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 27, 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 February 27, 2020, PQ Group Holdings Inc. (the "Company") will participate in investor meetings at the Alembic 10th Annual Global 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 February 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: February 27, 2020	**PQ Group Holdings Inc.**
	By: /s/ Michael Crews
	Executive Vice President and Chief Financial Officer

Exhibit 99.1

INVESTOR PRESENTATION

February 2020

PQ Corporation

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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 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, 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 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.

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, including transaction and restructuring related 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.

PQ CORPORATION OVERVIEW

BY THE NUMBERS

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

Long History: Founded in 1831

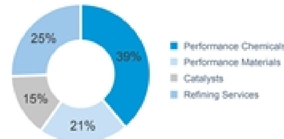
- Differentiated Specialty Businesses
- Innovation Culture
- Sustainable Products
- Track Record of Financial Stability

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]



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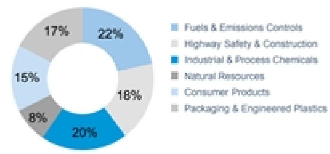
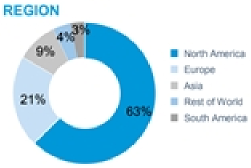


REGION



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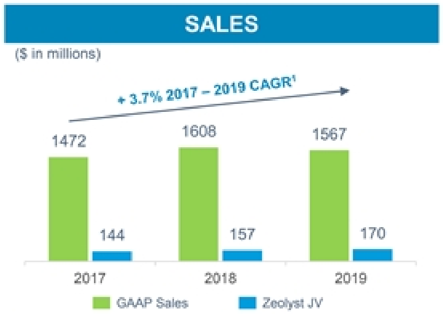
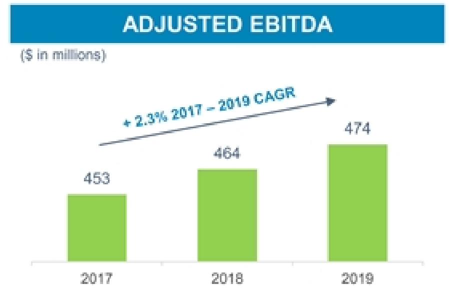
(1) GAAP Sales; Excludes proportionate 50% share of sales from the Zeolyst JV Sales of ~$170 million
(2) Sales include proportionate 50% share of sales from the Zeolyst Joint venture
(3) Excludes inter-segment sales eliminations of $13.8 million

TRACK RECORD OF PERFORMANCE





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(1) CAGR reflects the growth of sales including proportionate 50% share of sales from the Zeolyst Joint venture

PROGRESS ON PORTFOLIO ACTIONS

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Q4/18

- Embarked on strategic portfolio review
- Completed non-core asset sale for $13 million

Q1/19

- Delayered and separated into 4 distinct businesses
- Established cross functional councils for optimization for technology, supply chain, manufacturing

Q2/19

- Closed sale of Performance Chemicals product line for $28 million

Q3/19

- Entered agreement with INEOS to expand Silica Catalyst product line sales into Ziegler Natta technology

Q4/19

- Completed non-core asset sale for $19 million

2020

- Completed Performance Materials asset swap with long term supply
- Launched Performance Chemicals transformation plan to accelerate growth and capital efficiency

REFINING SERVICES

Leading provider of sulfuric acid recycling services and end-to-end logistics for North American alkylation production for higher octane gasoline

COMPETITIVE STRENGTHS

Supplier to largest North America refineries

Multi-decade customer relationships as leading provider of reliable and quality acid regeneration end-to-end logistics and services

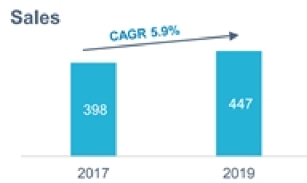
Largest Integrated Supply Network

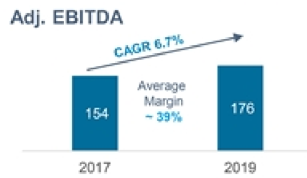
> 50% supplier of sulfuric acid regeneration demand, primarily in Gulf and West Coast with most flexible shipping modes (truck, rail, pipeline, and barge)

Favorable long-term contracts

70% of regeneration contracts under 5 – 10 year take-or-pay terms, with ~90% costs protected with pass-through contract provisions

FINANCIAL HIGHLIGHTS





GROWTH DRIVERS

Shale oil share growth

~ 70% of US oil production expected by 2025, a 35% increase from 2019. Gasoline from shale oil requires more alkylate blending to meet minimum octane ratings

Demand increase in premium gasoline

Price spread between premium and regular gasoline resulted in ~13% CAGR (2014 -2019). Growing share of smaller, more efficient turbocharged engines requires higher octane rated gasoline

Rising gasoline exports

Exports are expected to increase ~ 7% by 2022. Gasoline exports contain no ethanol and require alkylate to meet higher octane requirements for destination countries

KEY APPLICATIONS

Acid Regeneration

Specialty virgin acid for batteries

Industrial

PQ Corporation Sources: EIA and PQ estimates

CATALYSTS

Leading global supplier of specialty and emission control catalysts for global refineries and PE and MMA producers and licensors

COMPETITIVE STRENGTHS

Key supplier for global refineries

A 30 year joint venture with Shell, a leading established supplier of zeolite-based catalysts for hydrocracking and dewaxing

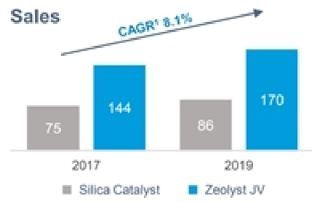
Leader in zeolite technology for HDD

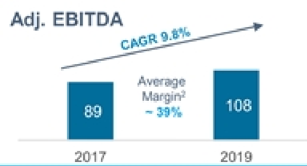
Supplier to top 3 global emission control producers that enables > 90% removal of NOx emissions from diesel engine tailpipe, typically for life of the vehicle platform

Specified with PE and MMA producers

A leading global provider of silica supports and catalysts and sole catalyst supplier for Alpha technology to top MMA producer, supported with long-term contracts

FINANCIAL HIGHLIGHTS





GROWTH DRIVERS

Broader adoption of emissions standards

Increasing global compliance for low sulfur fuels for both on-road and non-road engines, driving increased global hydrocracking capacity investments

Tightening vehicle emission standards

Continued stricter US and Europe regulations to limit diesel engine emissions, with other regions implementing similar standards including China in 2020

Trend for lighter and stronger plastics

~ 80% of PE capacity expansions through 2024 require silica-based catalysts technology

KEY APPLICATIONS

Lower sulfur fuel

Lower NOx emissions

Flexible pipe for gas, water, sewer mains

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Sources: 2018 IHS CEH Report and PQ estimates

(1) Sales CAGR reflects the growth of Combined Sales (GAAP Sales + proportionate 50% share of sales from Zeolyst Joint venture)

(2) Adjusted EBITDA margin calculation includes proportionate 50% share of sales from Zeolyst Joint venture

Notes: HDD: Heavy Duty Diesel; PE: polyethylene; MMA – methyl methacrylate

PERFORMANCE MATERIALS

Global leader in engineered glass microspheres for transportation safety marking and highly specialized industrial applications

COMPETITIVE STRENGTHS

Transportation safety lead bead supplier

~100-year glass technology leader and supplier to North America, Europe, Latin America, and Asia Pacific (ex-China)

Extensive global supply network

Serve > 2,000 customers globally with reputation for meeting stringent quality and specification requirements by country, state and region with short lead delivery times

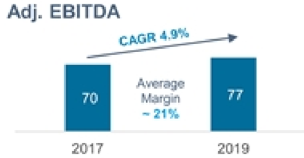
Co-production for industrial applications

Utilizing engineering expertise and efficient co-production to provide wide variety of applications for industrial and consumer applications while achieving lower input costs for customers

FINANCIAL HIGHLIGHTS

Sales

Adj. EBITDA



GROWTH DRIVERS

Steady highway demand

Replacement or re-striping of existing markings, funded by gasoline taxes and new infrastructure drives steady growth

Higher safety regulations

Aging population and autonomous vehicle navigation are driving higher standards for more reflective beads and/or wider line markings to enhance visibility and safety in all weather conditions

Lightweighting & materials substitution

Rising demand for lightweighting, strength and mold flexibility in plastics and other materials, environmentally safe solutions for metal cleaning and substitution in electronic consumer applications

KEY APPLICATIONS

Superior visibility highway markings

Light-weighting consumer products

Structural enhancers in polymers & plastics

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PERFORMANCE CHEMICALS

Leading global producer of sodium silicates, specialty silicas and silicate derivatives for broad range of industrial and consumer uses

COMPETITIVE STRENGTHS

Strategic global infrastructure

Largest global sodium silicates supplier, at least 2x larger than nearest competitor supplying multinational customers' needs locally

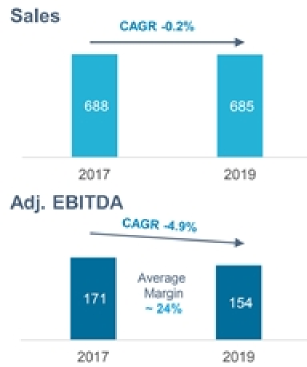
Vertically integrated silicate expertise

Production flexibility, innovation and technical know how enable a broad array of end use applications, including downstream for higher margin niche consumer goods

50+ years customer relationships

> 70% sales contracted for 1 – 3 year terms, with ability in most cases to pass through changes in raw material costs

FINANCIAL HIGHLIGHTS



GROWTH DRIVERS

Shifting consumer preferences

Silicates and silicate derivatives are recognized as environmentally friendly consumer product applications

Regulation driven substitution

Enabling the removal of other chemical materials such as phosphates for cleaning, formaldehyde-based adhesives in construction and volatile organic compounds in coatings

Higher performance standards

Clarification and purification in beverages, edible oils and biofuel feedstocks, flow aids for food and feed, improving dental cleaning without excessive abrasion

KEY APPLICATIONS

Personal care products

Coatings

Beverages

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PERFORMANCE CHEMICALS TRANSFORMATION

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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 annualized in 12 to 18 months

INNOVATION: ~ 200 YEARS OF SUCCESSFUL COMMERCIALIZATION

>$700 million in sales from new products over the last 5 years[1]

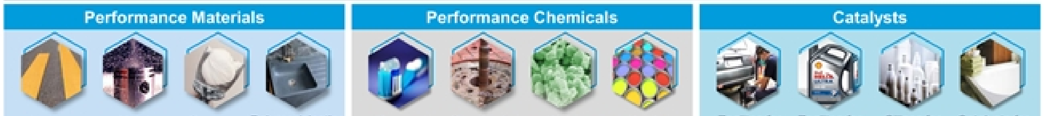
BALANCED INNOVATION APPROACH ENABLES GROWTH

10 Innovation Facilities

130 Scientists & Technologists

- Experienced product development team with strong customer relationships
- Significant expertise in silicates, silica, zeolites, glass, and catalyst technologies
- Ability to tailor and scale specialty grades to meet changing demands
- Robust product development pipeline expected to drive new growth
- Disciplined innovation process to reduce time to market
- Extensive pilot capabilities to refine process economics and value to customers and technical support for large scale commercialization

INNOVATION EXAMPLES:



Performance Materials	Performance Chemicals	Catalysts
Highway markings; Metal Finishing; Consumer products; Polymer/plastics enhancers	Personal Care; Silicates for oil drilling; Water purification; Paints	Zeolites for diesel emission control; Zeolites for dewaxing; Silicas for polyolefin; Catalysts for MMA

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(1) Aggregate sales from products launched within the past 5 years

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

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(1) Based on 2019 Sales

PQ UNDERVALUED VS SPECIALTY CHEMICAL PEERS

Source: Company filings, CapIQ consensus data as of February 18, 2020
Notes: PQ and Peers are not adjusted for M&A
(1) PQ figures are updated for 2019 and include 50% proportional share of Zeolyst Joint venture sales
(2) ESI 2019 numbers are based on market consensus as actual financials haven't been announced
(3) Free Cash Flow calculated as Cash Flow from Operations – Capex
(4) Tangible ROIC calculated as (EBITA less cash taxes) / Avg. Invested Capital

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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

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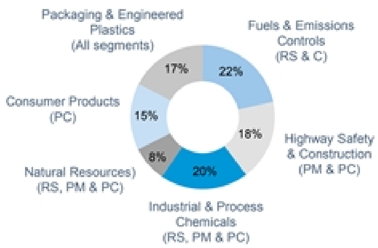
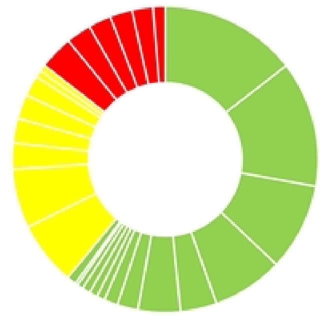
A PORTFOLIO OF STABILITY

% of 2019 Sales by End Use[1]



End Use Categorized by Sensitivity to Downturn[2]

Six Primary End Uses Serve ~28 Secondary End Uses



Sensitivity to Economic Downturn (% of Sales)

Minimal to No Exposure (~ 60%)	Limited Exposure (~25%)	Cyclical Exposure (~15%)
○ Fuels & Emission controls – Driven by gasoline alkylation with 5-10 year contracts and volume minimums ○ Highway Safety – Primarily road striping with 80% replacement business, secure funding ○ Consumer Products – consumer staples (cleaning products, personal care) with steady demand	○ Industrial & Process Chemicals – Diverse end-use applications in general industrial processes & manufacturing ○ Packaging & Engineered Plastics – polymers/plastics for light-weighting of consumer products	○ Construction and Surface Coatings – Furniture, automotive, general construction applications ○ Natural Resources – Paper & pulp, mining, oil drilling

Specific secondary end uses each ~ 1-3% of Sales, not correlated with each other

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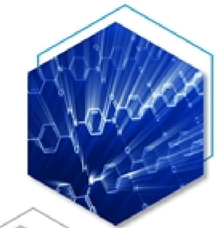
(1) Sales includes proportionate 50% share of sales from Zeolyst Joint venture
(2) PQ estimates based on prior historical performance 2015-2019
RS: Refining Services, C: Catalysts, PM: Performance Materials, PC: Performance Chemicals

2020 GUIDANCE

($ in millions, except % and per share)	2019 Actual	2020 Outlook
Sales	1,567.1	1,595 – 1,625
Adjusted EBITDA	474.3	470 – 480
Adjusted Free Cash Flow	166.2	155 – 175
Adjusted Diluted EPS	0.92	0.85 – 1.02
Interest Expense	111.5	100 – 105
Depreciation & Amortization		
PQ	182.1	180 – 190
Zeolyst JV	14.7	14 – 16
Capital Expenditures	127.6	130 – 140
Effective Tax Rate (ex tax reform)	24.6%	Mid 20%



QUARTERLY SEGMENT SALES, ADJUSTED EBITDA AND MARGINS

Year 2019, 2018 and 2017

($ in millions except %, unaudited)	Three Months Ended March 31, 2019	Three Months Ended June 30, 2019	Three Months Ended September 30, 2019	Three Months Ended December 31, 2019	Year Ended December 31, 2019	Three Months Ended March 31, 2018	Three Months Ended June 30, 2018	Three Months Ended September 30, 2018	Three Months Ended December 31, 2018	Year Ended December 31, 2018	Year Ended December 31, 2017
Sales:											
Refining Services	105.8	117.3	118.3	105.7	447.1	100.7	112.1	123.4	119.4	455.6	398.4
Silica Catalysts	15.9	20.9	25.6	23.3	85.7	16.5	17.3	16.3	22.0	72.1	75.3
Performance Materials	61.1	118.9	115.1	67.9	363.0	62.7	126.5	115.4	73.7	378.3	324.2
Performance Chemicals	180.5	177.8	167.9	158.9	685.1	190.0	183.8	174.7	168.8	717.3	687.6
Eliminations	(4.1)	(3.2)	(3.1)	(3.4)	(13.8)	(3.7)	(5.0)	(2.6)	(3.8)	(15.1)	(13.4)
Total sales	**359.2**	**431.7**	**423.8**	**352.4**	**1,567.1**	**366.2**	**434.7**	**427.2**	**380.1**	**1,608.2**	**1,472.1**
Zeolyst joint venture sales	29.5	39.1	54.4	47.3	170.3	38.3	49.5	32.3	36.5	156.7	143.8
Adjusted EBITDA:											
Refining Services	39.7	42.8	51.2	41.9	175.6	35.5	41.3	49.6	50.1	176.5	154.2
Catalysts	18.1	29.6	31.6	28.5	107.8	22.9	23.6	15.7	18.9	81.1	89.4
Performance Materials	10.5	29.2	25.8	11.2	76.7	12.1	28.6	21.3	10.5	72.5	69.7
Performance Chemicals	42.7	41.2	36.8	33.6	154.3	45.1	44.8	41.8	39.2	170.9	170.5
Total Segment Adjusted EBITDA	**111.0**	**142.8**	**145.4**	**115.2**	**514.4**	**115.6**	**138.3**	**128.4**	**118.7**	**501.0**	**483.8**
Corporate	(10.0)	(10.3)	(7.7)	(12.1)	(40.1)	(7.7)	(9.4)	(10.3)	(9.6)	(37.0)	(30.5)
Total Adjusted EBITDA	**101.0**	**132.5**	**137.7**	**103.1**	**474.3**	**107.9**	**128.9**	**118.1**	**109.1**	**464.0**	**453.3**
Adjusted EBITDA Margin:											
Refining Services	37.5%	36.5%	43.3%	39.6%	39.3%	35.3%	36.8%	40.2%	42.0%	38.7%	38.7%
Catalysts[1]	40.0%	49.4%	39.5%	40.4%	42.1%	41.8%	35.3%	32.3%	32.3%	35.4%	40.8%
Performance Materials	17.2%	24.6%	22.4%	16.5%	21.1%	19.3%	22.6%	18.5%	14.2%	19.2%	21.5%
Performance Chemicals	23.7%	23.1%	21.9%	21.1%	22.5%	23.7%	24.4%	23.9%	23.2%	23.8%	24.8%
Total Adjusted EBITDA Margin[1]	**26.0%**	**28.1%**	**28.8%**	**25.8%**	**27.3%**	**26.7%**	**26.6%**	**25.7%**	**26.2%**	**26.3%**	**28.1%**

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

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

RECONCILATION OF NET INCOME TO SEGMENT ADJUSTED EBITDA

Year 2019, 2018 and 2017

($ in millions)	Three Months Ended March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019	Year Ended December 31, 2019	Three Months Ended March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018	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.	3.2	30.6	26.7	19.1	79.5	0.2	15.8	14.2	28.2	58.3	57.6
Provision for (benefit from) income taxes	2.4	20.3	16.7	1.2	40.7	(0.5)	13.6	8.5	7.4	29.0	(119.2)
Interest expense	28.6	28.5	27.7	26.7	111.5	29.2	27.2	28.2	29.1	113.7	179.0
Depreciation and amortization	45.9	45.1	44.2	46.9	182.1	48.5	47.0	43.8	45.9	185.2	177.1
EBITDA	**80.1**	**124.5**	**115.3**	**93.9**	**413.8**	**77.4**	**103.6**	**94.7**	**110.6**	**386.2**	**294.5**
Joint venture depreciation, amortization and interest [a]	3.8	3.7	3.7	3.5	14.7	3.3	2.6	3.3	3.4	12.6	11.1
Amortization of investment in affiliate step-up [b]	2.6	1.7	1.7	1.7	7.5	1.7	1.7	1.7	1.6	6.6	8.6
Amortization of inventory step-up [c]	—	—	—	—	—	1.6	—	—	—	1.6	0.9
Impairment of fixed assets, intangibles and goodwill	—	—	—	1.6	1.6	—	—	—	—	—	—
Debt extinguishment costs	—	—	1.8	1.6	3.4	5.9	—	0.9	1.1	7.8	61.9
Net loss (gain) on asset disposals [d]	0.8	(9.7)	1.1	(5.3)	(13.1)	1.2	4.8	5.2	(4.5)	6.6	5.8
Foreign currency exchange (gain) loss [e]	(2.7)	3.6	4.5	(2.6)	2.8	5.1	6.8	3.5	(1.5)	13.8	25.8
LIFO expense [f]	10.2	0.1	0.5	0.3	11.1	4.9	0.1	0.9	2.5	8.4	3.7
Management advisory fees [g]	—	—	—	—	—	—	—	—	—	—	3.8
Transaction and other related costs [h]	0.1	1.0	0.7	1.8	3.6	0.4	0.3	0.2	—	0.9	7.4
Equity-based and other non-cash compensation	3.4	5.4	4.8	4.6	18.2	3.8	3.8	4.3	7.6	19.5	8.8
Restructuring, integration and business optimization expenses [i]	0.7	—	0.7	2.7	4.1	1.1	2.4	2.2	8.3	14.0	13.2
Defined benefit plan pension cost (benefit) [j]	1.0	0.6	0.8	0.7	3.1	0.6	(0.4)	0.1	(1.1)	(0.8)	2.9
Gain on contract termination [k]	—	—	—	—	—	—	—	—	(20.6)	(20.6)	—
Other [l]	1.0	1.6	2.1	(1.4)	3.5	0.9	3.2	1.1	1.7	7.4	4.9
Adjusted EBITDA	**101.0**	**132.5**	**137.7**	**103.1**	**474.3**	**107.9**	**128.9**	**118.1**	**109.1**	**464.0**	**453.3**
Unallocated corporate costs	10.0	10.3	7.7	12.1	40.1	7.7	9.4	10.3	9.7	37.0	30.5
Total Segment Adjusted EBITDA[1]	**111.0**	**142.8**	**145.4**	**115.2**	**514.4**	**115.6**	**138.3**	**128.4**	**118.8**	**501.0**	**483.8**
EBITDA Adjustments by Line Item											
EBITDA	**80.1**	**124.5**	**115.3**	**93.9**	**413.8**	**77.4**	**103.6**	**94.7**	**110.6**	**386.2**	**294.5**
Cost of goods sold	10.8	0.4	0.9	0.9	13.0	7.3	2.6	2.1	4.3	16.3	7.9
Selling, general and administrative expenses	4.4	5.9	5.7	5.6	21.6	4.9	4.8	5.4	7.9	23.0	13.2
Other operating expense (income), net	1.8	(7.3)	6.5	(1.0)	—	2.4	7.2	7.3	(17.8)	(0.9)	31.5
Equity in net (income) from affiliated companies	2.6	1.7	1.7	1.7	7.7	1.7	1.7	1.7	1.6	6.6	8.6
Other expense (income), net[2]	(2.5)	3.6	3.9	(1.5)	3.5	10.9	6.4	3.6	(0.9)	20.2	86.5
Joint venture depreciation, amortization and interest(a)	3.8	3.7	3.7	3.5	14.7	3.3	2.6	3.3	3.4	12.6	11.1
Adjusted EBITDA	**101.0**	**132.5**	**137.7**	**103.1**	**474.3**	**107.9**	**128.9**	**118.1**	**109.1**	**464.0**	**453.3**

PQ Corporation

(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

Year 2019 and 2018

($ in millions except share and per share data)	Three Months Ended				Year Ended	Three Months Ended				Year Ended
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019	December 31, 2019	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018	December 31, 2018
Net income	3.5	30.7	26.8	19.4	80.3	0.5	16.2	14.4	28.5	59.6
Less: Net income attributable to the non-controlling interest	0.3	0.1	0.1	0.3	0.8	0.3	0.4	0.2	0.3	1.3
Net income attributable to PQ Group Holdings, Inc. [1]	3.2	30.6	26.7	19.1	79.5	0.2	15.8	14.2	28.2	58.3
Diluted net income per share:	0.02	0.23	0.20	0.14	0.59	—	0.12	0.11	0.21	0.43
Net income attributable to PQ Group Holdings, Inc. [1]	3.2	30.6	26.7	19.1	79.5	0.2	15.8	14.2	28.2	58.3
Amortization of investment in affiliate step-up [b]	1.6	1.0	1.1	1.2	5.0	1.2	1.0	0.9	1.0	4.1
Amortization of inventory step-up [c]	—	—	—	—	—	1.1	—	—	—	1.0
Impairment of long-lived assets	—	—	—	1.1	1.1	—	—	—	—	—
Debt extinguishment costs	—	—	1.2	1.1	2.3	4.1	—	0.2	0.6	4.9
Net loss (gain) on asset disposal [d]	0.5	(7.4)	0.8	(3.5)	(9.7)	0.8	3.1	2.9	(2.7)	4.2
Foreign currency exchange (gain) loss [e]	(2.0)	4.1	3.9	(1.7)	4.3	2.9	5.2	4.0	(3.8)	8.2
LIFO expense [f]	6.5	0.2	0.4	0.4	7.4	3.4	—	0.3	1.7	5.3
Transaction and other related costs [h]	0.1	0.6	0.4	1.3	2.4	0.3	0.2	0.1	—	0.6
Equity-based and other non-cash compensation	2.2	3.5	3.2	3.3	12.1	2.6	2.5	2.2	7.6	14.9
Restructuring, integration and business optimization expenses [i]	0.5	—	0.5	1.8	2.7	0.7	1.6	1.2	5.3	8.8
Defined benefit pension plan cost (benefit) [j]	0.6	0.4	0.5	0.5	2.1	0.4	(0.3)	0.1	(0.7)	(0.5)
Gain on contract termination [k]	—	—	—	—	—	—	—	—	(13.0)	(13.0)
Other [l]	0.6	1.0	1.4	(1.0)	2.2	0.7	2.0	0.4	1.3	4.6
Adjusted net income, including tax reform and non-cash GILTI tax	13.8	34.0	40.1	23.6	111.4	18.4	31.1	26.5	25.5	101.4
Impact of non-cash GILTI tax [2]	3.7	7.5	8.2	(5.6)	13.8	2.5	5.0	11.4	2.2	21.2
Impact of tax reform [3]	—	—	—	0.0	0.0	—	1.1	(2.5)	(4.5)	(6.0)
Adjusted net income	17.5	41.5	48.3	18.0	125.2	20.9	37.2	35.4	23.2	116.6
Adjusted diluted net income per share:	0.13	0.31	0.36	0.13	0.92	0.16	0.28	0.26	0.17	0.87
Diluted Weighted Average shares outstanding	134.9	135.3	135.6	136.2	135.5	133.9	134.2	134.6	135.0	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 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).


Leading the way to a sustainable future
PQ Corporation