
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 20, 2019 (February 20, 2019)

HOLLYFRONTIER CORPORATION
(Exact name of Registrant as specified in its charter)

Delaware
(State or other
jurisdiction of incorporation)

001-03876
(Commission File Number)

75-1056913
(I.R.S. Employer
Identification Number)

2828 N. Harwood, Suite 1300
Dallas, TX
(Address of principal
executive offices)

75201
(Zip code)

Registrant's telephone number, including area code: **(214) 871-3555**

Not applicable
(Former name or former address, if changed since last report)

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))

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 20, 2019, HollyFrontier Corporation (the “Company”) issued a press release announcing the Company’s fourth quarter and full year 2018 results. A copy of the Company’s press release is attached hereto as Exhibit 99.1 and incorporated herein in its entirety.

The information contained in, or incorporated into, this Item 2.02 is being furnished and shall not be deemed “filed” for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference into any registration statement or other filing under the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference to such filing.

Item 9.01 Financial Statements and Exhibits.**(d) Exhibits.**

99.1— Press Release of the Company issued February 20, 2019.*

* Furnished herewith pursuant to Item 2.02.

SIGNATURES

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 thereunto duly authorized.

HOLLYFRONTIER CORPORATION

By: /s/ Richard L. Voliva III
Richard L. Voliva III
Executive Vice President and
Chief Financial Officer

Date: February 20, 2019

Press Release

February 20, 2019



HollyFrontier Corporation Reports 2018 Fourth Quarter and Full Year Results

- Reported net income attributable to HollyFrontier stockholders of \$1.1 billion or \$6.19 per diluted share and adjusted net income of \$1.14 billion or \$6.44 per diluted share, for the year
- Reported EBITDA of \$2.0 billion and adjusted EBITDA of \$2.1 billion, for the year
- Returned \$597.0 million to shareholders through dividends and share repurchases in the year
- Acquisitions of Red Giant Oil and Sonneborn, further strengthening our finished lubricants and specialty products business

Dallas, Texas, February 20, 2019-- HollyFrontier Corporation (NYSE:HFC) (“HollyFrontier” or the “Company”) today reported fourth quarter net income attributable to HollyFrontier stockholders of \$141.9 million or \$0.81 per diluted share for the quarter ended December 31, 2018, compared to \$521.1 million or \$2.92 per diluted share for the quarter ended December 31, 2017.

The fourth quarter results include a lower of cost or market inventory valuation adjustment that decreased pre-tax earnings by \$329.2 million. Excluding this item, net income for the fourth quarter was \$393.9 million (\$2.25 per diluted share) compared to \$124.6 million (\$0.70 per diluted share) for the fourth quarter of 2017, which excludes certain items that collectively decreased earnings by \$396.5 million for the three months ended December 31, 2017. A reconciliation of actual to adjusted earnings is presented in the accompanying reconciliations to amounts reported under Generally Accepted Accounting Principles ("GAAP").

HollyFrontier’s President & CEO, George Damiris, commented, “HollyFrontier achieved strong financial results in 2018 as we were able to capture the favorable crude discounts and healthy product cracks across our refining system. We returned approximately \$597 million in cash to shareholders in the form of regular dividends and share repurchases, while continuing to invest in our assets. Looking to 2019, despite tightening crude differentials, we are optimistic that strength in the diesel markets will continue and we will see a seasonal rebound in gasoline markets. On February 1, 2019, we closed on our previously announced acquisition of Sonneborn. With the addition of Sonneborn, we continue to focus on advancing our downward integration strategy into the high-margin finished lubricants and specialty products market.”

The Refining and Marketing segment reported adjusted EBITDA of \$583.4 million compared to \$233.1 million for the fourth quarter of 2017. This increase was primarily driven by lower laid-in crude costs which resulted in a consolidated refinery gross margin of \$22.17 per produced barrel, a 77% increase compared to \$12.54 for the fourth quarter of 2017. Crude oil charge averaged 405,580 barrels per day (“BPD”) for the fourth quarter compared to 461,110 BPD for the fourth quarter 2017. The lower crude charge was due to the planned turnaround at our El Dorado refinery.

Our Lubricants and Specialty Products segment reported EBITDA of \$(3.9) million, driven by negative Rack Back EBITDA. Rack Forward EBITDA was \$48.5 million for the quarter and \$213.4 million for the year ended December 31, 2018. Rack Back EBITDA was negatively impacted by continued weakness in the base oil markets, coupled with a turnaround at the Mississauga plant in the fourth quarter.

Holly Energy Partners, L.P. ("HEP") reported EBITDA of \$89.9 million for the fourth quarter 2018 compared to \$124.6 million in the fourth quarter of 2017, which included a remeasurement gain related to the acquisition of the remaining interest in the SLC and Frontier Pipelines. HEP EBITDA was negatively impacted by lower UNEV volumes and unplanned maintenance on a refinery process unit at Woods Cross in the fourth quarter.

For the fourth quarter of 2018, net cash provided by operations totaled \$424.5 million. During the period, we declared and paid a dividend of \$0.33 per share to shareholders totaling \$57.6 million and spent \$185.2 million in stock repurchases. At December 31, 2018, our cash and cash equivalents totaled \$1,154.8 million, a \$79.1 million increase over cash and cash equivalents of \$1,075.7 million at September 30, 2018. Additionally, our consolidated long-term debt was \$2,411.5 million. Our debt, exclusive of HEP debt, which is nonrecourse to HollyFrontier, was \$992.6 million at December 31, 2018.

The Company has scheduled a webcast conference call for today, February 20, 2019, at 8:30 AM Eastern Time to discuss fourth quarter financial results. This webcast may be accessed at: <https://78449.themediaframe.com/dataconf/productusers/hfc/mediaframe/27948/index1.html>. An audio archive of this webcast will be available using the above noted link through March 6, 2019.

HollyFrontier Corporation, headquartered in Dallas, Texas, is an independent petroleum refiner and marketer that produces high value light products such as gasoline, diesel fuel, jet fuel and other specialty products. HollyFrontier owns and operates refineries located in Kansas, Oklahoma, New Mexico, Wyoming and Utah and markets its refined products principally in the Southwest U.S., the Rocky Mountains extending into the Pacific Northwest and in other neighboring Plains states. In addition, HollyFrontier produces base oils and other specialized lubricants in the U.S., Canada and Netherlands, and exports products to more than 80 countries. HollyFrontier also owns a 57% limited partner interest and a non-economic general partner interest in Holly Energy Partners, L.P., a master limited partnership that provides petroleum product and crude oil transportation, terminalling, storage and throughput services to the petroleum industry, including HollyFrontier Corporation subsidiaries.

The following is a "safe harbor" statement under the Private Securities Litigation Reform Act of 1995: The statements in this press release relating to matters that are not historical facts are "forward-looking statements" based on management's beliefs and assumptions using currently available information and expectations as of the date hereof, are not guarantees of future performance and involve certain risks and uncertainties, including those contained in our filings with the Securities and Exchange Commission. Although we believe that the expectations reflected in these forward-looking statements are reasonable, we cannot assure you that our expectations will prove correct. Therefore, actual outcomes and results could materially differ from what is expressed, implied or forecast in such statements. Any differences could be caused by a number of factors, including, but not limited to, risks and uncertainties with respect to the actions of actual or potential competitive suppliers of refined petroleum products in the Company's markets, the demand for and supply of crude oil and refined products, the spread between market prices for refined products and market prices for crude oil, the possibility of constraints on the transportation of refined products, the possibility of inefficiencies, curtailments or shutdowns in refinery operations or pipelines, effects of governmental and environmental regulations and policies, the availability and cost of financing to the Company, the effectiveness of the Company's capital investments and marketing strategies, the Company's efficiency in carrying out construction projects, the ability of the Company to acquire refined or lubricant product operations or pipeline and terminal operations on acceptable terms and to integrate any future acquired operations, the possibility of terrorist and cyber attacks and the consequences of any such attacks, general economic conditions and other financial, operational and legal risks and uncertainties detailed from time to time in the Company's Securities and Exchange Commission filings. The forward-looking statements speak only as of the date made and, other than as required by law, we undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

RESULTS OF OPERATIONS

Financial Data (all information in this release is unaudited)

	Three Months Ended December 31,		Change from 2017	
	2018	2017	Change	Percent
(In thousands, except per share data)				
Sales and other revenues	\$ 4,344,204	\$ 3,992,705	\$ 351,499	9 %
Operating costs and expenses:				
Cost of products sold:				
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	3,245,507	3,184,690	60,817	2
Lower of cost or market inventory valuation adjustment	329,232	(93,362)	422,594	(453)
	<u>3,574,739</u>	<u>3,091,328</u>	<u>483,411</u>	<u>16</u>
Operating expenses	352,139	350,405	1,734	—
Selling, general and administrative expenses	85,955	80,411	5,544	7
Depreciation and amortization	113,719	105,731	7,988	8
Total operating costs and expenses	<u>4,126,552</u>	<u>3,627,875</u>	<u>498,677</u>	<u>14</u>
Income from operations	<u>217,652</u>	<u>364,830</u>	<u>(147,178)</u>	<u>(40)</u>
Other income (expense):				
Earnings of equity method investments	1,698	1,545	153	10
Interest income	6,232	1,667	4,565	274
Interest expense	(33,917)	(32,063)	(1,854)	6
Gain on foreign currency transactions	681	(2,596)	3,277	(126)
Remeasurement gain on HEP pipeline interest acquisitions	—	36,254	(36,254)	(100)
Other, net	(528)	1,625	(2,153)	(132)
	<u>(25,834)</u>	<u>6,432</u>	<u>(32,266)</u>	<u>(502)</u>
Income before income taxes	<u>191,818</u>	<u>371,262</u>	<u>(179,444)</u>	<u>(48)</u>
Income tax expense (benefit)	28,501	(185,972)	214,473	(115)
Net income	<u>163,317</u>	<u>557,234</u>	<u>(393,917)</u>	<u>(71)</u>
Less net income attributable to noncontrolling interest	21,421	36,152	(14,731)	(41)
Net income attributable to HollyFrontier stockholders	<u>\$ 141,896</u>	<u>\$ 521,082</u>	<u>\$ (379,186)</u>	<u>(73)%</u>
Earnings per share attributable to HollyFrontier stockholders:				
Basic	<u>\$ 0.82</u>	<u>\$ 2.94</u>	<u>\$ (2.12)</u>	<u>(72)%</u>
Diluted	<u>\$ 0.81</u>	<u>\$ 2.92</u>	<u>\$ (2.11)</u>	<u>(72)%</u>
Cash dividends declared per common share	<u>\$ 0.33</u>	<u>\$ 0.33</u>	<u>\$ —</u>	<u>— %</u>
Average number of common shares outstanding:				
Basic	172,485	176,265	(3,780)	(2)%
Diluted	174,259	177,457	(3,198)	(2)%
EBITDA	\$ 311,801	\$ 471,237	\$ (159,436)	(34)%
Adjusted EBITDA	\$ 641,033	\$ 333,921	\$ 307,112	92 %

	Years Ended December 31,		Change from 2017	
	2018	2017	Change	Percent
(In thousands, except per share data)				
Sales and other revenues	\$ 17,714,666	\$ 14,251,299	\$ 3,463,367	24 %
Operating costs and expenses:				
Cost of products sold:				
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	13,940,782	11,467,873	2,472,909	22
Lower of cost or market inventory valuation adjustment	136,305	(108,685)	244,990	(225)
	14,077,087	11,359,188	2,717,899	24
Operating expenses	1,285,838	1,296,669	(10,831)	(1)
Selling, general and administrative expenses	290,424	265,721	24,703	9
Depreciation and amortization	437,324	409,937	27,387	7
Asset impairment	—	19,247	(19,247)	(100)
Total operating costs and expenses	16,090,673	13,350,762	2,739,911	21
Income from operations	1,623,993	900,537	723,456	80
Other income (expense):				
Earnings of equity method investments	5,825	12,510	(6,685)	(53)
Interest income	16,892	3,736	13,156	352
Interest expense	(131,363)	(117,597)	(13,766)	12
Loss on early extinguishment of debt	—	(12,225)	12,225	(100)
Gain on foreign currency transactions	6,197	16,921	(10,724)	(63)
Gain on foreign currency swap contracts	—	24,545	(24,545)	(100)
Remeasurement gain on HEP pipeline interest acquisitions	—	36,254	(36,254)	(100)
Other, net	2,923	4,182	(1,259)	(30)
	(99,526)	(31,674)	(67,852)	214
Income before income taxes	1,524,467	868,863	655,604	75
Income tax expense (benefit)	347,243	(12,379)	359,622	(2,905)
Net income	1,177,224	881,242	295,982	34
Less net income attributable to noncontrolling interest	79,264	75,847	3,417	5
Net income attributable to HollyFrontier stockholders	\$ 1,097,960	\$ 805,395	\$ 292,565	36 %
Earnings per share attributable to HollyFrontier stockholders:				
Basic	\$ 6.25	\$ 4.54	\$ 1.71	38 %
Diluted	\$ 6.19	\$ 4.52	\$ 1.67	37 %
Cash dividends declared per common share	\$ 1.32	\$ 1.32	\$ —	— %
Average number of common shares outstanding:				
Basic	175,009	176,174	(1,165)	(1)%
Diluted	176,661	177,196	(535)	— %
EBITDA	\$ 1,996,998	\$ 1,316,814	\$ 680,184	52 %
Adjusted EBITDA	\$ 2,054,653	\$ 1,179,479	\$ 875,174	74 %

Balance Sheet Data

	Years Ended December 31,	
	2018	2017
	(In thousands)	
Cash and cash equivalents	\$ 1,154,752	\$ 630,757
Working capital	\$ 2,128,224	\$ 1,640,118
Total assets	\$ 10,994,601	\$ 10,692,154
Long-term debt	\$ 2,411,540	\$ 2,498,993
Total equity	\$ 6,459,059	\$ 5,896,940

Segment Information

Our operations are organized into three reportable segments, Refining, Lubricants and Specialty Products and HEP. Our operations that are not included in the Refining, Lubricants and Specialty Products and HEP segments are included in Corporate and Other. Intersegment transactions are eliminated in our consolidated financial statements and are included in Eliminations. Corporate and Other and Eliminations are aggregated and presented under Corporate, Other and Eliminations column. The Refining segment includes the operations of our El Dorado, Tulsa, Navajo, Cheyenne and Woods Cross refineries and HFC Asphalt (aggregated as a reportable segment). Refining activities involve the purchase and refining of crude oil and wholesale and branded marketing of refined products, such as gasoline, diesel fuel and jet fuel. These petroleum products are primarily marketed in the Mid-Continent, Southwest and Rocky Mountain regions of the United States. HFC Asphalt operates various terminals in Arizona, New Mexico and Oklahoma.

The Lubricants and Specialty Products segment involves PCL's production operations, located in Mississauga, Ontario, that include lubricant products such as base oils, white oils, specialty products and finished lubricants and the operations of our Petro-Canada Lubricants business that includes the marketing of products to both retail and wholesale outlets through a global sales network with locations in Canada, the United States, Europe and China. Additionally, the Lubricants and Specialty Products segment includes specialty lubricant products produced at our Tulsa refineries that are marketed throughout North America and are distributed in Central and South America and the operations of Red Giant Oil Company LLC, one of the largest suppliers of locomotive engine oil in North America.

The HEP segment involves all of the operations of HEP, a consolidated variable interest entity, which owns and operates logistics assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery process units in the Mid-Continent, Southwest and Rocky Mountain regions of the United States. The HEP segment also includes a 75% interest in UNEV Pipeline, LLC (an HEP consolidated subsidiary), and a 50% ownership interest in each of Osage Pipeline Company, LLC and Cheyenne Pipeline LLC. Revenues from the HEP segment are earned through transactions with unaffiliated parties for pipeline transportation, rental and terminalling operations as well as revenues relating to pipeline transportation services provided for our refining operations. Due to certain basis differences, our reported amounts for the HEP segment may not agree to amounts reported in HEP's periodic public filings.

	Refining	Lubricants and Specialty Products	HEP	Corporate, Other and Eliminations	Consolidated Total
(In thousands)					
Three Months Ended December 31, 2018					
Sales and other revenues:					
Revenues from external customers	\$ 3,890,507	\$ 422,975	\$ 30,613	\$ 109	\$ 4,344,204
Intersegment revenues	\$ 85,721	\$ 1,313	\$ 102,179	\$ (189,213)	\$ —
	\$ 3,976,228	\$ 424,288	\$ 132,792	\$ (189,104)	\$ 4,344,204
Cost of products sold (exclusive of lower of cost or market inventory adjustment)	\$ 3,071,340	\$ 341,126	\$ —	\$ (166,959)	\$ 3,245,507
Lower of cost or market inventory valuation adjustment	\$ 329,232	\$ —	\$ —	\$ —	\$ 329,232
Operating expenses	\$ 290,794	\$ 42,719	\$ 39,699	\$ (21,073)	\$ 352,139
Selling, general and administrative expenses	\$ 30,675	\$ 44,325	\$ 2,748	\$ 8,207	\$ 85,955
Depreciation and amortization	\$ 73,482	\$ 13,232	\$ 24,375	\$ 2,630	\$ 113,719
Income (loss) from operations	\$ 180,705	\$ (17,114)	\$ 65,970	\$ (11,909)	\$ 217,652
Earnings of equity method investments	\$ —	\$ —	\$ 1,698	\$ —	\$ 1,698
Capital expenditures	\$ 70,741	\$ 14,309	\$ 13,030	\$ 3,871	\$ 101,951
Three Months Ended December 31, 2017					
Sales and other revenues:					
Revenues from external customers	\$ 3,546,444	\$ 415,693	\$ 29,399	\$ 1,169	\$ 3,992,705
Intersegment revenues	\$ 70,262	\$ —	\$ 99,822	\$ (170,084)	\$ —
	\$ 3,616,706	\$ 415,693	\$ 129,221	\$ (168,915)	\$ 3,992,705
Cost of products sold (exclusive of lower of cost or market inventory adjustment)	\$ 3,059,606	\$ 275,003	\$ —	\$ (149,919)	\$ 3,184,690
Lower of cost or market inventory valuation adjustment	\$ (92,114)	\$ (1,248)	\$ —	\$ —	\$ (93,362)
Operating expenses	\$ 265,365	\$ 67,666	\$ 35,084	\$ (17,710)	\$ 350,405
Selling, general and administrative expenses	\$ 31,629	\$ 33,783	\$ 5,454	\$ 9,545	\$ 80,411
Depreciation and amortization	\$ 70,500	\$ 11,324	\$ 21,145	\$ 2,762	\$ 105,731
Income (loss) from operations	\$ 281,720	\$ 29,165	\$ 67,538	\$ (13,593)	\$ 364,830
Earnings of equity method investments	\$ —	\$ —	\$ 1,545	\$ —	\$ 1,545
Capital expenditures	\$ 46,295	\$ 10,691	\$ 14,135	\$ 8,021	\$ 79,142

	Refining	Lubricants and Specialty Products	HEP	Corporate, Other and Eliminations	Consolidated Total
(In thousands)					
Year Ended December 31, 2018					
Sales and other revenues:					
Revenues from external customers	\$ 15,806,304	\$ 1,799,506	\$ 108,412	\$ 444	\$ 17,714,666
Intersegment revenues	\$ 370,259	\$ 13,197	\$ 397,808	\$ (781,264)	\$ —
	\$ 16,176,563	\$ 1,812,703	\$ 506,220	\$ (780,820)	\$ 17,714,666
Cost of products sold (exclusive of lower of cost or market inventory adjustment)	\$ 13,250,849	\$ 1,381,540	\$ —	\$ (691,607)	\$ 13,940,782
Lower of cost or market inventory valuation adjustment	\$ 136,305	\$ —	\$ —	\$ —	\$ 136,305
Operating expenses	\$ 1,055,209	\$ 167,820	\$ 146,430	\$ (83,621)	\$ 1,285,838
Selling, general and administrative expenses	\$ 113,641	\$ 143,750	\$ 11,041	\$ 21,992	\$ 290,424
Depreciation and amortization	\$ 284,439	\$ 43,255	\$ 98,492	\$ 11,138	\$ 437,324
Income (loss) from operations	\$ 1,336,120	\$ 76,338	\$ 250,257	\$ (38,722)	\$ 1,623,993
Earnings of equity method investments	\$ —	\$ —	\$ 5,825	\$ —	\$ 5,825
Capital expenditures	\$ 202,791	\$ 37,448	\$ 54,141	\$ 16,649	\$ 311,029
Year Ended December 31, 2017					
Sales and other revenues:					
Revenues from external customers	\$ 12,579,672	\$ 1,594,036	\$ 77,225	\$ 366	\$ 14,251,299
Intersegment revenues	\$ 338,390	\$ —	\$ 377,137	\$ (715,527)	\$ —
	\$ 12,918,062	\$ 1,594,036	\$ 454,362	\$ (715,161)	\$ 14,251,299
Cost of products sold (exclusive of lower of cost or market inventory adjustment)	\$ 11,009,419	\$ 1,093,984	\$ —	\$ (635,530)	\$ 11,467,873
Lower of cost or market inventory valuation adjustment	\$ (107,479)	\$ (1,206)	\$ —	\$ —	\$ (108,685)
Operating expenses	\$ 1,008,859	\$ 222,461	\$ 137,856	\$ (72,507)	\$ 1,296,669
Selling, general and administrative expenses	\$ 103,246	\$ 105,666	\$ 14,336	\$ 42,473	\$ 265,721
Depreciation and amortization	\$ 289,434	\$ 31,894	\$ 77,660	\$ 10,949	\$ 409,937
Asset impairment	\$ 19,247	\$ —	\$ —	\$ —	\$ 19,247
Income (loss) from operations	\$ 595,336	\$ 141,237	\$ 224,510	\$ (60,546)	\$ 900,537
Earnings of equity method investments	\$ —	\$ —	\$ 12,510	\$ —	\$ 12,510
Capital expenditures	\$ 176,533	\$ 31,464	\$ 44,810	\$ 19,452	\$ 272,259
December 31, 2018					
Cash and cash equivalents	\$ 7,236	\$ 80,931	\$ 3,045	\$ 1,063,540	\$ 1,154,752
Total assets	\$ 6,465,155	\$ 1,506,209	\$ 2,142,027	\$ 881,210	\$ 10,994,601
Long-term debt	\$ —	\$ —	\$ 1,418,900	\$ 992,640	\$ 2,411,540
December 31, 2017					
Cash and cash equivalents	\$ 7,488	\$ 41,756	\$ 7,776	\$ 573,737	\$ 630,757
Total assets	\$ 6,474,666	\$ 1,610,472	\$ 2,191,984	\$ 415,032	\$ 10,692,154
Long-term debt	\$ —	\$ —	\$ 1,507,308	\$ 991,685	\$ 2,498,993

Refining Segment Operating Data

The following tables set forth information, including non-GAAP performance measures about our refinery operations. Refinery gross and net operating margins do not include the non-cash effects of lower of cost or market inventory valuation adjustments and depreciation and amortization. Reconciliations to amounts reported under GAAP are provided below.

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
Mid-Continent Region (El Dorado and Tulsa Refineries)				
Crude charge (BPD) ⁽¹⁾	216,870	270,180	249,240	261,380
Refinery throughput (BPD) ⁽²⁾	236,240	289,050	264,730	277,940
Sales of produced refined products (BPD) ⁽³⁾	243,680	277,560	255,800	260,800
Refinery utilization ⁽⁴⁾	83.4%	103.9%	95.9%	100.5%
Average per produced barrel ⁽⁵⁾				
Refinery gross margin	\$ 19.01	\$ 11.42	\$ 14.44	\$ 9.91
Refinery operating expenses ⁽⁶⁾	6.55	5.09	5.51	5.15
Net operating margin	\$ 12.46	\$ 6.33	\$ 8.93	\$ 4.76
Refinery operating expenses per throughput barrel ⁽⁷⁾				
	\$ 6.76	\$ 4.89	\$ 5.32	\$ 4.83
Feedstocks:				
Sweet crude oil	56%	59%	54%	61%
Sour crude oil	25%	19%	24%	17%
Heavy sour crude oil	11%	16%	16%	16%
Other feedstocks and blends	8%	6%	6%	6%
Total	100%	100%	100%	100%
Sales of produced refined products:				
Gasolines	52%	53%	51%	50%
Diesel fuels	30%	32%	33%	33%
Jet fuels	7%	7%	6%	7%
Fuel oil	1%	1%	1%	1%
Asphalt	3%	2%	3%	3%
Base oils	4%	3%	4%	4%
LPG and other	3%	2%	2%	2%
Total	100%	100%	100%	100%

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
Southwest Region (Navajo Refinery)				
Crude charge (BPD) ⁽¹⁾	110,160	110,980	109,440	100,040
Refinery throughput (BPD) ⁽²⁾	119,640	121,400	118,630	109,280
Sales of produced refined products (BPD) ⁽³⁾	119,390	122,710	120,520	111,630
Refinery utilization ⁽⁴⁾	110.2%	111.0%	109.4%	100.0%
Average per produced barrel ⁽⁵⁾				
Refinery gross margin	\$ 22.68	\$ 12.91	\$ 19.05	\$ 12.40
Refinery operating expenses ⁽⁶⁾	5.37	4.71	4.81	5.20
Net operating margin	\$ 17.31	\$ 8.20	\$ 14.24	\$ 7.20
Refinery operating expenses per throughput barrel ⁽⁷⁾				
	\$ 5.36	\$ 4.76	\$ 4.89	\$ 5.31
Feedstocks:				
Sweet crude oil	14%	31%	27%	25%
Sour crude oil	78%	61%	65%	66%
Other feedstocks and blends	8%	8%	8%	9%
Total	100%	100%	100%	100%
Sales of produced refined products:				
Gasolines	51%	51%	50%	51%
Diesel fuels	39%	40%	40%	39%
Fuel oil	3%	3%	3%	3%
Asphalt	4%	3%	4%	4%
LPG and other	3%	3%	3%	3%
Total	100%	100%	100%	100%
Rocky Mountain Region (Cheyenne and Woods Cross Refineries)				
Crude charge (BPD) ⁽¹⁾	78,550	79,950	72,890	77,380
Refinery throughput (BPD) ⁽²⁾	84,670	87,000	79,980	84,790
Sales of produced refined products (BPD) ⁽³⁾	80,600	82,590	76,300	79,840
Refinery utilization ⁽⁴⁾	81.0%	82.4%	75.1%	79.8%
Average per produced barrel ⁽⁵⁾				
Refinery gross margin	\$ 30.96	\$ 15.77	\$ 26.55	\$ 15.78
Refinery operating expenses ⁽⁶⁾	11.45	10.75	11.83	10.46
Net operating margin	\$ 19.51	\$ 5.02	\$ 14.72	\$ 5.32
Refinery operating expenses per throughput barrel ⁽⁷⁾				
	\$ 10.90	\$ 10.20	\$ 11.28	\$ 9.85
Feedstocks:				
Sweet crude oil	34%	35%	28%	34%
Heavy sour crude oil	38%	34%	42%	35%
Black wax crude oil	21%	23%	21%	22%
Other feedstocks and blends	7%	8%	9%	9%
Total	100%	100%	100%	100%

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
Sales of produced refined products:				
Gasolines	52%	59%	55%	58%
Diesel fuels	32%	30%	33%	32%
Fuel oil	4%	3%	3%	3%
Asphalt	6%	4%	5%	4%
LPG and other	6%	4%	4%	3%
Total	100%	100%	100%	100%

Consolidated

Crude charge (BPD) ⁽¹⁾	405,580	461,110	431,570	438,800
Refinery throughput (BPD) ⁽²⁾	440,550	497,450	463,340	472,010
Sales of produced refined products (BPD) ⁽³⁾	443,670	482,860	452,630	452,270
Refinery utilization ⁽⁴⁾	88.7%	100.9%	94.4%	96.0%

Average per produced barrel ⁽⁵⁾

Refinery gross margin	\$ 22.17	\$ 12.54	\$ 17.71	\$ 11.56
Refinery operating expenses ⁽⁶⁾	7.12	5.97	6.39	6.11
Net operating margin	\$ 15.05	\$ 6.57	\$ 11.32	\$ 5.45

Refinery operating expenses per throughput barrel ⁽⁷⁾	\$ 7.17	\$ 5.80	\$ 6.24	\$ 5.86
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Feedstocks:

Sweet crude oil	40%	48%	43%	48%
Sour crude oil	35%	26%	30%	25%
Heavy sour crude oil	13%	15%	17%	16%
Black wax crude oil	4%	4%	4%	4%
Other feedstocks and blends	8%	7%	6%	7%
Total	100%	100%	100%	100%

Consolidated

Sales of produced refined products:

Gasolines	52%	53%	52%	52%
Diesel fuels	33%	34%	34%	34%
Jet fuels	4%	4%	3%	4%
Fuel oil	2%	2%	2%	2%
Asphalt	4%	3%	4%	4%
Base oils	2%	2%	2%	2%
LPG and other	3%	2%	3%	2%
Total	100%	100%	100%	100%

(1) Crude charge represents the barrels per day of crude oil processed at our refineries.

(2) Refinery throughput represents the barrels per day of crude and other refinery feedstocks input to the crude units and other conversion units at our refineries.

(3) Represents barrels sold of refined products produced at our refineries (including HFC Asphalt) and does not include volumes of refined products purchased for resale or volumes of excess crude oil sold.

(4) Represents crude charge divided by total crude capacity ("BPSD"). Our consolidated crude capacity is 457,000 BPSD.

(5) Represents average amount per produced barrel sold, which is a non-GAAP measure. Reconciliations to amounts reported under GAAP are provided below.

(6) Represents total refining segment operating expenses, exclusive of depreciation and amortization, divided by sales volumes of refined products produced at our refineries.

(7) Represents total refining segment operating expenses, exclusive of depreciation and amortization, divided by refinery throughput.

Lubricants and Specialty Products Segment Operating Data

We acquired our Petro-Canada Lubricants business on February 1, 2017. For the twelve months ended December 31, 2017, our lubricants and specialty product operating results reflect the operations of our Petro-Canada Lubricants business for the period February 1, 2017 through December 31, 2017.

The following table sets forth information about our lubricants and specialty products operations.

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
Lubricants and Specialty Products				
Throughput (BPD)	16,790	20,990	19,590	21,710
Sales of produced products (BPD)	27,550	29,670	30,510	32,910
Sales of produced products:				
Finished products	51%	46%	48%	45%
Base oils	30%	28%	31%	31%
Other	19%	26%	21%	24%
Total	100%	100%	100%	100%

Our Lubricants and Specialty Products segment includes base oil production activities, by-product sales to third parties and intra-segment base oil sales to rack forward, referred to as "Rack Back." "Rack Forward" includes the purchase of base oils and the blending, packaging, marketing and distribution and sales of finished lubricants and specialty products to third parties. Supplemental financial data attributable to our Lubricants and Specialty Products segment is presented below:

	Rack Back ⁽¹⁾		Rack Forward ⁽²⁾		Eliminations ⁽³⁾		Total Lubricants and Specialty Products
	(In thousands)						
Three Months Ended December 31, 2018							
Sales and other revenues	\$	136,592	\$	401,170	\$	(113,474)	\$ 424,288
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$	150,617	\$	303,983	\$	(113,474)	\$ 341,126
Operating expenses	\$	28,426	\$	14,293	\$	—	\$ 42,719
Selling, general and administrative expenses	\$	9,940	\$	34,385	\$	—	\$ 44,325
Depreciation and amortization	\$	8,969	\$	4,263	\$	—	\$ 13,232
Income (loss) from operations	\$	(61,360)	\$	44,246	\$	—	\$ (17,114)
EBITDA	\$	(52,391)	\$	48,509	\$	—	\$ (3,882)
Three Months Ended December 31, 2017							
Sales and other revenues	\$	186,478	\$	361,681	\$	(132,466)	\$ 415,693
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$	153,141	\$	254,328	\$	(132,466)	\$ 275,003
Lower of cost or market inventory valuation adjustment	\$	—	\$	(1,248)	\$	—	\$ (1,248)
Operating expenses	\$	30,051	\$	37,615	\$	—	\$ 67,666
Selling, general and administrative expenses	\$	11,713	\$	22,070	\$	—	\$ 33,783
Depreciation and amortization	\$	8,996	\$	2,328	\$	—	\$ 11,324
Income from operations	\$	(17,423)	\$	46,588	\$	—	\$ 29,165
EBITDA	\$	(8,427)	\$	48,916	\$	—	\$ 40,489

	Rack Back ⁽¹⁾	Rack Forward ⁽²⁾	Eliminations ⁽³⁾	Total Lubricants and Specialty Products
	(In thousands)			
Year Ended December 31, 2018				
Sales and other revenues	\$ 682,892	\$ 1,650,056	\$ (520,245)	\$ 1,812,703
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 633,459	\$ 1,268,326	\$ (520,245)	\$ 1,381,540
Operating expenses	\$ 111,155	\$ 56,665	\$ —	\$ 167,820
Selling, general and administrative expenses	\$ 32,086	\$ 111,664	\$ —	\$ 143,750
Depreciation and amortization	\$ 26,955	\$ 16,300	\$ —	\$ 43,255
Income (loss) from operations	\$ (120,763)	\$ 197,101	\$ —	\$ 76,338
EBITDA	\$ (93,808)	\$ 213,401	\$ —	\$ 119,593
Year Ended December 31, 2017				
Sales and other revenues	\$ 621,153	\$ 1,415,842	\$ (442,959)	\$ 1,594,036
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 504,782	\$ 1,032,161	\$ (442,959)	\$ 1,093,984
Lower of cost or market inventory valuation adjustment	\$ —	\$ (1,206)	\$ —	\$ (1,206)
Operating expenses	\$ 95,303	\$ 127,158	\$ —	\$ 222,461
Selling, general and administrative expenses	\$ 27,764	\$ 77,902	\$ —	\$ 105,666
Depreciation and amortization	\$ 23,471	\$ 8,423	\$ —	\$ 31,894
Income (loss) from operations	\$ (30,167)	\$ 171,404	\$ —	\$ 141,237
EBITDA	\$ (6,696)	\$ 179,827	\$ —	\$ 173,131

- (1) Rack Back consists of the PCLI base oil production activities, by-product sales to third parties and intra-segment base oil sales to rack forward.
- (2) Rack Forward activities include the purchase of base oils from rack back and the blending, packaging, marketing and distribution and sales of finished lubricants and specialty products to third parties.
- (3) Intra-segment sales of Rack Back produced base oils to rack forward are eliminated under the "Eliminations" column.

Reconciliations to Amounts Reported Under GAAP

Reconciliations of earnings before interest, taxes, depreciation and amortization ("EBITDA") and EBITDA excluding special items ("Adjusted EBITDA") to amounts reported under GAAP in financial statements.

Earnings before interest, taxes, depreciation and amortization, referred to as EBITDA, is calculated as net income attributable to HollyFrontier stockholders plus (i) interest expense, net of interest income, (ii) income tax expense and (iii) depreciation and amortization. Adjusted EBITDA is calculated as EBITDA plus or minus (i) lower of cost or market inventory valuation adjustments, (ii) our RINs cost reduction related to our Cheyenne and Woods Cross small refinery exemptions, (iii) Woods Cross refinery outage damages, (iv) Woods Cross refinery estimated insurance claims on outage damages, (v) PCL I acquisition and integration costs (vi) long-lived asset impairment charges charged to operating expense, (vii) incremental cost of products sold attributable to our PCL I inventory value step-up, (viii) loss on early extinguishment of debt and (ix) gain on foreign currency swap contracts.

EBITDA and Adjusted EBITDA are not calculations provided for GAAP; however, the amounts included in these calculations are derived from amounts included in our consolidated financial statements. EBITDA and Adjusted EBITDA should not be considered as alternatives to net income or operating income as an indication of our operating performance or as an alternative to operating cash flow as a measure of liquidity. EBITDA and Adjusted EBITDA are not necessarily comparable to similarly titled measures of other companies. These are presented here because they are widely used financial indicators used by investors and analysts to measure performance. EBITDA and Adjusted EBITDA are also used by our management for internal analysis and as a basis for financial covenants.

Set forth below is our calculation of EBITDA and Adjusted EBITDA.

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
	(In thousands)			
Net income attributable to HollyFrontier stockholders	\$ 141,896	\$ 521,082	\$ 1,097,960	\$ 805,395
Add (subtract) income tax expense (benefit)	28,501	(185,972)	347,243	(12,379)
Add interest expense	33,917	32,063	131,363	117,597
Subtract interest income	(6,232)	(1,667)	(16,892)	(3,736)
Add depreciation and amortization	113,719	105,731	437,324	409,937
EBITDA	\$ 311,801	\$ 471,237	\$ 1,996,998	\$ 1,316,814
Add (subtract) lower of cost or market inventory valuation adjustment	329,232	(93,362)	136,305	(108,685)
Subtract RINs cost reduction	—	(27,000)	(96,971)	(57,456)
Add Woods Cross refinery outage damages	—	—	24,566	—
Subtract Woods Cross refinery insurance claims on outage damages	—	—	(9,840)	—
Add PCL I acquisition and integration costs	—	4,436	3,595	27,942
Add asset impairment	—	—	—	19,247
Add incremental cost of products sold attributable to PCL I inventory value step-up	—	—	—	15,327
Add loss on early extinguishment of debt	—	—	—	12,225
Subtract HollyFrontier's pro-rata share of remeasurement gain on HEP pipeline interest acquisitions	—	(21,390)	—	(21,390)
Subtract gain on foreign currency swap contracts	—	—	—	(24,545)
Adjusted EBITDA	\$ 641,033	\$ 333,921	\$ 2,054,653	\$ 1,179,479

EBITDA and Adjusted EBITDA attributable to our Refining segment is presented below:

Refining Segment	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
	(In thousands)			
Income from operations ⁽¹⁾	\$ 180,705	\$ 281,720	\$ 1,336,120	\$ 595,336
Add depreciation and amortization	73,482	70,500	284,439	289,434
EBITDA	254,187	352,220	1,620,559	884,770
Add (subtract) lower of cost or market inventory valuation adjustment	329,232	(92,114)	136,305	(107,479)
Subtract RINs cost reduction	—	(27,000)	(96,971)	(57,456)
Add Woods Cross refinery outage damages	—	—	24,566	—
Subtract Woods Cross refinery insurance claims on outage damages	—	—	(9,840)	—
Add asset impairment	—	—	—	19,247
Adjusted EBITDA	\$ 583,419	\$ 233,106	\$ 1,674,619	\$ 739,082

(1) Income from operations of our Refining segment represents income plus (i) interest expense, net of interest income and (ii) income tax provision.

EBITDA attributable to our Lubricants and Specialty Products segment is set forth below.

Lubricants and Specialty Products Segment	Rack Back		Rack Forward		Total Lubricants and Specialty Products
	(In thousands)				
Three Months Ended December 31, 2018					
Income (loss) from operations ⁽¹⁾	\$ (61,360)	\$ 44,246	\$ (17,114)		
Add depreciation and amortization	8,969	4,263	13,232		
EBITDA	\$ (52,391)	\$ 48,509	\$ (3,882)		
Three Months Ended December 31, 2017					
Income (loss) from operations ⁽¹⁾	\$ (17,423)	\$ 46,588	\$ 29,165		
Add depreciation and amortization	8,996	2,328	11,324		
EBITDA	\$ (8,427)	\$ 48,916	\$ 40,489		
Year Ended December 31, 2018					
Income (loss) from operations ⁽¹⁾	\$ (120,763)	\$ 197,101	\$ 76,338		
Add depreciation and amortization	26,955	16,300	43,255		
EBITDA	\$ (93,808)	\$ 213,401	\$ 119,593		
Year Ended December 31, 2017					
Income (loss) from operations ⁽¹⁾	\$ (30,167)	\$ 171,404	\$ 141,237		
Add depreciation and amortization	23,471	8,423	31,894		
EBITDA	\$ (6,696)	\$ 179,827	\$ 173,131		

(1) Income (loss) from operations of our Lubricants and Specialty Products segment represents income (loss) plus (i) interest expense, net of interest income, and (ii) income tax provision.

Reconciliations of refinery operating information (non-GAAP performance measures) to amounts reported under GAAP.

Refinery gross margin and net operating margin are non-GAAP performance measures that are used by our management and others to compare our refining performance to that of other companies in our industry. We believe these margin measures are helpful to investors in evaluating our refining performance on a relative and absolute basis. Refinery gross margin per produced barrel sold is total refining segment revenues less total refining segment cost of products sold, exclusive of lower of cost or market inventory valuation adjustments, divided by sales volumes of produced refined products sold. Net operating margin per barrel sold is the difference between refinery gross margin and refinery operating expenses per produced barrel sold. These two margins do not include the non-cash effects of lower of cost or market inventory valuation adjustments or depreciation and amortization. Each of these component performance measures can be reconciled directly to our consolidated statements of income. Other companies in our industry may not calculate these performance measures in the same manner.

Below are reconciliations to our consolidated statements of income for refinery net operating and gross margin and operating expenses, in each case averaged per produced barrel sold. Due to rounding of reported numbers, some amounts may not calculate exactly.

Reconciliation of average refining segment net operating margin per produced barrel sold to refinery gross margin to total sales and other revenues

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
(Dollars in thousands, except per barrel amounts)				
Consolidated				
Net operating margin per produced barrel sold	\$ 15.05	\$ 6.57	\$ 11.32	\$ 5.45
Add average refinery operating expenses per produced barrel sold	7.12	5.97	6.39	6.11
Refinery gross margin per produced barrel sold	\$ 22.17	\$ 12.54	\$ 17.71	\$ 11.56
Times produced barrels sold (BPD)	443,670	482,860	452,630	452,270
Times number of days in period	92	92	365	365
Refining segment gross margin	\$ 904,927	\$ 557,066	\$ 2,925,868	\$ 1,908,308
Add (subtract) rounding	(39)	35	(154)	335
Total refining segment gross margin	904,888	557,101	2,925,714	1,908,643
Add refining segment cost of products sold	3,071,340	3,059,605	13,250,849	11,009,419
Refining segment sales and other revenues	3,976,228	3,616,706	16,176,563	12,918,062
Add lubricants and specialty products segment sales and other revenues	424,288	415,693	1,812,703	1,594,036
Add HEP segment sales and other revenues	132,792	129,221	506,220	454,362
Subtract corporate, other and eliminations	(189,104)	(168,915)	(780,820)	(715,161)
Sales and other revenues	\$ 4,344,204	\$ 3,992,705	\$ 17,714,666	\$ 14,251,299

Reconciliation of average refining segment operating expenses per produced barrel sold to total operating expenses

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
(Dollars in thousands, except per barrel amounts)				
Consolidated				
Average operating expenses per produced barrel sold	\$ 7.12	\$ 5.97	\$ 6.39	\$ 6.11
Times produced barrels sold (BPD)	443,670	482,860	452,630	452,270
Times number of days in period	92	92	365	365
Refining segment operating expenses	\$ 290,622	\$ 265,206	\$ 1,055,692	\$ 1,008,630
Add (subtract) rounding	172	159	(483)	229
Total refining segment operating expenses	290,794	265,365	1,055,209	1,008,859
Add lubricants and specialty products segment operating expenses	42,719	67,666	167,820	222,461
Add HEP segment operating expenses	39,699	35,084	146,430	137,856
Subtract corporate, other and eliminations	(21,073)	(17,710)	(83,621)	(72,507)
Operating expenses (exclusive of depreciation and amortization)	\$ 352,139	\$ 350,405	\$ 1,285,838	\$ 1,296,669

Reconciliation of net income attributable to HollyFrontier stockholders to adjusted net income attributable to HollyFrontier stockholders

Adjusted net income attributable to HollyFrontier stockholders is a non-GAAP financial measure that excludes non-cash lower of cost or market inventory valuation adjustments, RINs cost reductions, refinery outage damages and related estimated insurance claims, asset impairment charges, PCLI acquisition and integration costs, incremental costs of products sold due to PCLI inventory value step-up, gain of foreign currency swap contracts and loss on early extinguishment of debt. We believe this measure is helpful to investors and others in evaluating our financial performance and to compare our results to that of other companies in our industry. Similarly titled performance measures of other companies may not be calculated in the same manner.

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
	(Dollars in thousands, except per share amounts)			
Consolidated				
GAAP:				
Income before income taxes	\$ 191,818	\$ 371,262	\$ 1,524,467	\$ 868,863
Income tax expense (benefit)	28,501	(185,972)	347,243	(12,379)
Net income	163,317	557,234	1,177,224	881,242
Less net income attributable to noncontrolling interest	21,421	36,152	79,264	75,847
Net income attributable to HollyFrontier stockholders	141,896	521,082	1,097,960	805,395
Non-GAAP adjustments to arrive at adjusted results:				
Lower of cost or market inventory valuation adjustment	329,232	(93,362)	136,305	(108,685)
RINs cost reduction	—	(27,000)	(96,971)	(57,456)
Woods Cross refinery outage damages	—	—	24,566	—
Woods Cross refinery insurance claims on outage damages	—	—	(9,840)	—
PCLI acquisition and integration costs	—	4,436	3,595	27,942
Remeasurement gain on HEP pipeline interest acquisitions	—	(36,254)	—	(36,254)
Asset impairment	—	—	—	23,249
Incremental cost of products sold attributable to PCLI inventory value step up	—	—	—	15,327
Loss on early extinguishment of debt	—	—	—	12,225
Gain on foreign currency swap contracts	—	—	—	(24,545)
Total adjustments to income before income taxes	329,232	(152,180)	57,655	(148,197)
Adjustment to income tax expense ⁽¹⁾	77,198	259,160	14,746	260,514
Adjustment to net income attributable to noncontrolling interest	—	(14,864)	—	(7,162)
Total adjustments, net of tax	252,034	(396,476)	42,909	(401,549)
Adjusted results - Non-GAAP:				
Adjusted income before income taxes	521,050	219,082	1,582,122	720,666
Adjusted income tax expense ⁽²⁾	105,699	73,188	361,989	248,135
Adjusted net income	415,351	145,894	1,220,133	472,531
Less net income attributable to noncontrolling interest	21,421	21,288	79,264	68,685
Adjusted net income attributable to HollyFrontier stockholders	\$ 393,930	\$ 124,606	\$ 1,140,869	\$ 403,846
Adjusted earnings per share attributable to HollyFrontier stockholders - diluted ⁽³⁾	\$ 2.25	\$ 0.70	\$ 6.44	\$ 2.32
Average number of common shares outstanding - diluted	174,259	177,457	176,661	177,196

(1) Represents adjustment to GAAP income tax expense (benefit) to arrive at adjusted income tax expense (benefit), which is computed as follows:

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
	(Dollars in thousands)			
Non-GAAP income tax expense benefit ⁽²⁾	\$ 105,699	\$ 73,188	\$ 361,989	\$ 248,135
Subtract (Add) GAAP income tax expense (benefit)	28,501	(185,972)	347,243	(12,379)
Non-GAAP adjustment to income tax expense	<u>\$ 77,198</u>	<u>\$ 259,160</u>	<u>\$ 14,746</u>	<u>\$ 260,514</u>

(2) Non-GAAP income tax expense (benefit) is computed by a) adjusting HFC's consolidated estimated Annual Effective Tax Rate ("AETR") for GAAP purposes for the effects of the above Non-GAAP adjustments, b) applying the resulting Adjusted Non-GAAP AETR to Non-GAAP adjusted income before income taxes and c) adjusting for discrete tax items applicable to the period.

(3) Adjusted earnings per share attributable to HollyFrontier stockholders - diluted is calculated as adjusted net income attributable to HollyFrontier stockholders divided by the average number of shares of common stock outstanding assuming dilution.

Reconciliation of effective tax rate to adjusted effective tax rate

	Three Months Ended December 31,		Years Ended December 31,	
	2018	2017	2018	2017
	(Dollars in thousands)			
GAAP:				
Income before income taxes	\$ 191,818	\$ 371,262	\$ 1,524,467	\$ 868,863
Income tax expense (benefit)	\$ 28,501	\$ (185,972)	\$ 347,243	\$ (12,379)
Effective tax rate for GAAP financial statements	14.9%	(50.1)%	22.8%	(1.4)%
Adjusted - Non-GAAP:				
Effect of Non-GAAP adjustments	5.4%	83.5 %	0.1%	35.8 %
Effective tax rate for adjusted results	20.3%	33.4 %	22.9%	34.4 %

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