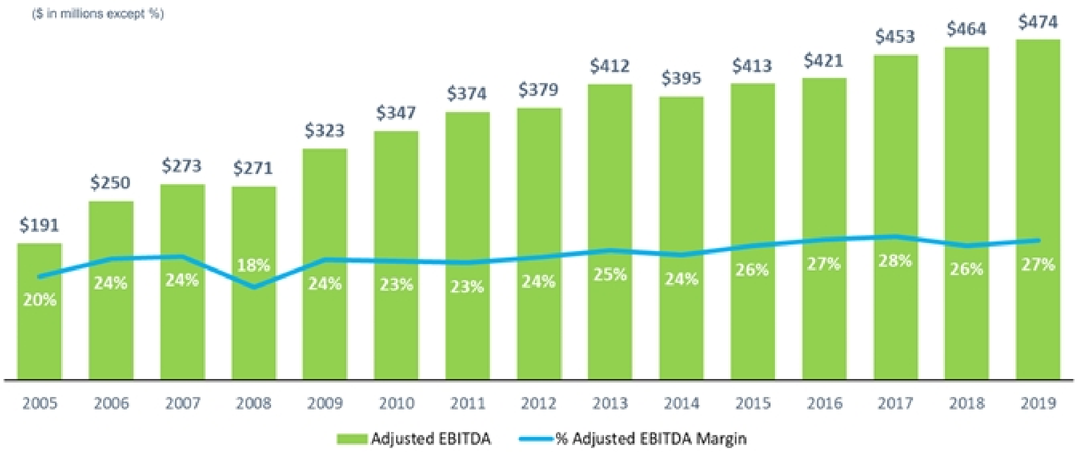
(1) Includes Silica Catalysts and Zeolyst Joint Venture
(2) Adjusted EBITDA margin includes proportionate 50% share of sales from Zeolyst Joint Venture

FINANCIAL PERFORMANCE IN MACROECONOMIC CYCLES

Adjusted EBITDA and Adjusted EBITDA Margin (%)[1,2,3]



(1) Adjusted EBITDA for the period from 2005 to 2014 represents Legacy Eco Adjusted EBITDA and Legacy PQ Adjusted EBITDA prior to the Business Combination. Adjusted EBITDA for 2015 and 2016 is presented on a pro forma basis to give effect to the Business Combination as further described in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017
(2) See Reconciliations for additional information regarding Adjusted EBITDA, including a reconciliation of the amounts to net income (loss) for each of the periods presented as well as information regarding the Legacy Eco and Legacy PQ financial information included in such amounts
(3) Adjusted EBITDA margin calculation includes proportionate 50% share of sales from Zeolyst Joint Venture

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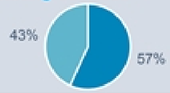
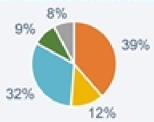
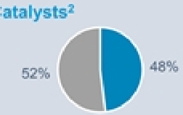
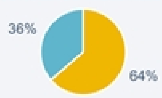
COVID-19 NEAR TERM BUSINESS TRENDS

BUSINESS SEGMENT	KEY BUSINESS DRIVERS	2020 TRENDS
Refining Services[1] 	Sulfuric acid regeneration materially impacted due to lower refinery rates on high gasoline inventories driven by significant decline in gasoline demand due to government "stay home" mandates Virgin sulfuric acid business moderately lower on reduced demand for nylon for auto	
Performance Chemicals 	Sodium silicates are expected to decline driven by industrial, chemicals and automotive applications Specialty silicas mixed on decline in consumer discretionary spending driving demand shifts for consumer goods, including beer gels and surface coatings, partially offsetting favorable trends in personal care	
Catalysts[2] 	Polyolefin demand remains stable as demand for medical and consumer products offsets lower consumer discretionary and construction material demand Catalyst change-out timing may adjust as refineries run at lower rates; emission control catalysts lower on reduced heavy duty diesel demand	
Performance Materials[3] 	North America highway safety remains strong as most states continued road marking activity through the shutdowns Engineered Glass Materials demand is weakening due to industrial activity, partially offset by higher demand to medical industry	

Note: Pie charts above based on full year 2019 sales

Consumer Products | Fuels & Emission Controls | Highway Safety & Construction | Industrial & Process Chemicals | Natural Resources | Packaging & Engineered Plastics

(1) Refining Services reflects its two largest end uses with an aggregation of smaller end uses of natural resources and packaging & engineered plastics into industrial & process chemicals. Major product lines, regeneration services and virgin sulfuric acid, are aligned to these summarized end uses
(2) Catalysts sales includes proportionate 50% share of sales from Zeolyst JV, which serves packaging & engineered plastics and fuels & emission controls end uses
(3) Performance Materials reflects its two largest end uses with an aggregation of smaller end uses of natural resources and packaging & engineered plastics into industrial & process chemicals. Major product lines, highway safety and engineered glass materials, are aligned to these summarized end uses

PQ Corporation

2020 OUTLOOK AND DECISIVE ACTIONS

Rapid COVID-19 response

- Ensured health and safety of our employees
- Maintained operations with minor disruptions
- Adapted to customer demand
- Refinanced debt at lower costs with extended maturities

Q1 2020 Results

Solid performance driven by portfolio diversity; minimal impact from COVID-19

- Sales up ~2% and adjusted EBITDA up ~3% on a constant currency basis
- Volume growth in 3 of our 4 businesses: Catalysts, Performance Materials and Refining Services; double-digit sequential quarterly improvement in Performance Chemicals

2020 Outlook

Second Quarter:

- Sales $360 to $375 million
- Adjusted EBITDA $95 to $105 million

Full Year:

- Adjusted EBITDA margin mid 20%
- Adjusted free cash flow target $130 – $150 million

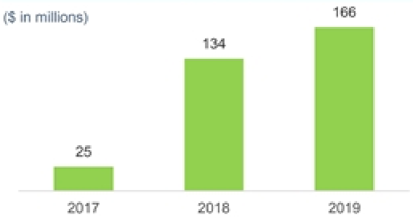
Additional Actions

Target additional free cash flow benefits

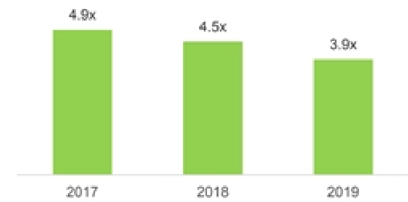
- Capital expenditure reduction ~$15 million in the first half of 2020
- Operating and SG&A cost reductions
- ~$15 million lower annual cash interest from reduced rates and recent refinancings
- CARES Act tax deferrals

DEBT MATURITIES

ADJUSTED FREE CASH FLOW



NET DEBT / ADJUSTED EBITDA



DEBT SCHEDULE[1]

FINANCIAL FLEXIBILITY[1]

- Cash on hand of $108 million with $236 million available liquidity at quarter end
  - ABL Revolver draw of ~$60 million to provide cash cushion
- No material financial covenants required to maintain a leverage ratio below a particular level

(1) Balances presented as of March 31, 2020

ONGOING PORTFOLIO OPTIMIZATION STRATEGY

Simpler +
STRONGER

2018 – 2019

- Completed non-core asset sale for $13 million
- Delayered and separated into four distinct businesses structure
- Sale of Performance Chemicals product line for $28 million
- Agreement with INEOS to expand Silica Catalyst product line sales into Ziegler Natta technology
- Completed non-core asset sale for $19 million

2020

Assessing opportunities to optimize overall portfolio

Monetizing non-core assets within each business at value

- Performance Materials asset swap
- Refining Services non-core asset sale
- Sale of Performance Chemicals JV interest
- Additional monetization of non-core assets in progress

Advance Performance Chemicals Transformation Plan

Enhancing commercial effectiveness, productivity and capital efficiency

- Expected annualized benefit of $10 to $15 million to adjusted EBITDA
- Drive cash improvements from reduced working capital and capital expenditures
- Anticipate annualized run-rate of these benefits in late 2021/early 2022

WHY PQ's SPECIALTY CHEMICAL PORTFOLIO?

- #1 and #2 positions in nearly all product lines
- Sustainable growth from diverse underlying secular macro trends
- Strategic and extensive global manufacturing network
- Input cost small as percentage of customer total product cost
- Track record of innovation and customer collaboration
- Environmentally friendly end use applications and solutions
- Stable, high-margins drive strong sustainable free cash flow

SUPPLEMENTAL INFORMATION

PQ Corporation

PQ's PRODUCTS FOR A SUSTAINABLE FUTURE

Inorganic Materials Drive ~ 75% of our Sales[1]

REFINING SERVICES

- Largest North America recycler of spent sulfuric acid, avoiding 1.5 million tons of landfill or deep well disposal annually
- One of the largest consumers of refinery by-product sulfur, converting for other applications
- World class low SO_2 emissions

CATALYSTS

- Remove sulfur from diesel fuel for land and marine transportation
- Provide active component for > 90% reduction of NOx emissions from diesel engines
- Improve fuel economy by reducing friction in lubricants

PERFORMANCE MATERIALS

- Recycle > 1 billion pounds of glass per year, avoiding landfill disposal
- Improve safety and save lives through superior road and airport marking technologies
- Glass bead applications provide alternative to petroleum-based solvents for industrial cleaning and surface finishing applications

PERFORMANCE CHEMICALS

- Silica-based sensory particles for personal care products replace plastic spheres
- Specialty silicas for use in environmentally-friendly low VOC coatings
- Sodium silicate used in production of silica to replace carbon black in fuel efficient "green tires"
- Sodium silicates inhibit corrosion in municipal water treatment pipelines

Safety Conscious | Emissions | Recyclability
Environmentally Friendly | Efficient Energy Usage | Innovative Green Solution

PQ Corporation

(1) Based on 2019 Sales

PERFORMANCE CHEMICALS TRANSFORMATION

Simpler +
STRONGER

DRIVERS:

- Commercial effectiveness
- Productivity and sustainability improvements
- Capital efficiency

MANUFACTURING EXCELLENCE:
Accelerate productivity and throughput

NETWORK OPTIMIZATION:
Align footprint with growth opportunities

ENHANCE CUSTOMER EXPERIENCE

INTEGRATED BUSINESS MANAGEMENT:
Step change in supply/demand planning

COMMERCIAL DISCIPLINE:
Enhance customer account management

EXPECTED BENEFIT:

- $10 million to $15 million Adjusted EBITDA on annualized basis

ADJUSTED FREE CASH FLOW

($ in millions)	Full Year 2019	Full Year 2018	Full Year 2017
Cash Flow from Operations before interest and tax	**401.9**	**377.5**	**364.5**
Less:			
Cash paid for taxes	17.4	23.8	29.2
Cash paid for interest[1]	116.8	105.1	170.1
Cash Flow from Operations	**267.7**	**248.6**	**165.2**
Less: Purchases of property, plant and equipment[2]	127.6	131.7	140.5
Free Cash Flow	**140.1**	**116.9**	**24.7**
Plus: Proceeds from sale of assets	17.6	12.4	-
Plus: Net interest proceeds on currency swaps	8.5	4.9	-
Adjusted Free Cash Flow	**166.2**	**134.2**	**24.7**

PQ Corporation

(1) Excludes net interest proceeds on swaps designated as net investment hedges
(2) Excludes the Company's proportionate 50% share of capital expenditures from the Zeolyst Joint Venture

QUARTERLY SEGMENT SALES, ADJUSTED EBITDA AND MARGINS

($ in millions except %, unaudited)	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019	Year Ended December 31, 2019	Year Ended December 31, 2018	Year Ended December 31, 2017
Sales:								
Refining Services	100.7	105.8	117.3	118.3	105.7	447.1	455.6	398.4
Silica Catalysts	24.9	15.9	20.9	25.6	23.3	85.7	72.1	75.3
Performance Materials	65.5	61.1	118.9	115.1	67.9	363.0	378.3	324.2
Performance Chemicals	174.3	180.5	177.8	167.9	158.9	685.1	717.3	687.6
Eliminations	(3.8)	(4.1)	(3.2)	(3.1)	(3.4)	(13.8)	(15.1)	(13.4)
Total sales	**361.6**	**359.2**	**431.7**	**423.8**	**352.4**	**1,567.1**	**1,608.2**	**1,472.1**
Zeolyst joint venture sales	32.3	29.5	39.1	54.4	47.3	170.3	156.7	143.8
Adjusted EBITDA:								
Refining Services	37.2	39.7	42.8	51.2	41.9	175.6	176.5	154.2
Catalysts	22.7	18.1	29.6	31.6	28.5	107.8	81.1	89.4
Performance Materials	13.5	10.5	29.2	25.8	11.2	76.7	72.5	69.7
Performance Chemicals	40.5	42.7	41.2	36.8	33.6	154.3	170.9	170.5
Total Segment Adjusted EBITDA	**113.8**	**111.0**	**142.8**	**145.4**	**115.2**	**514.4**	**501.0**	**483.8**
Corporate	(10.7)	(10.0)	(10.3)	(7.7)	(12.1)	(40.1)	(37.0)	(30.5)
Total Adjusted EBITDA	**103.1**	**101.0**	**132.5**	**137.7**	**103.1**	**474.3**	**464.0**	**453.3**
Adjusted EBITDA Margin:								
Refining Services	36.9%	37.5%	36.5%	43.3%	39.6%	39.3%	38.7%	38.7%
Catalysts[1]	39.7%	40.0%	49.4%	39.5%	40.4%	42.1%	35.4%	40.8%
Performance Materials	20.6%	17.2%	24.6%	22.4%	16.5%	21.1%	19.2%	21.5%
Performance Chemicals	23.2%	23.7%	23.1%	21.9%	21.1%	22.5%	23.8%	24.8%
Total Adjusted EBITDA Margin[1]	**26.2%**	**26.0%**	**28.1%**	**28.8%**	**25.8%**	**27.3%**	**26.3%**	**28.1%**

PQ Corporation

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

RECONCILATION OF NET INCOME TO SEGMENT ADJUSTED EBITDA

($ in millions)	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019	Year Ended December 31, 2019	Year Ended December 31, 2018	Year Ended December 31, 2017
Reconciliation of net income attributable to PQ Group Holdings Inc. to Segment Adjusted EBITDA								
Net income attributable to PQ Group Holdings Inc.	0.2	3.2	30.6	26.7	19.1	79.5	58.3	57.6
Provision for (benefit from) income taxes	1.4	2.4	20.3	16.7	1.2	40.7	29.0	(119.2)
Interest expense	24.5	28.6	28.5	27.7	26.7	111.5	113.7	179.0
Depreciation and amortization	45.7	45.9	45.1	44.2	46.9	182.1	185.2	177.1
EBITDA	**71.8**	**80.1**	**124.5**	**115.3**	**93.9**	**413.8**	**386.2**	**294.5**
Joint venture depreciation, amortization and interest [a]	3.8	3.8	3.7	3.7	3.5	14.7	12.6	11.1
Amortization of investment in affiliate step-up [b]	1.7	2.6	1.7	1.7	1.7	7.5	6.6	8.6
Amortization of inventory step-up [c]	—	—	—	—	—	—	1.6	0.9
Impairment of fixed assets, intangibles and goodwill	—	—	—	—	1.6	1.6	—	—
Debt extinguishment costs	2.5	—	—	1.8	1.6	3.4	7.8	61.9
Net loss (gain) on asset disposals [d]	9.4	0.8	(9.7)	1.1	(5.3)	(13.1)	6.6	5.8
Foreign currency exchange (gain) loss [e]	3.3	(2.7)	3.6	4.5	(2.6)	2.8	13.8	25.8
LIFO expense [f]	(0.3)	10.2	0.1	0.5	0.3	11.1	8.4	3.7
Management advisory fees [g]	—	—	—	—	—	—	—	3.8
Transaction and other related costs [h]	2.1	0.1	1.0	0.7	1.8	3.6	0.9	7.4
Equity-based and other non-cash compensation	5.9	3.4	5.4	4.8	4.6	18.2	19.5	8.8
Restructuring, integration and business optimization expenses [i]	2.0	0.7	—	0.7	2.7	4.1	14.0	13.2
Defined benefit plan pension cost (benefit) [j]	(0.2)	1.0	0.6	0.8	0.7	3.1	(0.8)	2.9
Gain on contract termination [k]	—	—	—	—	—	—	(20.6)	—
Other [l]	1.1	1.0	1.6	2.1	(1.4)	3.5	7.4	4.9
Adjusted EBITDA	**103.1**	**101.0**	**132.5**	**137.7**	**103.1**	**474.3**	**464.0**	**453.3**
Unallocated corporate costs	10.7	10.0	10.3	7.7	12.1	40.1	37.0	30.5
Total Segment Adjusted EBITDA[1]	**113.8**	**111.0**	**142.8**	**145.4**	**115.2**	**514.4**	**501.0**	**483.8**

($ in millions)	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019	Year Ended December 31, 2019	Year Ended December 31, 2018	Year Ended December 31, 2017
EBITDA Adjustments by Line Item								
EBITDA	**71.8**	**80.1**	**124.5**	**115.3**	**93.9**	**413.8**	**386.2**	**294.5**
Cost of goods sold	0.4	10.8	0.4	0.9	0.9	13.0	16.3	7.9
Selling, general and administrative expenses	6.5	4.4	5.9	5.7	5.6	21.6	23.0	13.2
Other operating expense (income), net	13.4	1.8	(7.3)	6.5	(1.0)	—	(0.9)	31.5
Equity in net (income) from affiliated companies	1.7	2.6	1.7	1.7	1.7	7.7	6.6	8.6
Other expense (income), net[2]	5.5	(2.5)	3.6	3.9	(1.5)	3.5	20.2	86.5
Joint venture depreciation, amortization and interest [a]	3.8	3.8	3.7	3.7	3.5	14.7	12.6	11.1
Adjusted EBITDA	**103.1**	**101.0**	**132.5**	**137.7**	**103.1**	**474.3**	**464.0**	**453.3**

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(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

RECONCILATION OF QUARTERLY NET INCOME TO ADJUSTED NET INCOME AND ADJUSTED DILUTED EARNINGS PER SHARE

($ in millions except share and per share data)	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019	Year Ended December 31, 2019	Year Ended December 31, 2018
Net Income	0.5	3.5	30.7	26.8	19.4	80.3	59.6
Less: Net income attributable to the non-controlling interest	0.3	0.3	0.1	0.1	0.3	0.8	1.3
Net Income attributable to PQ Group Holdings, Inc. [1]	0.2	3.2	30.6	26.7	19.1	79.5	58.3
Diluted net income per share:	—	0.02	0.23	0.20	0.14	0.59	0.43
Net Income attributable to PQ Group Holdings, Inc. [1]	0.2	3.2	30.6	26.7	19.1	79.5	58.3
Amortization of investment in affiliate step-up [b]	1.1	1.6	1.0	1.1	1.2	5.0	4.1
Amortization of inventory step-up [c]	—	—	—	—	—	—	1.0
Impairment of long-lived assets	—	—	—	—	1.1	1.1	—
Debt extinguishment costs	1.6	—	—	1.2	1.1	2.3	4.9
Net loss (gain) on asset disposal [d]	7.1	0.5	(7.4)	0.8	(3.5)	(9.7)	4.2
Foreign currency exchange (gain) loss [e]	1.0	(2.0)	4.1	3.9	(1.7)	4.3	8.2
LIFO expense [f]	(0.2)	6.5	0.2	0.4	0.4	7.4	5.3
Transaction and other related costs [h]	1.3	0.1	0.6	0.4	1.3	2.4	0.6
Equity-based and other non-cash compensation	3.8	2.2	3.5	3.2	3.3	12.1	14.9
Restructuring, integration and business optimization expenses [i]	1.3	0.5	—	0.5	1.8	2.7	8.8
Defined benefit pension plan cost (benefit) [j]	(0.1)	0.6	0.4	0.5	0.5	2.1	(0.5)
Gain on contract termination [k]	—	—	—	—	—	—	(13.0)
Other [l]	0.7	0.6	1.0	1.4	(1.0)	2.2	4.6
Adjusted net income, including tax reform and non-cash GILTI tax	17.8	13.8	34.0	40.1	23.6	111.4	101.4
Impact of non-cash GILTI tax [2]	3.9	3.7	7.5	8.2	(5.6)	13.8	21.2
Impact of tax reform [3]	—	—	—	—	—	—	(6.0)
Adjusted net income	21.7	17.5	41.5	48.3	18.0	125.2	116.6
Adjusted diluted net income per share:	0.16	0.13	0.31	0.36	0.13	0.92	0.87
Diluted Weighted Average shares outstanding	136.1	134.9	135.3	135.6	136.2	135.5	134.7

(1) For additional information with respect to each adjustment, see "Reconciliations of Non-GAAP Financial Measures" within this appendix
(2) Amount represents the impact to tax expense in net income before non-controlling interest and the related adjustments to net income associated with GILTI provisions of the Tax Cuts and Jobs Act of 2017 ("TCJA"). Beginning January 1, 2018, GILTI results in taxation of "excess of foreign earnings," which is defined as amounts greater than a 10% rate of return on applicable foreign tangible asset basis. The Company is required to record incremental tax provision impact with respect to GILTI as a result of having historical U.S. net operating loss ("NOL") amounts to offset the GILTI taxable income inclusion. This NOL utilization precludes us from recognizing foreign tax credits ("FTCs") which would otherwise help offset the tax impacts of GILTI. No FTCs will be recognized with respect to GILTI until our cumulative NOL balance has been exhausted. Because the GILTI provision does not impact our cash taxes (given available U.S. NOLs), and given that we expect to recognize FTCs to offset GILTI impacts once the NOLs are exhausted, we do not view this item as a component of core operations.
(3) Represents the provisional benefit (loss) for the impact of the U.S. Tax Cuts and Jobs Act of 2017 and the Dutch Tax Plan 2019 recorded in Net Income

RECONCILIATION OF SALES AND ADJUSTED EBITDA

($ in millions)	Year Ended December 31, 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015 Pro forma [3]	2016 Pro forma [3]	2017	2018	2019
Reconciliation of sales and adjusted EBITDA															
Legacy PQ Sales [1]	635.3	708.6	775.0	977.0	1,009.9	1,087.9	1,115.0	1,084.8	1,085.0	1,114.9					
Legacy Eco Services Sales [2,5]	260.2	288.7	289.4	449.4	293.9	331.0	415.4	410.4	390.8	397.4					
Total Sales	**895.5**	**997.3**	**1,064.4**	**1,426.4**	**1,303.8**	**1,418.9**	**1,530.4**	**1,495.2**	**1,475.8**	**1,512.3**	**1,413.2**	**1,403.0**	**1,472.1**	**1,608.2**	**1,567.1**
Zeolyst Joint Venture total net sales	**45.6**	**60.4**	**63.8**	**69.4**	**63.2**	**69.9**	**99.0**	**87.3**	**148.5**	**106.7**	**159.8**	**131.3**	**143.8**	**156.7**	**170.3**
Legacy PQ Adjusted EBITDA[1]	119.6	151.2	177.3	164.3	225.4	253.8	274.6	268.7	306.8	288.1					
Legacy Eco Services Adjusted EBITDA [2]	71.5	99.0	96.0	106.4	97.5	93.6	99.8	110.8	105.5	107.2					
Total Adjusted EBITDA	**191.1**	**250.2**	**273.3**	**270.7**	**322.9**	**347.4**	**374.4**	**379.5**	**412.3**	**395.3**	**413.2**	**420.8**	**453.3**	**464.0**	**474.3**
% Adjusted EBITDA Margin[4]	**20.3%**	**23.7%**	**24.2%**	**18.1%**	**23.6%**	**23.3%**	**23.0%**	**24.0%**	**25.4%**	**24.4%**	**26.3%**	**27.4%**	**28.1%**	**26.3%**	**27.3%**

(1) Legacy PQ is the results of PQ Holdings Inc. prior to the Business Combination in May 2016
(2) Legacy Eco Services is the results of Eco Services which prior to December 1, 2014 was part of Solvay / Rhodia. Information for 2005 through 2010 is derived from financial information obtained in connection with the acquisition of Legacy Eco and is unaudited and, in some cases, is based upon management estimates
(3) Reflects unaudited pro forma results which gives effect to the Business Combination as further described in the company's annual report on Form 10-K for the year ended December 31, 2017
(4) Adjusted EBITDA margin calculation includes proportionate 50% share of sales from Zeolyst Joint Venture
(5) Amounts presented for Legacy Eco Services in 2014 includes $361.8 and $35.5 of sales and $98.1 and $9.1 of Adjusted EBITDA for the predecessor and successor periods, respectively. Refer to reconciliations for additional details.

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RECONCILIATIONS FOR ADJUSTED EBITDA

Years 2005 – 2014 Legacy PQ[1] Net Income (Loss) to Adjusted EBITDA

	Year Ended December 31,									
($ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Reconciliation of net income (loss) attributable to Legacy PQ to Adjusted EBITDA										
Net income (loss) attributable to Legacy PQ	(41.9)	14.2	(64.7)	(168.2)	(10.6)	11.5	(65.4)	5.2	26.7	(3.6)
Provision for (benefit from) income taxes	(2.2)	14.0	(29.5)	(28.7)	(12.1)	(4.7)	(0.4)	18.9	10.6	7.5
Interest expense	38.3	51.9	79.5	119.2	117.8	112.9	121.2	111.2	120.3	111.6
Depreciation and amortization	44.6	46.8	57.1	88.6	99.6	96.1	98.0	93.4	89.4	91.3
EBITDA	**38.8**	**126.9**	**42.4**	**10.9**	**194.7**	**215.8**	**153.4**	**228.7**	**247.0**	**206.8**
Joint venture depreciation, amortization and interest	2.4	2.1	2.1	2.3	2.1	2.5	3.2	3.3	6.1	6.9
Amortization of investment in affiliate step-up	6.1	1.2	24.7	4.0	2.7	2.7	2.7	2.6	2.4	2.4
Amortization of inventory step-up	32.7	14.0	22.2	28.3	—	—	—	—	—	—
Impairment of long-lived and intangible assets	—	—	—	—	0.3	4.2	67.0	—	0.9	—
Debt extinguishment costs	—	—	32.6	—	—	—	2.3	20.1	20.3	2.5
Net loss on asset disposals	0.3	0.2	0.7	0.1	1.0	(1.1)	2.2	0.8	0.7	0.7
Foreign currency exchange loss (gain)	—	—	1.2	77.0	(26.9)	13.9	5.6	(1.9)	4.4	23.4
Non-cash revaluation of inventory, including LIFO	(0.8)	—	1.7	1.1	7.6	(1.5)	1.5	0.3	1.2	0.8
Management advisory fees	—	2.0	2.0	3.5	5.0	5.0	7.0	7.5	5.0	5.0
Transaction related costs	29.9	0.5	35.8	11.5	0.5	5.5	7.9	0.5	5.6	24.4
Equity-based and other non-cash compensation	0.1	0.1	0.3	0.7	0.2	1.0	0.3	—	1.0	—
Restructuring, integration and business optimization expenses	12.6	4.4	7.3	7.3	11.7	2.6	5.9	5.6	5.4	4.6
Defined benefit plan pension cost (benefit)	—	—	—	0.6	(0.1)	—	—	0.5	3.6	1.8
Other	(2.5)	(0.2)	4.3	17.0	26.6	3.2	15.6	0.7	3.2	8.8
Adjusted EBITDA	**119.6**	**151.2**	**177.3**	**164.3**	**225.4**	**253.8**	**274.6**	**268.7**	**306.8**	**288.1**

(1) Legacy PQ is the results of PQ Holdings Inc. prior to the Business Combination in May 2016

RECONCILIATIONS FOR ADJUSTED EBITDA

2005 – 2014 Legacy Eco Services[1] Net Income (Loss) to Adjusted EBITDA Reconciliation

	Year Ended December 31,										
($ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 Successor	2014 Predecessor
Reconciliation of net income (loss) attributable to Legacy Eco Services to Adjusted EBITDA											
Net income (loss) attributable to Legacy Eco Services	45.4	73.0	73.8	86.0	73.4	65.4	35.8	48.5	39.3	(22.1)	30.5
Provision for income taxes	—	—	—	—	—	—	20.5	26.3	21.4	—	14.6
Interest expense	—	—	—	—	—	—	0.2	0.2	0.1	8.5	0.1
Depreciation and amortization	26.1	26.0	22.2	20.4	24.1	27.5	30.7	38.8	43.5	3.0	42.5
EBITDA	**71.5**	**99.0**	**96.0**	**106.4**	**97.5**	**92.9**	**87.2**	**113.8**	**104.3**	**(10.6)**	**87.7**
Amortization of inventory step-up	—	—	—	—	—	—	2.1	—	—	3.5	—
Transaction related costs	—	—	—	—	—	—	—	—	—	15.5	—
Equity-based and other non-cash compensation	—	—	—	—	—	—	0.4	0.6	0.7	—	0.5
Restructuring, integration and business optimization expenses	—	—	—	—	—	—	—	—	—	0.2	—
Other	—	—	—	—	—	0.7	10.1	(3.6)	0.5	0.5	9.9
Adjusted EBITDA	**71.5**	**99.0**	**96.0**	**106.4**	**97.5**	**93.6**	**99.8**	**110.8**	**105.5**	**9.1**	**98.1**

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(1) Legacy Eco Services is the results of Eco Services which prior to December 1, 2014 was part of Solvay / Rhodia. Information for 2005 through 2010 is derived from financial information obtained in connection with the acquisition of Legacy Eco and is unaudited and, in some cases, is based upon management estimates.

RECONCILIATIONS FOR ADJUSTED EBITDA

Years 2015 – 2019 Post-Business Combination PQ Net Income (Loss) to Adjusted EBITDA

($ in millions)	Year Ended December 31, 2015 Pro forma [1]	2016 Pro forma [1]	2017	2018	2019
Reconciliation of net income (loss) attributable to PQ Group Holdings Inc. to Adjusted EBITDA					
Net income (loss) attributable to PQ Group Holdings Inc.	(26.9)	(59.0)	57.6	58.3	79.5
Provision for (benefit from) income taxes	1.2	58.0	(119.2)	29.0	40.7
Interest expense	199.6	187.9	179.0	113.7	111.5
Depreciation and amortization	152.2	165.8	177.1	185.2	182.1
EBITDA	**326.1**	**352.7**	**294.5**	**386.2**	**413.8**
Joint venture depreciation, amortization and interest [a]	7.9	10.3	11.1	12.6	14.7
Amortization of investment in affiliate step-up [b]	6.6	5.8	8.6	6.6	7.5
Amortization of inventory step-up [c]	—	4.9	0.9	1.6	—
Impairment of long-lived and intangible assets	0.4	6.9	—	—	1.6
Debt extinguishment costs	—	1.8	61.9	7.8	3.4
Net loss on asset disposals [d]	5.5	4.8	5.8	6.6	(13.1)
Foreign currency exchange loss (gain) [e]	21.1	(9.0)	25.8	13.8	2.8
LIFO expense [f]	(2.1)	1.3	3.7	8.4	11.1
Management advisory fees [g]	5.6	5.3	3.8	—	—
Transaction and other related costs [h]	13.2	2.6	7.4	0.9	3.6
Equity-based and other non-cash compensation	4.2	6.5	8.8	19.5	18.2
Restructuring, integration and business optimization expenses [i]	8.6	17.9	13.2	14.0	4.1
Defined benefit plan pension cost (benefit) [j]	6.1	2.8	2.9	(0.8)	3.1
Transition services	4.9	—	—	—	—
Gain on contract termination [k]	—	—	—	(20.6)	—
Other [l]	5.1	6.2	4.9	7.4	3.5
Adjusted EBITDA	**413.2**	**420.8**	**453.3**	**464.0**	**474.3**

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(1) Reflects unaudited pro forma results which gives effect to the Business Combination as further described in the company's annual report on Form 10-K for the year ended December 31, 2017

CONSTANT CURRENCY SALES AND ADJUSTED EBITDA

($ in millions except %, unaudited)	Three Months Ended March 31, 2020 As Reported	Three Months Ended March 31, 2020 FX Impact	Three Months Ended March 31, 2020 Constant Currency	Three Months Ended March 31, 2019 As Reported	Constant Currency % Change
Sales:	$	$	$	$	%
Refining Services	100.7	—	100.7	105.8	(4.8)
Silica Catalysts	24.9	0.2	25.1	15.9	57.9
Performance Materials	65.5	1.4	66.9	61.1	9.5
Performance Chemicals	174.3	4.2	178.5	180.5	(1.1)
Eliminations	(3.8)	(0.1)	(3.9)	(4.1)	(4.9)
Total sales	**361.6**	**5.7**	**367.3**	**359.2**	**2.3**
Zeolyst joint venture sales	32.3	—	32.3	29.5	9.6
Adjusted EBITDA:	$	$	$	$	%
Refining Services	37.2	—	37.2	39.7	(6.3)
Catalysts	22.7	0.1	22.8	18.1	26.0
Performance Materials	13.5	0.1	13.6	10.5	29.5
Performance Chemicals	40.5	1.0	41.5	42.7	(2.8)
Total Segment Adjusted EBITDA	**113.8**	**1.2**	**115.0**	**111.0**	**3.6**
Corporate	(10.7)	—	(10.7)	(10.0)	7.0
Total Adjusted EBITDA	**103.1**	**1.2**	**104.3**	**101.0**	**3.3**

RECONCILIATION OF NON-GAAP FINANCIAL MEASURES

Descriptions to PQ Non-GAAP Reconciliations

a) 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.

b) Represents the amortization of the fair value adjustments associated with the equity affiliate investment in the Zeolyst Joint venture as a result of the combination of the businesses of PQ Holdings Inc. and Eco Services Operations LLC in May 2016 (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 inventory, fixed assets and intangible assets, including customer relationships and technical know-how.

c) 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 statements of income.

d) 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.

e) 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 and, during 2018 and 2017, the Euro denominated term loan (which was settled as part of the February 2018 term loan refinancing).

f) 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.

g) 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 initial public offering ("IPO") on October 3, 2017.

h) 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.

i) Includes the impact of restructuring, integration and business optimization expenses which are incremental costs that are not representative of our ongoing business operations.

j) Represents adjustments for defined benefit pension plan costs in our statements 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.

k) 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.

l) 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, non-cash asset retirement obligation accretion and the initial implementation of procedures to comply with Section 404 of the Sarbanes-Oxley Act. Included in this line-item are rounding discrepancies that may arise from rounding from dollars (in thousands) to dollars (in millions).


Shaping
our path for a
sustainable
future
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