

HollyFrontier Corporation Reports Quarterly Results

October 31, 2018

DALLAS--(BUSINESS WIRE)--Oct. 31, 2018-- HollyFrontier Corporation (NYSE:HFC) ("HollyFrontier" or the "Company") today reported third quarter net income attributable to HollyFrontier stockholders of \$342.5 million or \$1.93 per diluted share for the quarter ended September 30, 2018, compared to \$272.0 million or \$1.53 per diluted share for the quarter ended September 30, 2017.

The third quarter results include a lower of cost or market inventory valuation adjustment that decreased pre-tax earnings by \$17.8 million. Excluding this item, net income for the current quarter was \$350.7 million (\$1.98 per diluted share) compared to \$202.4 million (\$1.14 per diluted share) for the third quarter of 2017, which excludes certain items that collectively decreased earnings by \$69.6 million for the three months ended September 30, 2017. Total operating expenses for the quarter were \$317.2 million compared to \$322.3 million for the third quarter of last year.

HollyFrontier's President & CEO, George Damiris, commented, "HollyFrontier's strong financial results reflect our ability to capture the favorable crude discounts across our refining system. In line with our cash priorities, during the third quarter we reinvested in our plants through both capital and maintenance spending, paid our regular dividend and returned an additional \$124.0 million to shareholders in the form of share repurchase. Looking into the fourth quarter, we see normal seasonality in the gasoline markets and sustained attractive crude markets. We are currently undergoing turnarounds at our El Dorado and Mississauga facilities and plan to return to normal operations in November."

The Refining and Marketing segment reported adjusted EBITDA of \$507.2 million compared to \$326.4 million for the third quarter of 2017. This increase was primarily driven by lower laid-in crude costs which resulted in a consolidated refinery gross margin of \$19.41 per produced barrel, a 38% increase compared to \$14.05 for the third quarter of 2017. Crude oil charge averaged 441,990 barrels per day ("BPD") for the current quarter compared to 454,790 BPD for the third quarter 2017. The lower crude charge is due to the planned turnaround at El Dorado that began in the last week of September, coupled with Woods Cross running at reduced rates throughout July and August.

Our Lubricants and Specialty Products segment reported EBITDA of \$42.3 million, driven by consistent Rack Forward sales volumes and margins. Rack Forward EBITDA was \$57.1 million for the quarter and HollyFrontier continues to expect Rack Forward EBITDA in the \$200.0 million to \$220.0 million range for 2018. Rack Back EBITDA was negatively impacted by weakness in the base oil markets. Additionally, we closed on our previously announced acquisition of Red Giant Oil Company on August 1, 2018.

Holly Energy Partners, L.P. ("HEP") reported EBITDA of \$86.9 million for the third quarter 2018 compared to \$75.0 million in the third quarter of 2017. This growth was driven by the acquisition of the SLC and Frontier Pipelines as well as volume growth in HEP's Permian crude gathering system.

For the third quarter of 2018, net cash provided by operations totaled \$401.8 million. During the period, we declared and paid a dividend of \$0.33 per share to shareholders totaling \$58.4 million and spent \$124.0 million in stock repurchases. At September 30, 2018, our cash and cash equivalents totaled \$1,075.7 million, a \$95.8 million increase over cash and cash equivalents of \$979.9 million at June 30, 2018. Additionally, our consolidated debt was \$2,409.1 million. Our debt, exclusive of HEP debt, which is nonrecourse to HollyFrontier, was \$992.4 million at September 30, 2018.

The Company has scheduled a webcast conference call for today, October 31, 2018, at 8:30 AM Eastern Time to discuss third quarter financial results. This webcast may be accessed at: https://78449.themediaframe.com/dataconf/productusers/hfc/mediaframe/26441/indexl.html. An audio archive of this webcast will be available using the above noted link through November 14, 2018.

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 operates through its subsidiaries a 135,000 barrels per stream day ("BPSD") refinery located in El Dorado, Kansas, two refinery facilities with a combined capacity of 125,000 BPSD located in Tulsa, Oklahoma, a 100,000 BPSD refinery located in Artesia, New Mexico, a 52,000 BPSD refinery located in Cheyenne, Wyoming and a 45,000 BPSD refinery in Woods Cross, Utah. HollyFrontier 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, through its subsidiary, owns Petro-Canada Lubricants Inc., whose Mississauga, Ontario facility produces 15,600 barrels per day of base oils and other specialized lubricant products, and also owns a 57% interest and a non-economic general partner interest in Holly Energy Partners, L.P.

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 forwardlooking 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 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.

Financial Data (all information in this release is unaudited)

	Three Months Ended September 30,		Change from	201	7
	2018	2017	Change	Pe	rcent
Sales and other revenues	(In thousands \$4,770,799	, except per sha \$3,719,247	re data) \$1,051,552	28	%
Operating costs and expenses:	ψ 4,110,133	Ψ 5,7 15,247	ψ 1,001,002	20	70
Cost of products sold:					
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	3,752,234	2,888,549	863,685	30	
Lower of cost or market inventory valuation adjustment	17,837	(111,128)	128,965	(11	6)
	3,770,071	2,777,421	992,650	36	
Operating expenses	317,196	322,277	(5,081)	(2)
Selling, general and administrative expenses	71,130	68,252	2,878	4	
Depreciation and amortization	108,885	102,884	6,001	6	
Total operating costs and expenses	4,267,282	3,270,834	996,448	30	
Income from operations	503,517	448,413	55,104	12	
Other income (expense):					
Earnings of equity method investments	1,114	5,072	(3,958)	(78	3)
Interest income	5,136	1,074	4,062	378	3
Interest expense	(32,399)	(28,731)	(3,668)	13	
Gain on foreign currency transactions	281	19,122	(18,841)	(99))
Other, net	741	1,153	(412)	(36	5)
	(25,127)	(2,310)	(22,817)	988	3
Income before income taxes	478,390	446,103	32,287	7	
Income tax expense	116,258	158,386	(42,128)	(27	')
Net income	362,132	287,717	74,415	26	
Less net income attributable to noncontrolling interest	19,666	15,703	3,963	25	0/
Net income attributable to HollyFrontier stockholders	\$342,466	\$272,014	\$ 70,452	26	%
Earnings per share attributable to HollyFrontier stockholders:					
Basic	\$1.95	\$1.53	\$0.42	27	%
Diluted	\$1.93	\$1.53	\$0.40	26	%
Cash dividends declared per common share	\$0.33	\$0.33	\$ —	_	%
Average number of common shares outstanding:					
Basic	175,097	176,149	(1,052)	(1)%
Diluted	176,927	176,530	397	_	%
EBITDA	\$594,872	\$ 560,941	\$ 33,931	6	%
Adjusted EBITDA	\$612,709	\$454,029	\$ 158,680	35	%
	Nine Months		Change fro	m 20	017
	September 30 2018), 2017	Chango	_	Percent
		except per shar	Change	-	ercent
Sales and other revenues	\$ 13,370,462	\$10,258,594	\$ 3,111,868	3	80 %
Operating costs and expenses:	ψ 10,070,402	Ψ 10,200,004	ψ 0, 111,000		70
Cost of products sold:					
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	10,695,275	8,283,183	2,412,092	2 2	29
Lower of cost or market inventory valuation adjustment	(192,927)	(15,323	(177,604) 1	,159
	10,502,348	8,267,860	2,234,488		27
Operating expenses	933,699	946,264	(12,565	, ,	
Selling, general and administrative expenses	204,469	185,303	19,166		0
Depreciation and amortization	323,605	304,206	19,399	. 6	
Asset impairment	_	19,247	(19,247	, ,	100)
Total operating costs and expenses	11,964,121	9,722,880	2,241,241		23
Income from operations	1,406,341	535,714	870,627	1	63
Other income (expense):					
Earnings of equity method investments	4,127	10,965	(6,838) (62)
Interest income	10,660	2,069	8,591	4	115

Interest expense	(97,446)	(85,534) (11,912	14	
Loss on early extinguishment of debt	_	(12,225) 12,225	(100))
Gain on foreign currency transactions	5,516	19,517	(14,001	(72)
Gain on foreign currency swap contracts	_	24,545	(24,545	(100))
Other, net	3,451	2,550	901	35	
	(73,692)	(38,113) (35,579	93	
Income before income taxes	1,332,649	497,601	835,048	168	
Income tax expense	318,742	173,593	145,149	84	
Net income	1,013,907	324,008	689,899	213	
Less net income attributable to noncontrolling interest	57,843	39,695	18,148	46	
Net income attributable to HollyFrontier stockholders	\$ 956,064	\$284,313	\$671,751	236	%
Earnings per share attributable to HollyFrontier stockholders:					
Basic	\$5.42	\$1.60	\$3.82	239	%
Diluted	\$5.37	\$1.60	\$3.77	236	%
Cash dividends declared per common share	\$ 0.99	\$0.99	\$ —	_	%
Average number of common shares outstanding:					
Basic	175,865	176,143	(278	_	%
Diluted	177,557	176,616	941	1	%
EBITDA	\$1,685,197	\$845,577	\$839,620	99	%
Adjusted EBITDA	\$1,413,620	\$845,558	\$ 568,062	67	%

Balance Sheet Data

	September 30, 2018	December 31, 2017
	(In thousands)	
Cash and cash equivalents	\$ 1,075,677	\$ 630,757
Working capital	\$ 2,317,090	\$ 1,640,118
Total assets	\$ 11,495,126	\$ 10,692,154
Long-term debt	\$ 2,409,148	\$ 2,498,993
Total equity	\$ 6,563,512	\$ 5,896,940

Segment Information

In the fourth quarter of 2017, we revised our reportable segments to align with certain changes in how our chief operating decision maker manages and allocates resources to our business. Accordingly, our Tulsa refineries' lubricants operations, previously reported in the Refining segment, are now combined with the operations of our Petro-Canada Lubricants business (acquired February 1, 2017) and reported in the Lubricants and Specialty Products segment. Segment information for the three and nine months ended September 30, 2017 has been retrospectively adjusted to reflect our current segment presentation.

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 PCLI'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, 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.

(In thousands)

	(In thousands)								
Three Months Ended September 30, 2018	3									
Sales and other revenues: Revenues from external customers	\$4,270,835	\$	474,260		\$ 25,596	\$	108		\$ 4,770,799	
Intersegment revenues	\$ 101,334	\$	1,626		\$ 100,188	\$	(203,148)	\$ 4,770,799 \$ —	
Ç	\$4,372,169	\$	475,886		\$125,784	\$	(203,040)	\$ 4,770,799	
Cost of products sold (exclusive of lower of cost or market inventory)	\$3,572,593	\$	359,742		\$ —	\$	(180,101)	\$ 3,752,234	
Lower of cost or market inventory valuation adjustment	\$ 17,837	\$	_		\$ —	\$	_		\$ 17,837	
Operating expenses	\$262,010	\$	40,288		\$ 35,995	\$	(21,097)	\$ 317,196	
Selling, general and administrative expenses	\$30,394	\$	33,514		\$2,498	\$	4,724		\$ 71,130	
Depreciation and amortization	\$70,793	\$	11,139		\$24,367	\$	2,586		\$ 108,885	
Income (loss) from operations	\$ 418,542	\$	31,203		\$62,924	\$	(9,152)	\$ 503,517	
Earnings of equity method investments Capital expenditures	\$ — \$ 47,088	\$ \$	— 8,094		\$ 1,114 \$ 0.541	\$ \$	 5,214		\$ 1,114 \$ 69,937	
Capital experiolities	φ47,000	Ф	6,094		\$ 9,541	Ф	5,214		φ 69,93 <i>1</i>	
Three Months Ended September 30, 2017 Sales and other revenues:	7									
Revenues from external customers	\$3,291,417	\$	413,074		\$ 15,227	\$	(471)	\$ 3,719,247	
Intersegment revenues	\$82,705	\$	_		\$95,137	\$	(177,842)	\$ —	
	\$3,374,122	\$	413,074		\$ 110,364	\$	(178,313)	\$ 3,719,247	
Cost of products sold (exclusive of lower of cost or market inventory)	\$2,774,722	\$	270,279		\$ —	\$	(156,452)	\$ 2,888,549	
Lower of cost or market inventory valuation adjustment	\$ (109,690)	\$	(1,438)	\$ —	\$	_		\$ (111,128)
Operating expenses	\$ 246,409	\$	59,726		\$ 36,061	\$	(19,919)	\$ 322,277	
Selling, general and administrative expenses	\$ 26,582	\$	30,796		\$3,626	\$	7,248		\$ 68,252	
Depreciation and amortization	\$74,070	\$	7,734		\$18,601	\$	2,479		\$ 102,884	
Income (loss) from operations	\$ 362,029	\$	45,977		\$52,076	\$	(11,669)	\$ 448,413	
Familiana of any ity mostle adjustication and	\$ —	Φ			\$5,072	\$	_		\$ 5,072	
Earnings of equity method investments		\$					5 400			
Capital expenditures	\$ — \$ 30,979	\$	9,815		\$ 10,151	\$	5,122		\$ 56,067	
		\$	9,815			\$		nd	\$ 56,067	ı
		\$ Lu				\$ C	5,122 orporate, Other ar liminations	nd		I
Capital expenditures	\$30,979	\$ Lu	9,815		\$ 10,151	\$ C	orporate, Other ar	nd	\$ 56,067 Consolidated	l
	\$ 30,979 Refining	\$ Lu	9,815		\$ 10,151	\$ C	orporate, Other ar	nd	\$ 56,067 Consolidated	I
Capital expenditures Nine Months Ended September 30, 2018	\$ 30,979 Refining (In thousands) \$ 11,915,797	\$ Lu Sp	9,815 Abricants and Decialty Products 1,376,531		\$10,151 HEP \$77,799	\$ CE \$	orporate, Other ar liminations	nd	\$ 56,067 Consolidated Total \$ 13,370,462	I
Capital expenditures Nine Months Ended September 30, 2018 Sales and other revenues:	\$ 30,979 Refining (In thousands) \$ 11,915,797 \$ 284,538	\$ Sp \$	9,815 Abricants and pecialty Products 1,376,531 11,884		\$10,151 HEP \$77,799 \$295,629	\$ C E \$	orporate, Other an liminations 335 (592,051))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ —	I
Capital expenditures Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues	\$ 30,979 Refining (In thousands) \$ 11,915,797 \$ 284,538 \$ 12,200,335	SF SF	9,815 sbricants and secialty Products 1,376,531 11,884 1,388,415		\$10,151 HEP \$77,799 \$295,629 \$373,428	\$ C E \$ \$ \$	orporate, Other an liminations 335 (592,051 (591,716))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462	ı
Capital expenditures Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory)	\$ 30,979 Refining (In thousands) \$ 11,915,797 \$ 284,538 \$ 12,200,335 \$ 10,179,509	\$ Sp \$	9,815 Abricants and pecialty Products 1,376,531 11,884		\$10,151 HEP \$77,799 \$295,629	\$ CE \$ \$ \$	orporate, Other an liminations 335 (592,051)))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275	ı
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment	\$ 30,979 Refining (In thousands) \$ 11,915,797 \$ 284,538 \$ 12,200,335 \$ 10,179,509 \$ (192,927)	\$ \$ \$ \$ \$ \$ \$	9,815 Sibricants and secialty Products 1,376,531 11,884 1,388,415 1,040,414 —		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$—	\$ CE \$ \$ \$ \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927)
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses	\$ 30,979 Refining (In thousands) \$ 11,915,797 \$ 284,538 \$ 12,200,335 \$ 10,179,509	\$ Lu sr \$ \$ \$ \$ \$ \$	9,815 Abricants and pecialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$—	\$ CE \$ \$ \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648)))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966	\$ \$ \$ \$ \$ \$ \$ \$	9,815 sbricants and secialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$ — \$106,731 \$8,293	\$ CE \$ \$ \$ \$ \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses Depreciation and amortization	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966 \$210,957	\$ \$ \$ \$ \$ \$ \$ \$	9,815 sbricants and secialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425 30,023		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$ — \$106,731 \$8,293 \$74,117	\$ CE \$ \$ \$ \$ \$ \$ \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785 8,508))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469 \$ 323,605	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966 \$210,957 \$1,155,415	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,815 sbricants and secialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$— \$106,731 \$8,293 \$74,117 \$184,287	\$ CE \$\$\$ \$ \$\$\$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469 \$ 323,605 \$ 1,406,341	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations Earnings of equity method investments	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966 \$210,957 \$1,155,415 \$—	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,815 sbricants and pecialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425 30,023 93,452 —		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$— \$106,731 \$8,293 \$74,117 \$184,287 \$4,127	\$ CE \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785 8,508 (26,813 —))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469 \$ 323,605 \$ 1,406,341 \$ 4,127	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966 \$210,957 \$1,155,415	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,815 sbricants and secialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425 30,023		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$— \$106,731 \$8,293 \$74,117 \$184,287	\$ CE \$\$\$ \$ \$\$\$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785 8,508))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469 \$ 323,605 \$ 1,406,341	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations Earnings of equity method investments	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966 \$210,957 \$1,155,415 \$—	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,815 sbricants and pecialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425 30,023 93,452 —		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$— \$106,731 \$8,293 \$74,117 \$184,287 \$4,127	\$ CE \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785 8,508 (26,813 —))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469 \$ 323,605 \$ 1,406,341 \$ 4,127	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations Earnings of equity method investments Capital expenditures Nine Months Ended September 30, 2017 Sales and other revenues: Revenues from external customers	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966 \$210,957 \$1,155,415 \$— \$132,050 \$9,033,148	\$ LUSE \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,815 sbricants and pecialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425 30,023 93,452 —		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$106,731 \$8,293 \$74,117 \$184,287 \$4,127 \$41,111 \$47,826	\$ CE \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785 8,508 (26,813 — 12,779))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469 \$ 323,605 \$ 1,406,341 \$ 4,127 \$ 209,078 \$ 10,258,594	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations Earnings of equity method investments Capital expenditures Nine Months Ended September 30, 2017 Sales and other revenues:	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966 \$210,957 \$1,155,415 \$— \$132,050 \$9,033,148 \$268,208	\$ LSF \$	9,815 sbricants and secialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425 30,023 93,452 — 23,138 1,178,343 —		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$— \$106,731 \$8,293 \$74,117 \$184,287 \$4,127 \$41,111 \$47,826 \$277,315	\$ CE \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785 8,508 (26,813 — 12,779 (723 (545,523))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469 \$ 323,605 \$ 1,406,341 \$ 4,127 \$ 209,078 \$ 10,258,594 \$ —	
Nine Months Ended September 30, 2018 Sales and other revenues: Revenues from external customers Intersegment revenues Cost of products sold (exclusive of lower of cost or market inventory) Lower of cost or market inventory valuation adjustment Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations Earnings of equity method investments Capital expenditures Nine Months Ended September 30, 2017 Sales and other revenues: Revenues from external customers	\$30,979 Refining (In thousands) \$11,915,797 \$284,538 \$12,200,335 \$10,179,509 \$(192,927) \$764,415 \$82,966 \$210,957 \$1,155,415 \$— \$132,050 \$9,033,148	\$ LUSE \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,815 sbricants and secialty Products 1,376,531 11,884 1,388,415 1,040,414 — 125,101 99,425 30,023 93,452 — 23,138		\$10,151 HEP \$77,799 \$295,629 \$373,428 \$— \$106,731 \$8,293 \$74,117 \$184,287 \$4,127 \$41,111 \$47,826	\$ CE \$	orporate, Other ar liminations 335 (592,051 (591,716 (524,648 — (62,548 13,785 8,508 (26,813 — 12,779))	\$ 56,067 Consolidated Total \$ 13,370,462 \$ — \$ 13,370,462 \$ 10,695,275 \$ (192,927 \$ 933,699 \$ 204,469 \$ 323,605 \$ 1,406,341 \$ 4,127 \$ 209,078 \$ 10,258,594	

Lower of cost or market inventory valuation adjustment	\$ (15,365)	\$	42	\$ —	\$ _		\$ (15,323)
Operating expenses	\$743,493	\$	154,795	\$102,773	\$ (54,797)	\$ 946,264
Selling, general and administrative expenses	\$71,591	\$	71,877	\$8,882	\$ 32,953		\$ 185,303
Depreciation and amortization	\$218,934	\$	20,570	\$ 56,515	\$ 8,187		\$ 304,206
Asset impairment	\$ 19,247	\$	_	\$ —	\$ _		\$ 19,247
Income (loss) from operations	\$313,643	\$	112,078	\$156,971	\$ (46,978)	\$ 535,714
Earnings of equity method investments	\$ —	\$	_	\$10,965	\$ _		\$ 10,965
Capital expenditures	\$ 130,238	\$	20,772	\$ 30,675	\$ 11,432		\$ 193,117
September 30, 2018							
Cash and cash equivalents	\$6,915	\$	72,652	\$6,375	\$ 989,735		\$ 1,075,677
Total assets	\$ 0,915 \$ 7,044,358	\$	1,498,586	\$ 2,146,124	\$ 806,058		\$ 1,075,677 \$ 11,495,126
		*	1,490,300		,		
Long-term debt	\$ —	\$	_	\$1,416,748	\$ 992,400		\$ 2,409,148
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 (Generally Accepted Accounting Principles) 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 under "Reconciliations to Amounts Reported Under Generally Accepted Accounting Principles" below.

In the fourth quarter of 2017, we revised the following refining segment operating data computations: refinery gross margin; net operating margin; and operating expenses to better align with similar measurements provided by other companies in our industry and to facilitate comparison of our refining performance relative to our peers. Effective with this change, these measurements are now inclusive of all refining segment activities, including HFC Asphalt operations and revenues and costs related to products purchased for resale and excess crude oil sales. Refining segment operating data for the three and nine months ended September 30, 2017 has been retrospectively adjusted to reflect our current presentation.

	Three Months Ended September 30,			Nine Mo Septem				
	2018		2017		2018		2017	
Mid-Continent Region (El Dorado and Tulsa Refineries)								
Crude charge (BPD) (1)	262,55	0	262,47	0	260,15	0	258,42	20
Refinery throughput (BPD) (2)	276,56	0	275,27	0	274,330		274,20)0
Sales of produced refined products (BPD) (3)	255,840 253,700		259,89	0	255,160			
Refinery utilization ⁽⁴⁾	101.0	%	101.0	%	100.1	%	99.4	%
Average per produced barrel (5)								
Refinery gross margin ⁽⁶⁾	\$16.43		\$12.60		\$12.99		\$9.36	
Refinery operating expenses ⁽⁷⁾	5.48		5.02		5.18		5.17	
Net operating margin	\$ 10.95		\$7.58		\$7.81		\$4.19	
Refinery operating expenses per throughput barrel ⁽⁸⁾	\$5.07		\$4.63		\$4.90		\$4.81	
Feedstocks:								
Sweet crude oil	59	%	65	%	54	%	62	%
Sour crude oil	21	%	14	%	24	%	17	%
Heavy sour crude oil	15	%	16	%	17	%	15	%
Other feedstocks and blends	5	%	5	%	5	%	6	%
Total	100	%	100	%	100	%	100	%
Sales of produced refined products:								
Gasolines	49	%	50	%	51	%	50	%
Diesel fuels	34	%	34	%	33	%	33	%
Jet fuels	6	%	6	%	6	%	7	%
Fuel oil	1	%	1	%	1	%	1	%
Asphalt	4	%	3	%	3	%	3	%

Base oils LPG and other		4	% %	4 2	% %	4 2		% %	4 2		% %	
Total		100	%	100	%	100		%	100		%	
				ee Mont tember 8					embe		Ended 0, 2017	
Southwest Region (Navajo Refinery)					_							
Crude charge (BPD) (1)				9,560		12,060			9,200		96,350	
Refinery throughput (BPD) (2)				7,880		22,890			3,300		105,19	
Sales of produced refined products (BPD) (3)				2,210 9.6 %		30,740 12.1	%	109	0,900	%	107,89 96.4	U %
Refinery utilization ⁽⁴⁾			10	9.0 %) [12.1	70	108	9.2	/0	90.4	70
Average per produced barrel ⁽⁵⁾												
Refinery gross margin ⁽⁶⁾			\$ 22	.60	\$ 1	4.64		\$ 17.	.84		\$ 12.21	
Refinery operating expenses ⁽⁷⁾			4.5	53	4	.34		4.6	3		5.38	
Net operating margin			\$ 18	.07	\$1	0.30		\$ 13.	.21		\$6.83	
Refinery operating expenses per throughput barrel ⁽⁸⁾			\$ 4.6	89	\$4	.62		\$4.7	3		\$5.52	
Feedstocks:												
Sweet crude oil			28	%	2	5	%	31	g	%	23	%
Sour crude oil			65				%	61		%	68	%
Other feedstocks and blends			7	%			%	8		%	9	%
Total			10	0 %	1	00	%	100) 9	%	100	%
Sales of produced refined products:												
Gasolines			49	%	4	9	%	50		%	50	%
Diesel fuels			41				%	40		%	40	%
Fuel oil			3	%			%	3		%	3	%
Asphalt LPG and other			5 2	% %			% %	4 3		% %	4 3	% %
Total			10			00	%	100		%	100	%
	- ·											
Rocky Mountain Region (Cheyenne and Woods Cr Crude charge (BPD) (1)	oss Refi	neries)		,880	ρ	0,260		71	000		76,510	
Refinery throughput (BPD) (2)				,120		7,620		•	410		84,050	
Sales of produced refined products (BPD) (3)				,720		9,310			850		78,910	
Refinery utilization ⁽⁴⁾			72				%	73.		%	78.9	%
Average per produced barrel (5)												
Refinery gross margin ⁽⁶⁾			\$ 24	.75	\$ 1	7.71		\$ 24.	.95		\$ 15.78	
Refinery operating expenses (7)				.80		0.47		11.			10.36	
Net operating margin			\$ 11	.95	\$7	.24		\$ 12.	.98		\$5.42	
Refinery operating expenses per throughput barrel ⁽⁸⁾			\$ 11	.72	\$9	.48		\$ 11.	42		\$9.72	
Feedstocks:												
Sweet crude oil			24				%	25	ç	%	34	%
Heavy sour crude oil			44				%	44		%	36	%
Black wax crude oil Other feedstocks and blends			24 8	% %			% %	22 9		% %	21 9	% %
Total			10			00	% %	100		⁄° %	100	%
	_											
		Months		d		e Mont tembe						
	2018		2017		201		. 50	, 2017				
Sales of produced refined products:	-											
Gasolines	54	%	58	%	56	5	%	58	%			
Diesel fuels	34	%	32	%	33	3	%	33	%			

Fuel oil	2	%	3	%	3	%	2	%
Asphalt	7	%	4	%	5	%	5	%
LPG and other	3	%	3	%	3	%	2	%
Total	100	%	100	%	100	%	100	%
Consolidated								
Crude charge (BPD) (1)	441,99	0	454,79	90	440,350		431,280	
Refinery throughput (BPD) (2)	470,56	0	485,78	80	471,04	0	463,440	
Sales of produced refined products (BPD) (3)	447,770 463,750		50	455,64	0	441,96	0	
Refinery utilization (4)	96.7	%	99.5	%	96.4	%	94.4	%
Average per produced barrel (5)								
Refinery gross margin ⁽⁶⁾	\$19.41		\$14.05		\$16.25		\$11.20	
Refinery operating expenses (7)	6.36		5.78		6.15		6.16	
Net operating margin	\$ 13.05		\$8.27		\$10.10		\$5.04	
Refinery operating expenses per throughput barrel ⁽⁸⁾	\$6.05		\$5.51		\$5.94		\$5.88	
Feedstocks:								
Sweet crude oil	45	%	49	%	43	%	48	%
Sour crude oil	29	%	25	%	30	%	25	%
Heavy sour crude oil	16	%	16	%	17	%	16	%
Black wax crude oil	4	%	4	%	4	%	4	%
Other feedstocks and blends	6	%	6	%	6	%	7	%
Total	100	%	100	%	100	%	100	%
Consolidated								
Sales of produced refined products:								
Gasolines	50	%	51	%	52	%	51	%
Diesel fuels	36	%	36	%	35	%	34	%
Jet fuels	3	%	3	%	3	%	4	%
Fuel oil	2	%	2	%	2	%	2	%
Asphalt	5	%	4	%	4	%	4	%
Base oils	2	%	2	%	2	%	3	%
LPG and other	2	%	2	%	2	%	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 under "Reconciliations to Amounts Reported Under Generally Accepted Accounting Principles" below.
- (6) Excludes lower of cost or market inventory valuation adjustments of \$17.8 million and \$111.1 million for the three months ended September 30, 2018 and 2017, respectively, and \$192.9 million and \$15.3 million for the nine months ended September 30, 2018 and 2017, respectively.
- (7) Represents total refining segment operating expenses, exclusive of depreciation and amortization, divided by sales volumes of refined products produced at our refineries.
- (8) 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 nine months ended September 30, 2017 our lubricants and specialty product operating results reflect the operations of our Petro-Canada Lubricants business for the period February 1, 2017 through September 30, 2017.

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

	Three Mor Septembe	nths Ended r 30,	Nine Months Ende September 30,			
	2018	2017	2018	2017		
Lubricants and Specialty Products						
Throughput (BPD)	21,410	22,360	20,530	21,980		

Sales of produced products (BPD)	31,97	0	30,44	.0	21,34	.0	34,79	90
Sales of produced products:								
Finished products	49	%	49	%	48	%	44	%
Base oils	28	%	28	%	31	%	33	%
Other	23	%	23	%	21	%	23	%
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 September 30, 2018				
Sales and other revenues	\$ 197,226	\$ 424,386	\$ (145,726)	\$ 475,886
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 177,748	\$ 327,720	\$ (145,726)	\$ 359,742
Operating expenses	\$ 26,748	\$ 13,540	\$ —	\$ 40,288
Selling, general and administrative expenses	\$ 7,439	\$ 26,075	\$ —	\$ 33,514
Depreciation and amortization	\$ 6,345	\$ 4,794	\$ —	\$ 11,139
Income (loss) from operations	\$ (21,054)	\$ 52,257	\$ —	\$ 31,203
EBITDA	\$ (14,709)	\$ 57,051	\$ —	\$ 42,342
Three months ended September 30, 2017				
Sales and other revenues	\$ 166,851	\$ 369,822	\$ (123,599)	\$ 413,074
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 127,371	\$ 266,507	\$ (123,599)	\$ 270,279
Lower of cost or market inventory valuation adjustment	\$ —	\$ (1,438)	\$ —	\$ (1,438)
Operating expenses	\$ 26,691	\$ 33,035	\$ —	\$ 59,726
Selling, general and administrative expenses	\$ 6,847	\$ 23,949	\$ —	\$ 30,796
Depreciation and amortization	\$ 5,388	\$ 2,346	\$ —	\$ 7,734
Income from operations	\$ 554	\$ 45,423	\$ —	\$ 45,977
	*	A	•	Ф FO 744
EBITDA	\$ 5,942	\$ 47,769	\$ —	\$ 53,711
EBITDA	\$ 5,942 Rack Back (1)	Rack Forward (2)	Eliminations	Total Lubricants and Specialty Products
	Rack Back	Rack Forward (2)	Eliminations	Total Lubricants and Specialty
Nine months ended September 30, 2018	Rack Back (1) (In thousands)	Rack Forward (2)	Eliminations (3)	Total Lubricants and Specialty Products
Nine months ended September 30, 2018 Sales and other revenues	Rack Back (1)	Rack Forward (2)	Eliminations	Total Lubricants and Specialty
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842	Rack Forward (2) \$ 1,248,886 \$ 964,343	Eliminations (3) \$ (406,771) \$ (406,771)	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372	Eliminations (3) \$ (406,771) \$ (406,771) \$ —	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279	Eliminations (3) \$ (406,771) \$ (406,771) \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses Depreciation and amortization	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146 \$ 17,986	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279 \$ 12,037	Eliminations (3) \$ (406,771) \$ (406,771) \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425 \$ 30,023
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146 \$ 17,986 \$ (59,403)	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279 \$ 12,037 \$ 152,855	Eliminations (3) \$ (406,771) \$ (406,771) \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425 \$ 30,023 \$ 93,452
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses Depreciation and amortization	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146 \$ 17,986	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279 \$ 12,037 \$ 152,855	Eliminations (3) \$ (406,771) \$ (406,771) \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425 \$ 30,023
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146 \$ 17,986 \$ (59,403)	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279 \$ 12,037 \$ 152,855	Eliminations (3) \$ (406,771) \$ (406,771) \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425 \$ 30,023 \$ 93,452
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations EBITDA Nine months ended September 30, 2017 Sales and other revenues	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146 \$ 17,986 \$ (59,403)	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279 \$ 12,037 \$ 152,855	Eliminations (3) \$ (406,771) \$ (406,771) \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425 \$ 30,023 \$ 93,452
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations EBITDA Nine months ended September 30, 2017 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146 \$ 17,986 \$ (59,403) \$ (41,417) \$ 434,675 \$ 351,641	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279 \$ 12,037 \$ 152,855 \$ 164,892	Eliminations (3) \$ (406,771) \$ (406,771) \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425 \$ 30,023 \$ 93,452 \$ 123,475
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations EBITDA Nine months ended September 30, 2017 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Lower of cost or market inventory valuation adjustment	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146 \$ 17,986 \$ (59,403) \$ (41,417) \$ 434,675 \$ 351,641 \$ —	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279 \$ 12,037 \$ 152,855 \$ 164,892 \$ 1,054,161 \$ 777,833 \$ 42	\$ (406,771) \$ (406,771) \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425 \$ 30,023 \$ 93,452 \$ 123,475 \$ 1,178,343 \$ 818,981 \$ 42
Nine months ended September 30, 2018 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment) Operating expenses Selling, general and administrative expenses Depreciation and amortization Income (loss) from operations EBITDA Nine months ended September 30, 2017 Sales and other revenues Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	Rack Back (1) (In thousands) \$ 546,300 \$ 482,842 \$ 82,729 \$ 22,146 \$ 17,986 \$ (59,403) \$ (41,417) \$ 434,675 \$ 351,641	Rack Forward (2) \$ 1,248,886 \$ 964,343 \$ 42,372 \$ 77,279 \$ 12,037 \$ 152,855 \$ 164,892 \$ 1,054,161 \$ 777,833	Eliminations (3) \$ (406,771) \$ (406,771) \$ \$ \$ \$ \$ \$ \$ \$	Total Lubricants and Specialty Products \$ 1,388,415 \$ 1,040,414 \$ 125,101 \$ 99,425 \$ 30,023 \$ 93,452 \$ 123,475 \$ 1,178,343 \$ 818,981

Depreciation and amortization	\$ 14,475	\$ 6,095	\$ —	\$ 20,570
Income (loss) from operations	\$ (12,598)	\$ 124,676	\$ —	\$ 112,078
EBITDA	\$ 1,877	\$ 130,771	\$ —	\$ 132,648

- (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 Generally Accepted Accounting Principles

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

Earnings before interest, taxes, depreciation and amortization, referred to as EBITDA, is calculated as net income (loss) 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) PCLI acquisition and integration costs (vi) long-lived asset impairment charges charged to operating expense (vii) incremental cost of products sold attributable to our PCLI 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 under accounting principles generally accepted in the United States; 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 Mont September		Nine Months Ended September 30,		
	2018	2017	2018	2017	
	(In thousand	ls)			
Net income attributable to HollyFrontier stockholders	\$342,466	\$272,014	\$956,064	\$284,313	
Add interest expense	32,399	28,731	97,446	85,534	
Subtract interest income	(5,136)	(1,074)	(10,660)	(2,069)	
Add income tax expense	116,258	158,386	318,742	173,593	
Add depreciation and amortization	108,885	102,884	323,605	304,206	
EBITDA	\$594,872	\$560,941	\$1,685,197	\$845,577	
Add (subtract) lower of cost or market inventory valuation adjustment	17,837	(111,128)	(192,927)	(15,323)	
Subtract RINs cost reduction	_	_	(96,971)	(30,456)	
Add Woods Cross refinery outage damages	_	_	24,566	_	
Subtract Woods Cross refinery estimated insurance claims on outage damages	_	_	(9,840)	_	
Add PCLI acquisition and integration costs	_	4,216	3,595	23,506	
Add long-lived asset impairment	_	_	_	19,247	
Add incremental cost of products sold attributable to PCLI inventory value step-up	_	_	_	15,327	
Add loss on early extinguishment of debt	_	_	_	12,225	
Subtract gain on foreign currency swap contracts	_	_	_	(24,545)	
Adjusted EBITDA	\$612,709	\$454,029	\$1,413,620	\$845,558	

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

	Three Mor Septembe	nths Ended r 30,	Nine Months Ended September 30,		
Refining Segment	2018	2017	2018	2017	
	(In thousands)				
Income from operations (1)	\$418,542	\$362,029	\$1,155,415	\$313,643	
Add depreciation and amortization	70,793	74,070	210,957	218,934	
EBITDA	489,335	436,099	1,366,372	532,577	
Add (subtract) lower of cost or market inventory valuation adjustment	17,837	(109,690)	(192,927)	(15,365)	
Subtract RINs cost reduction	_	_	(96,971)	(30,456)	
Add Woods Cross refinery outage damages	_	_	24,566	_	

Subtract Woods Cross refinery estimated insurance claims on outage damages	_	_	(9,840)	_
Add long-lived asset impairment	_	_	_	19,247
Adjusted EBITDA	\$507,172	\$326,409	\$1,091,200	\$506,003

(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	R	Rack Forward		otal Lubricants nd Specialty roducts
	(In thousand	ls)			
Three months ended September 30, 2018					
Income (loss) from operations (1)	\$ (21,054)	\$	52,257	\$	31,203
Add depreciation and amortization	6,345		4,794		11,139
EBITDA	\$ (14,709)	\$	57,051	\$	42,342
Three months ended September 30, 2017					
Income (loss) from operations (1)	\$ 554	\$	45,423	\$	45,977
Add depreciation and amortization	5,388		2,346		7,734
EBITDA	\$ 5,942	\$	47,769	\$	53,711
Nine months ended September 30, 2018					
Income (loss) from operations (1)	\$ (59,403)	\$	152,855	\$	93,452
Add depreciation and amortization	17,986		12,037		30,023
EBITDA	\$ (41,417)	\$	164,892	\$	123,475
Nine months ended September 30, 2017					
Income (loss) from operations (1)	\$ (12,598)	\$	124,676	\$	112,078
Add depreciation and amortization	14,475		6,095		20,570
EBITDA	\$ 1,877	\$	130,771	\$	132,648

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 generally accepted accounting principles in financial statements.

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 Mont September	=	Nine Months Ended September 30,		
	2018 2017		2018	2017	
	(Dollars in th	nousands, excep	ept per barrel amounts)		
Consolidated					
Net operating margin per produced barrel sold	\$13.05	\$8.27	\$10.10	\$5.04	
Add average refinery operating expenses per produced barrel sold	6.36	5.78	6.15	6.16	
Refinery gross margin per produced barrel sold	\$19.41	\$ 14.05	\$ 16.25	\$ 11.20	
Times produced barrels sold (BPD)	447,770	463,750	455,640	441,960	
Times number of days in period	92	92	273	273	
Refining segment gross margin	\$799,592	\$599,443	\$2,021,333	\$1,351,337	
Add (subtract) rounding	(16) (43	(507) 206	
Total refining segment gross margin	799,576	599,400	2,020,826	1,351,543	

Add refining segment cost of products sold	3,572,593	2,774,722	10,179,509	7,949,813
Refining segment sales and other revenues	4,372,169	3,374,122	12,200,335	9,301,356
Add lubricants and specialty products segment sales and other revenues	475,886	413,074	1,388,415	1,178,343
Add HEP segment sales and other revenues	125,784	110,364	373,428	325,141
Subtract corporate, other and eliminations	(203,040)	(178,313)	(591,716)	(546,246)
Sales and other revenues	\$4,770,799	\$3,719,247	\$13,370,462	\$10,258,594

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

	Three Mont September		Nine Months Ended September 30,		
	2018	2017	2018	2017	
	(Dollars in th	nousands, exc	ept per barrel	amounts)	
Consolidated					
Average operating expenses per produced barrel sold	\$6.36	\$5.78	\$6.15	\$6.16	
Times produced barrels sold (BPD)	447,770	463,750	455,640	441,960	
Times number of days in period	92	92	273	273	
Refining segment operating expenses	\$ 261,999	\$ 246,604	\$764,997	\$743,235	
Add (subtract) rounding	11	(195)	(582)	258	
Total refining segment operating expenses	262,010	246,409	764,415	743,493	
Add lubricants and specialty products segment operating expenses	40,288	59,726	125,101	154,795	
Add HEP segment operating expenses	35,995	36,061	106,731	102,773	
Subtract corporate, other and eliminations	(21,097)	(19,919)	(62,548)	(54,797)	
Operating expenses (exclusive of depreciation and amortization)	\$317,196	\$ 322,277	\$933,699	\$ 946,264	

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 costs, 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 Mor Septembe	nths Ended r 30,	Nine Months Ended September 30,		
	2018	2017	2018	2017	
	(Dollars in	thousands, exc	cept per share a	mounts)	
Consolidated					
GAAP:					
Income before income taxes	\$478,390	\$ 446,103	\$1,332,649	\$ 497,601	
Income tax expense	116,258	158,386	318,742	173,593	
Net income	362,132	287,717	1,013,907	324,008	
Less net income attributable to noncontrolling interest	19,666	15,703	57,843	39,695	
Net income attributable to HollyFrontier stockholders	342,466	272,014	956,064	284,313	
Non-GAAP adjustments to arrive at adjusted results:					
Lower of cost or market inventory valuation adjustment	17,837	(111,128)	(192,927)	(15,323)	
Woods Cross refinery outage damages	_	_ ′	24,566		
Woods Cross refinery estimated insurance claims on outage damages	_	_	(9,840)	_	
PCLI acquisition and integration costs	_	4,216	3,595	23,506	
RINs cost reduction	_	_	(96,971)	(30,456)	
Long-lived 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	17,837	(106,912)	(271,577)	3,983	
Adjustment to income tax expense (1)	9,554	(37,291)	(62,386)	(4,329)	
Adjustment to net income attributable to noncontrolling interest	_	_	_	7,702	
Total adjustments, net of tax	8,283	(69,621)	(209,191)	610	

Adjusted results - Non-GAAP:				
Adjusted income before income taxes	496,227	339,191	1,061,072	501,584
Adjusted income tax expense (2)	125,812	121,095	256,356	169,264
Adjusted net income	370,415	218,096	804,716	332,320
Less net income attributable to noncontrolling interest	19,666	15,703	57,843	47,397
Adjusted net income attributable to HollyFrontier stockholders	\$350,749	\$ 202,393	\$746,873	\$284,923
Adjusted earnings per share attributable to HollyFrontier stockholders - diluted ⁽³⁾	\$1.98	\$1.14	\$4.19	\$1.60
Average number of common shares outstanding - diluted	176,927	176,530	177,557	176,616

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

	Three Mor Septembe	nths Ended r 30,	Nine Month September	
	2018	2017	2018	2017
	(Dollars in	thousands)		
Non-GAAP income tax expense (2)	\$ 125,812	\$121,095	\$256,356	\$ 169,264
Subtract GAAP income tax expense	116,258	158,386	318,742	173,593
Non-GAAP adjustment to income tax expense	\$9,554	\$ (37,291)	\$ (62,386)	\$ (4,329)

- Non-GAAP income tax expense is computed by a) adjusting HFC's consolidated estimated Annual Effective Tax Rate ("AETR") for GAAP 2) 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 September 30,			Nine Months Ended September 30,				
	2018		2017		2018		2017	
	(Dollars in thousands)							
GAAP:								
Income before income taxes	\$ 478,39	0	\$ 446,10)3	\$1,332,649		\$497,601	
Income tax expense	\$ 116,25	8	\$ 158,386		\$318,742		\$ 173,593	
Effective tax rate for GAAP financial statements	24.3	%	35.5	%	23.9	%	34.9	%
Adjusted - Non-GAAP:								
Effect of Non-GAAP adjustments	1.1	%	_	%	0.3	%	(1.2)%
Effective tax rate for adjusted results	25.4	%	35.5	%	24.2	%	33.7	%

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Source: HollyFrontier Corporation

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