

SECURITIES AND EXCHANGE COMMISSION

FORM 10-K

Annual report pursuant to section 13 and 15(d)

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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K**

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2020

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For

the transition period from _____ to _____

Commission File Number 1-3876

HOLLYFRONTIER CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

75-1056913

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

2828 N. Harwood, Suite 1300

Dallas

Texas

75201

(Address of principal executive offices)

(Zip Code)

(214) 871-3555

Registrant's telephone number, including area code

Securities registered pursuant to 12(b) of the Securities Exchange Act of 1934:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock \$0.01 par value	HFC	New York Stock Exchange

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15 (d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
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.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C.7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

On June 30, 2020, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the Common Stock, par value \$0.01 per share, held by non-affiliates of the registrant was approximately \$4.3 billion, based upon the closing price on the New York Stock Exchange on such date. (This is not deemed an admission that any person whose shares were not included in the computation of the amount set forth in the preceding sentence necessarily is an "affiliate" of the registrant.)

162,414,838 shares of Common Stock, par value \$.01 per share, were outstanding on February 16, 2021.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for its annual meeting of stockholders to be held on May 12, 2021, which proxy statement will be filed with the Securities and Exchange Commission within 120 days after December 31, 2020, are incorporated by reference in Part III.

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PART I

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains certain “forward-looking statements” within the meaning of the federal securities laws. All statements, other than statements of historical fact included in this Form 10-K, including, but not limited to, those under “Business and Properties” in Items 1 and 2, “Risk Factors” in Item 1A, “Legal Proceedings” in Item 3 and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Item 7, are forward-looking statements. Forward-looking statements use words such as “anticipate,” “project,” “expect,” “plan,” “goal,” “forecast,” “intend,” “should,” “would,” “could,” “believe,” “may,” and similar expressions and statements regarding our plans and objectives for future operations. These statements are 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. All statements concerning our expectations for future results of operations are based on forecasts for our existing operations and do not include the potential impact of any future acquisitions. Although we believe that the expectations reflected in these forward-looking statements are reasonable, we cannot assure you that our expectations will prove to be correct. Therefore, actual outcomes and results could materially differ from what is expressed, implied or forecast in these statements. Any differences could be caused by a number of factors including, but not limited to:

- the extraordinary market environment and effects of the COVID-19 pandemic, including a significant decline in demand for refined petroleum products in markets we serve;
- risks and uncertainties with respect to the actions of actual or potential competitive suppliers and transporters of refined petroleum products or lubricant and specialty products in our markets;
- the spread between market prices for refined products and market prices for crude oil;
- the possibility of constraints on the transportation of refined products or lubricant and specialty products;
- the possibility of inefficiencies, curtailments or shutdowns in refinery operations or pipelines, whether due to infection in the workforce or in response to reductions in demand;
- the effects of current and future governmental and environmental regulations and policies, including the effects of current and future restrictions on various commercial and economic activities in response to the COVID-19 pandemic;
- the availability and cost of our financing;
- the effectiveness of our capital investments and marketing strategies;
- our efficiency in carrying out and consummating construction projects, including our ability to complete announced capital projects, such as the conversion of the Cheyenne Refinery to a renewable diesel facility and the construction of the Artesia renewable diesel unit and pretreatment unit, on time and within budget;
- our ability to timely obtain or maintain permits, including those necessary for operations or capital projects,
- our ability to acquire refined or lubricant product operations or pipeline and terminal operations on acceptable terms and to integrate any existing or future acquired operations;
- the possibility of terrorist or cyberattacks and the consequences of any such attacks;
- general economic conditions, including uncertainty regarding the timing, pace and extent of an economic recovery in the United States;
- continued deterioration in gross margins or a prolonged economic slowdown due to the COVID-19 pandemic which could result in an impairment of goodwill and / or additional long-lived asset impairments; and
- other financial, operational and legal risks and uncertainties detailed from time to time in our SEC filings.

Cautionary statements identifying important factors that could cause actual results to differ materially from our expectations are set forth in this Form 10-K, including without limitation the forward-looking statements that are referred to above. You should not put any undue reliance on any forward-looking statements. When considering forward-looking statements, you should keep in mind the risk factors and other cautionary statements set forth in this Form 10-K under “Risk Factors” in Item 1A and in conjunction with the discussion in this Form 10-K in “Management's Discussion and Analysis of Financial Condition and Results of Operations” under the heading “Liquidity and Capital Resources.” All forward-looking statements included in this Form 10-K and all subsequent written or oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements. 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.

DEFINITIONS

Within this report, the following terms have these specific meanings:

“**Alkylation**” means the reaction of propylene or butylene (olefins) with isobutane to form an iso-paraffinic gasoline (inverse of cracking).

“**Aromatic oil**” is long chain oil that is highly aromatic in nature and is used to manufacture tires and industrial rubber products and in the production of specialty asphalt.

“**BPD**” means the number of barrels per calendar day of crude oil or petroleum products.

“**BPSD**” means the number of barrels per stream day (barrels of capacity in a 24 hour period) of crude oil or petroleum products.

“**Base oil**” is a lubricant grade oil initially produced from refining crude oil or through chemical synthesis that is used in producing lubricant products such as lubricating greases, motor oil and metal processing fluids.

“**Biodiesel**” means a clean alternative fuel produced from renewable biological resources.

“**Black wax crude oil**” is a low sulfur, low gravity crude oil produced in the Uintah Basin in Eastern Utah that has certain characteristics that require specific facilities to transport, store and refine into transportation fuels.

“**Catalytic reforming**” means a refinery process which uses a precious metal (such as platinum) based catalyst to convert low octane naphtha to high octane gasoline blendstock and hydrogen. The hydrogen produced from the reforming process is used to desulfurize other refinery oils and is a primary source of hydrogen for the refinery.

“**Cracking**” means the process of breaking down larger, heavier and more complex hydrocarbon molecules into simpler and lighter molecules.

“**Crude oil distillation**” means the process of distilling vapor from liquid crudes, usually by heating, and condensing the vapor slightly above atmospheric pressure turning it back to liquid in order to purify, fractionate or form the desired products.

“**Ethanol**” means a high octane gasoline blend stock that is used to make various grades of gasoline.

“**FCC,**” or fluid catalytic cracking, means a refinery process that breaks down large complex hydrocarbon molecules into smaller more useful ones using a circulating bed of catalyst at relatively high temperatures.

“**Gas oil**” is a group of petroleum distillation products having boiling points between kerosene and lubricating oil and is used as fuel in construction and agricultural machinery.

“**Hydrodesulfurization**” means to remove sulfur and nitrogen compounds from oil or gas in the presence of hydrogen and a catalyst at relatively high temperatures.

“**Hydrogen plant**” means a refinery unit that converts natural gas and steam to high purity hydrogen, which is then used in the hydrodesulfurization, hydrocracking and isomerization processes.

“**HF alkylation**” or hydrofluoric alkylation, means a refinery process which combines isobutane and C3/C4 olefins using HF acid as a catalyst to make high octane gasoline blend stock.

“Isomerization” means a refinery process for rearranging the structure of C5/C6 molecules without changing their size or chemical composition and is used to improve the octane of C5/C6 gasoline blendstocks.

“LPG” means liquid petroleum gases.

“Lubricant” or **“lube”** means a solvent neutral paraffinic product used in commercial heavy duty engine oils, passenger car oils and specialty products for industrial applications such as heat transfer, metalworking, rubber and other general process oil.

“**MSAT2**” means Control of Hazardous Air Pollutants from Mobile Sources, a rule issued by the U.S. Environmental Protection Agency to reduce hazardous emissions from motor vehicles and motor vehicle fuels.

“**MEK**” means a lube process that separates waxy oil from non-waxy oils using methyl ethyl ketone as a solvent.

“**MMBTU**” means one million British thermal units.

“**Natural gasoline**” means a low octane gasoline blend stock that is purchased and used to blend with other high octane stocks produced to make various grades of gasoline.

“**Paraffinic oil**” is a high paraffinic, high gravity oil produced by extracting aromatic oils and waxes from gas oil and is used in producing high-grade lubricating oils.

“**Rack back**” represents the portion of our Lubricants and Specialty Products business operations that entails the processing of feedstocks into base oils.

“**Rack forward**” represents the portion of our Lubricants and Specialty Products business operations that entails the processing of base oils into finished lubricants and the packaging, distribution and sale to customers.

“**Refinery gross margin**” means the difference between average net sales price and average cost per barrel sold. This does not include the associated depreciation and amortization costs.

“**Reforming**” means the process of converting gasoline type molecules into aromatic, higher octane gasoline blend stocks while producing hydrogen in the process.

“**Renewable diesel**” means a diesel fuel derived from vegetable oils or animal fats that is produced through various processes, most commonly through hydrotreating, reacting the feedstock with hydrogen under temperatures and pressure in the presence of a catalyst.

“**RINs**” means renewable identification numbers and refers to serial numbers assigned to credits generated from renewable fuel production under the Environmental Protection Agency’s Renewable Fuel Standard (“RFS”) regulations, which require blending renewable fuels into the nation's fuel supply. In lieu of blending, refiners may purchase these transferable credits in order to comply with the regulations.

“**Roofing flux**” is produced from the bottom cut of crude oil and is the base oil used to make roofing shingles for the housing industry.

“**ROSE,**” or “**Solvent deasphalter / residuum oil supercritical extraction,**” means a refinery unit that uses a light hydrocarbon like propane or butane to extract non-asphaltene heavy oils from asphalt or atmospheric reduced crude. These deasphalted oils are then further converted to gasoline and diesel in the FCC process. The remaining asphaltenes are either sold, blended to fuel oil or blended with other asphalt as a hardener.

“**Scanfiner**” is a refinery unit that removes sulfur from gasoline to produce low sulfur gasoline blendstock.

“**Sour crude oil**” means crude oil containing quantities of sulfur greater than 0.4 percent by weight, while “**sweet crude oil**” means crude oil containing quantities of sulfur equal to or less than 0.4 percent by weight.

“Vacuum distillation” means the process of distilling vapor from liquid crudes, usually by heating, and condensing the vapor below atmospheric pressure turning it back to a liquid in order to purify, fractionate or form the desired products.

“White oil” is an extremely pure, highly-refined petroleum product that has a wide variety of applications ranging from pharmaceutical to cosmetic products.

“WTI” means West Texas Intermediate and is a grade of crude oil used as a common benchmark in oil pricing. WTI is a sweet crude oil and has a relatively low density.

Items 1 and 2. Business and Properties

COMPANY OVERVIEW

References herein to HollyFrontier Corporation (“HollyFrontier”) include HollyFrontier and its consolidated subsidiaries. In accordance with the Securities and Exchange Commission’s (“SEC”) “Plain English” guidelines, this Annual Report on Form 10-K has been written in the first person. In this document, the words “we,” “our,” “ours” and “us” refer only to HollyFrontier and its consolidated subsidiaries or to HollyFrontier or an individual subsidiary and not to any other person, with certain exceptions. Generally, the words “we,” “our,” “ours” and “us” include Holly Energy Partners, L.P. (“HEP”) and its subsidiaries as consolidated subsidiaries of HollyFrontier, unless when used in disclosures of transactions or obligations between HEP and HollyFrontier or its other subsidiaries. This document contains certain disclosures of agreements that are specific to HEP and its consolidated subsidiaries and do not necessarily represent obligations of HollyFrontier. When used in descriptions of agreements and transactions, “HEP” refers to HEP and its consolidated subsidiaries.

We are principally an independent petroleum refiner that produces high-value light products such as gasoline, diesel fuel, jet fuel, specialty lubricant products, and specialty and modified asphalt. We were incorporated in Delaware in 1947 and maintain our principal corporate offices at 2828 N. Harwood, Suite 1300, Dallas, Texas 75201-1507. Our telephone number is 214-871-3555, and our internet website address is www.hollyfrontier.com. The information contained on our website does not constitute part of this Annual Report on Form 10-K. A print copy of this Annual Report on Form 10-K will be provided without charge upon written request to the Vice President, Investor Relations at the above address. A direct link to our SEC filings is available on our website under the Investor Relations tab. Also available on our website are copies of our Corporate Governance Guidelines, Audit Committee Charter, Compensation Committee Charter, Nominating / Corporate Governance Committee Charter, Environmental, Health, Safety, and Public Policy Committee Charter and Code of Business Conduct and Ethics, all of which will be provided without charge upon written request to the Vice President, Investor Relations at the above address. Our Code of Business Conduct and Ethics applies to all of our officers, employees and directors, including our principal executive officer, principal financial officer and principal accounting officer. Our common stock is traded on the New York Stock Exchange under the trading symbol “HFC.”

In November 2019, we announced our plans to construct a new renewable diesel unit (“RDU”) at our Artesia facility. The RDU will have a production capacity of approximately 120 million gallons a year and allow us to process soybean oil and other renewable feedstocks into renewable diesel. This investment will provide us the opportunity to meet the demand for low-carbon fuels while covering the cost of our annual RINs purchase obligation under current market conditions.

In the third quarter of 2020, we permanently ceased petroleum refining operations at our Cheyenne Refinery and subsequently began converting certain assets at our Cheyenne Refinery to renewable diesel production. The Cheyenne RDU will have a production capacity of approximately 90 million gallons a year. This decision was primarily based on a positive outlook in the market for renewable diesel and the expectation that future free cash flow generation at our Cheyenne Refinery would be challenged due to lower gross margins resulting from the economic impact of the COVID-19 pandemic and compressed crude differentials due to dislocations in the crude oil market. Additional factors included uncompetitive operating and maintenance costs forecasted for our Cheyenne Refinery and the anticipated loss of the Environmental Protection Agency’s (“EPA”) small refinery exemption.

Additionally, we are constructing a pre-treatment unit (“PTU”) at our Artesia facility that will provide feedstock flexibility for both our Artesia and Cheyenne RDUs. The RDUs and PTU, along with corresponding rail infrastructure and storage tanks, are estimated to have a total capital cost of \$650 million to \$750 million. The RDUs are expected to be completed in the first quarter of 2022 and the PTU in the first half of 2022.

On November 12, 2018, we entered into an equity purchase agreement to acquire 100% of the issued and outstanding capital stock of Sonneborn US Holdings Inc. and 100% of the membership rights in Sonneborn Coöperatief U.A. (collectively, “Sonneborn”). The acquisition closed on February 1, 2019. Cash consideration paid was \$662.7 million. Sonneborn is a producer of specialty hydrocarbon chemicals such as white oils, petrolatums and waxes with manufacturing facilities in the United States and Europe.

On July 10, 2018, we entered into a definitive agreement to acquire Red Giant Oil Company LLC (“Red Giant Oil”), a privately-owned lubricants company. The acquisition closed on August 1, 2018. Cash consideration paid was \$54.2 million. Red Giant Oil is one of the largest suppliers of locomotive engine oil in North America and is headquartered in Council Bluffs, Iowa.

On October 29, 2016, we entered into a share purchase agreement with Suncor Energy Inc. (“Suncor”) to acquire 100% of the outstanding capital stock of Petro-Canada Lubricants Inc. (“PCLI”). The acquisition closed on February 1, 2017. Cash consideration paid was \$862.1 million, or \$1.125 billion Canadian dollars. PCLI, located in Mississauga, Ontario, is the largest producer of base oils in Canada with a plant having 15,600 BPD of lubricant production capacity and is one of the largest manufacturers of high margin Group III base oils in North America.

As of December 31, 2020, we:

- owned and operated a petroleum refinery in El Dorado, Kansas (the “El Dorado Refinery”), two refinery facilities located in Tulsa, Oklahoma (collectively, the “Tulsa Refineries”), a refinery in Artesia, New Mexico that is operated in conjunction with crude oil distillation and vacuum distillation and other facilities situated 65 miles away in Lovington, New Mexico (collectively, the “Navajo Refinery”) and a refinery in Woods Cross, Utah (the “Woods Cross Refinery”);
- owned a facility in Cheyenne, Wyoming, which operated as a petroleum refinery until early August 2020, at which time its assets began to be converted to renewable diesel production (the “Cheyenne Refinery”);
- owned and operated PCLI located in Mississauga, Ontario, which produces base oils and other specialized lubricant products;
- owned and operated Sonneborn with manufacturing facilities in Petrolia, Pennsylvania and the Netherlands, which produce specialty lubricant products such as white oils, petrolatums and waxes;
- owned and operated Red Giant Oil, which supplies locomotive engine oil and has storage and distribution facilities in Iowa and Wyoming, along with a blending and packaging facility in Texas;
- owned and operated HollyFrontier Asphalt Company LLC (“HFC Asphalt”), which operates various asphalt terminals in Arizona, New Mexico and Oklahoma; and
- owned a 57% limited partner interest and a non-economic general partner interest in HEP. HEP owns and operates logistic assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery processing units that principally support our refining and marketing operations in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States.

HEP is a variable interest entity (“VIE”) as defined under U.S. generally accepted accounting principles (“GAAP”). Information on HEP's assets and acquisitions completed in the past three years can be found under the “Holly Energy Partners, L.P.” section provided later in this discussion of Items 1 and 2, “Business and Properties.”

Our operations are currently organized into three reportable segments, Refining, Lubricants and Specialty Products and HEP. The Refining segment includes the operations of our El Dorado, Tulsa, Navajo and Woods Cross Refineries and HFC Asphalt. The Lubricants and Specialty Products segment includes the operations of our Petro-Canada Lubricants business, Red Giant Oil and Sonneborn in addition to specialty lubricant products produced at our Tulsa Refinery. The HEP segment involves all of the operations of HEP. See Note 20 “Segment Information” in the Notes to Consolidated Financial Statements for additional information on our reportable segments.

REFINERY OPERATIONS

Our refinery operations serve the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. We own and operate four complex refineries having a combined crude oil processing capacity of 405,000 barrels per stream day. Each of our refineries has the complexity to convert discounted, heavy and sour crude oils into a high percentage of gasoline, diesel and other high-value refined products.

The tables presented below and elsewhere in this discussion of our refinery operations set forth information, including non-GAAP performance measures, about our refinery operations. The cost of products and refinery gross and net operating margins do not include

the non-cash effects of long-lived asset impairment charges, 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” following Item 7A of Part II of this Form 10-K.

As of December 31, 2020, our refinery operations included the El Dorado, Tulsa, Navajo and Woods Cross Refineries. In the third quarter of 2020, we permanently ceased petroleum refining operations at our Cheyenne Refinery and subsequently began converting certain assets at our Cheyenne Refinery to renewable diesel production. The disaggregation of our refining geographic operating data is presented in two regions, Mid-Continent and West, to best reflect the economic drivers of our refining operations. The Mid-Continent region will continue to be comprised of the El Dorado and Tulsa Refineries, and the new West region will be comprised of the Navajo and Woods Cross Refineries. All prior period geographic operating data included below has been retrospectively adjusted to reflect the revised regional groupings.

	Years Ended December 31,		
	2020	2019	2018
Consolidated			
Crude charge (BPD) ⁽¹⁾	365,190	388,860	384,380
Refinery throughput (BPD) ⁽²⁾	395,080	417,570	413,780
Sales of produced refined products (BPD) ⁽³⁾	391,670	414,370	408,390
Refinery utilization ⁽⁴⁾	90.2 %	96.0 %	94.9 %
Average per produced barrel sold ⁽⁵⁾			
Refinery gross margin	\$ 7.29	\$ 15.92	\$ 16.50
Refinery operating expenses ⁽⁶⁾	6.05	6.12	6.06
Net operating margin	\$ 1.24	\$ 9.80	\$ 10.44
Refinery operating expenses per throughput barrel ⁽⁷⁾	\$ 6.00	\$ 6.07	\$ 5.98
Feedstocks:			
Sweet crude oil	48 %	45 %	44 %
Sour crude oil	29 %	34 %	35 %
Heavy sour crude oil	11 %	10 %	10 %
Black wax crude oil	4 %	4 %	4 %
Other feedstocks and blends	8 %	7 %	7 %
Total	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 405,000 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” following Item 7A of Part II of this Form 10-K.

(6) Represents total Mid-Continent and West regions operating expenses, exclusive of long-lived asset impairment charges and depreciation and amortization, divided by sales volumes of refined products produced at our refineries.

(7) Represents total Mid-Continent and West regions operating expenses, exclusive of long-lived asset impairment charges and depreciation and amortization, divided by refinery throughput.

Products and Customers

Set forth below is information regarding refined product sales:

	Years Ended December 31,		
	2020	2019	2018
<i>Consolidated</i>			
Sales of refined products:			
Gasolines	54 %	52 %	52 %
Diesel fuels	34 %	34 %	34 %
Jet fuels	3 %	4 %	4 %
Fuel oil	1 %	2 %	2 %
Asphalt	4 %	3 %	3 %
Base oils	2 %	2 %	3 %
LPG and other	2 %	3 %	2 %
Total	100 %	100 %	100 %

Light products are shipped to customers via product pipelines or are available for loading at our refinery truck facilities and terminals. Light products are also made available to customers at various other locations via exchange with other parties.

Our principal customers for gasoline include other refiners, convenience store chains, independent marketers and retailers. Diesel fuel is sold to other refiners, truck stop chains, wholesalers and railroads. Jet fuel is sold for commercial airline use. Base oils are intercompany sales to our Lubricants and Specialty Products segment. LPG's are sold to LPG wholesalers and LPG retailers. We produce and purchase asphalt products that are sold to governmental entities, paving contractors or manufacturers. Asphalt is also blended into fuel oil and is either sold locally or is shipped to the Gulf Coast. See Note 5 "Revenues" in the Notes to Consolidated Financial Statements for additional information on our significant customers.

Mid-Continent Region (El Dorado and Tulsa Refineries)

Facilities

The El Dorado Refinery is a high-complexity coking refinery with a 135,000 barrels per stream day processing capacity and the ability to process significant volumes of heavy and sour crudes. The integrated refining processes at the Tulsa West and East refinery facilities provide us with a highly complex refining operation having a combined crude processing rate of approximately 125,000 barrels per stream day.

The following table sets forth information about our Mid-Continent region operations, including non-GAAP performance measures.

	Years Ended December 31,		
	2020	2019	2018
Mid-Continent Region (El Dorado and Tulsa Refineries)			
Crude charge (BPD) ⁽¹⁾	241,140	254,010	249,240
Refinery throughput (BPD) ⁽²⁾	257,030	268,500	264,730
Sales of produced refined products (BPD) ⁽³⁾	248,320	259,310	255,800
Refinery utilization ⁽⁴⁾	92.7 %	97.7 %	95.9 %
Average per produced barrel sold ⁽⁵⁾			
Refinery gross margin	\$ 5.17	\$ 13.71	\$ 14.44
Refinery operating expenses ⁽⁶⁾	5.46	5.77	5.51
Net operating margin	\$ (0.29)	\$ 7.94	\$ 8.93
Refinery operating expenses per throughput barrel ⁽⁷⁾	\$ 5.27	\$ 5.58	\$ 5.33

Footnote references are provided under our Consolidated Refinery Operating Data table on page 8.

	Years Ended December 31,		
	2020	2019	2018
Mid-Continent Region (El Dorado and Tulsa Refineries)			
Feedstocks:			
Sweet crude oil	58 %	55 %	54 %
Sour crude oil	19 %	24 %	24 %
Heavy sour crude oil	17 %	16 %	16 %
Other feedstocks and blends	6 %	5 %	6 %
Total	100 %	100 %	100 %

The El Dorado Refinery is located on 1,100 acres south of El Dorado, Kansas and is a fully integrated refinery. The principal processing units at the El Dorado Refinery consist of crude and vacuum distillation; hydrodesulfurization of naphtha, kerosene, diesel, and gas oil streams; isomerization; catalytic reforming; aromatics recovery; catalytic cracking; alkylation; delayed coking; hydrogen production; and sulfur recovery.

The Tulsa West facility is located on a 750-acre site in Tulsa, Oklahoma situated along the Arkansas River. The principal processing units at the Tulsa West facility consist of crude and vacuum distillation (with light ends recovery), naphtha hydrodesulfurization, propane de-asphalting, lubes extraction, MEK dewaxing, delayed coker and butane splitter units.

The Tulsa East facility is located on a 466-acre site also in Tulsa, Oklahoma situated along the Arkansas River. The principal processing units at the Tulsa East facility consist of crude and vacuum distillation, naphtha hydrodesulfurization, FCC, isomerization, catalytic reforming, alkylation, scanfiner, diesel hydrodesulfurization and sulfur units.

Markets and Competition

The primary markets for the El Dorado Refinery's refined products are Colorado and the Plains States, which include the Kansas City metropolitan area. The gasoline, diesel and jet fuel produced by the El Dorado Refinery are primarily shipped via pipeline to terminals for distribution by truck or rail. We ship product via the NuStar Pipeline Operating Partnership L.P. Pipeline to the northern Plains States, via the Magellan Pipeline Company, L.P. ("Magellan") mountain pipeline to Denver, Colorado, and on the Magellan mid-continent pipeline to the Plains States. Additionally, HEP's on-site truck and rail racks facilitate access to local refined product markets.

The El Dorado Refinery faces competition from other Plains States and Mid-Continent refiners, but the principal competitors for the El Dorado Refinery are Gulf Coast refiners. Our Gulf Coast competitors typically have lower production costs due to greater economies of scale; however, they incur higher refined product transportation costs, which allows the El Dorado Refinery to compete effectively in the Plains States and Rocky Mountain region with Gulf Coast refineries.

The Tulsa Refineries serve the Mid-Continent geographic region of the United States. Distillates and gasolines are primarily delivered from the Tulsa Refineries to market via pipelines owned and operated by Magellan. These pipelines connect the refinery to distribution channels throughout Colorado, Oklahoma, Kansas, Missouri, Illinois, Iowa, Minnesota, Nebraska and Arkansas. Additionally, HEP's on-site truck and rail racks facilitate access to local refined product markets.

The Tulsa Refineries' principal customers for conventional gasoline include other refiners, convenience store chains, independent marketers and retailers. Truck stop operators and railroads are the primary diesel customers. Jet fuel is sold primarily for commercial use.

The refinery's asphalt and roofing flux products are sold via truck or railcar directly from the refineries or to customers throughout the Mid-Continent geographic region primarily to paving contractors and manufacturers of roofing products.

Products

Set forth below is information regarding refined product sales attributable to our Mid-Continent region:

	Years Ended December 31,		
	2020	2019	2018
Mid-Continent Region (El Dorado and Tulsa Refineries)			
Sales of refined products:			
Gasolines	52 %	51 %	51 %
Diesel fuels	34 %	32 %	33 %
Jet fuels	4 %	7 %	6 %
Fuel oil	1 %	1 %	1 %
Asphalt	3 %	3 %	3 %
Base oils	4 %	4 %	4 %
LPG and other	2 %	2 %	2 %
Total	100 %	100 %	100 %

Crude Oil and Feedstock Supplies

Both of our Mid-Continent Refineries are connected via pipeline to Cushing, Oklahoma, a significant crude oil pipeline trading and storage hub. The El Dorado Refinery and the Tulsa Refineries are located approximately 125 miles and 50 miles, respectively, from Cushing, Oklahoma. Local pipelines provide direct access to regional Oklahoma crude production as well as access to United States onshore and Canadian crudes. The proximity of the refineries to the Cushing pipeline and storage hub provides the flexibility to optimize their crude slate with a wide variety of crude oil supply options. Additionally, we have transportation service agreements to transport Canadian crude oil on the Spearhead and Keystone Pipelines, enabling us to transport Canadian crude oil to Cushing for subsequent shipment to either of our Mid-Continent Refineries.

We also purchase isobutane, natural gasoline, butane and other feedstocks for processing at our Mid-Continent Refineries. The El Dorado Refinery is connected to Conway, Kansas, a major gas liquids trading and storage hub, via the Oneok Pipeline. From time to time, other feedstocks such as gas oil, naphtha and light cycle oil are purchased from other refiners for use at our refineries.

West Region (Navajo and Woods Cross Refineries)

Facilities

The Navajo Refinery has a crude oil processing capacity of 100,000 barrels per stream day and has the ability to process sour crude oils into high-value light products such as gasoline, diesel fuel and jet fuel.

The Woods Cross Refinery has a crude oil processing capacity of 45,000 barrels per stream day and processes regional sweet and black wax crude into high-value light products.

The following table sets forth information about our West region operations, including non-GAAP performance measures.

	Years Ended December 31,		
	2020	2019	2018
<i>West Region (Navajo and Woods Cross Refineries)</i>			
Crude charge (BPD) ⁽¹⁾	124,050	134,850	135,140
Refinery throughput (BPD) ⁽²⁾	138,050	149,070	149,050
Sales of produced refined products (BPD) ⁽³⁾	143,350	155,060	152,590
Refinery utilization ⁽⁴⁾	85.6 %	93.0 %	93.2 %
Average per produced barrel sold ⁽⁵⁾			
Refinery gross margin	\$ 10.97	\$ 19.62	\$ 19.96
Refinery operating expenses ⁽⁶⁾	7.07	6.69	6.99
Net operating margin	\$ 3.90	\$ 12.93	\$ 12.97
Refinery operating expenses per throughput barrel ⁽⁷⁾	\$ 7.34	\$ 6.96	\$ 7.15

Footnote references are provided under our Consolidated Refinery Operating Data table on page 8.

	Years Ended December 31,		
	2020	2019	2018
<i>West Region (Navajo and Woods Cross Refineries)</i>			
Feedstocks:			
Sweet crude oil	30 %	26 %	27 %
Sour crude oil	49 %	52 %	52 %
Black wax crude oil	11 %	12 %	12 %
Other feedstocks and blends	10 %	10 %	9 %
Total	100 %	100 %	100 %

The Navajo Refinery's Artesia, New Mexico facility is located on a 561-acre site and is a fully integrated refinery with crude distillation, vacuum distillation, FCC, ROSE (solvent deasphalter), HF alkylation, catalytic reforming, hydrodesulfurization, mild hydrocracking, isomerization, sulfur recovery and product blending units.

The Artesia facility is operated in conjunction with a refining facility located in Lovington, New Mexico, approximately 65 miles east of Artesia. The principal equipment at the Lovington facility consists of a crude distillation unit and associated vacuum distillation units. The Lovington facility processes crude oil into intermediate products that are transported to Artesia by means of three intermediate pipelines owned by HEP. These products are then upgraded into finished products at the Artesia facility. The combined crude oil capacity of the Navajo Refinery facilities is 100,000 BPSD and it typically processes or blends an additional 10,000 BPSD of natural gasoline, butane, gas oil and naphtha.

The Woods Cross Refinery facility is located on a 200-acre site and is a fully integrated refinery with crude distillation, solvent deasphalter, FCC, HF alkylation, catalytic reforming, hydrodesulfurization, isomerization, sulfur recovery and product blending units. The facility typically processes or blends an additional 2,000 BPSD of natural gasoline, butane and gas oil over its 45,000 BPSD capacity.

Markets and Competition

The Navajo Refinery primarily serves the southwestern United States market, including the metropolitan areas of El Paso, Texas; Albuquerque, Moriarty and Bloomfield, New Mexico; Phoenix and Tucson, Arizona; and portions of northern Mexico. Our products are shipped through HEP's pipelines from Artesia, New Mexico to El Paso, Texas and from El Paso to Albuquerque and to Mexico via products pipeline systems owned by Magellan and from El Paso to Tucson and Phoenix via a products pipeline system owned by Kinder Morgan's subsidiary, SFPP, L.P. ("SFPP"). In addition, petroleum products from the Navajo Refinery are transported to markets in northwest New Mexico, to Moriarty, New Mexico, near Albuquerque, via HEP's pipelines running from Artesia to San Juan County, New Mexico, and to Bloomfield, New Mexico. We have refined product storage through our pipelines and terminals agreement with HEP at terminals in Artesia and Moriarty, New Mexico.

The Woods Cross Refinery's primary market is Utah, which is currently supplied by a number of local refiners and the Pioneer Pipeline. It also supplies a small percentage of the refined products consumed in the combined Idaho, Wyoming, eastern Washington and Nevada markets. Our Woods Cross Refinery ships refined products over a common carrier pipeline system owned by Andeavor Logistics Northwest Pipelines LLC to numerous terminals, including HEP's terminal at Spokane, Washington and to third-party terminals at Pocatello and Boise, Idaho and Pasco, Washington as well as to Cedar City, Utah and Las Vegas, Nevada via the UNEV Pipeline.

Products

Set forth below is information regarding refined product sales attributable to our West region:

Years Ended December 31,

2020

2019

2018

West Region (Navajo and Woods Cross Refineries)

Sales of refined products:

Gasolines	56 %	53 %	53 %
Diesel fuels	35 %	37 %	38 %
Fuel oil	3 %	3 %	3 %
Asphalt	4 %	4 %	3 %
LPG and other	2 %	3 %	3 %
Total	100 %	100 %	100 %

Crude Oil and Feedstock Supplies

The Navajo Refinery is situated near the Permian Basin, an area that has historically, and continues to have, abundant supplies of crude oil available both for regional users and for export to other areas. We purchase crude oil from independent producers in southeastern New Mexico and west Texas as well as from major oil companies. The crude oil is gathered through HEP's pipelines and through third-party tank trucks and crude oil pipeline systems for delivery to the Navajo Refinery.

We also purchase volumes of isobutane, natural gasoline and other feedstocks to supply the Navajo Refinery from sources in Texas and the Mid-Continent area that are delivered to our region on a common carrier pipeline owned by Enterprise Products, L.P. Ultimately all volumes of these products are shipped to the Artesia refining facilities on HEP's intermediate pipelines running from Lovington to Artesia. From time to time, we purchase gas oil, naphtha and light cycle oil from other refiners for use as feedstock.

The Woods Cross Refinery currently obtains crude oil from suppliers in Canada, Wyoming and Utah as delivered via common carrier pipelines, including the SLC Pipeline and Frontier Pipeline owned by HEP. Supplies of black wax crude oil are shipped via truck.

HollyFrontier Asphalt Company

We manufacture commodity and modified asphalt products at our manufacturing facilities located in Glendale, Arizona; Albuquerque, New Mexico; Artesia, New Mexico and Catoosa, Oklahoma. Our Albuquerque and Artesia facilities manufacture modified hot asphalt products and commodity and modified asphalt emulsions from base asphalt materials provided by our refineries and third-party suppliers. Our Glendale facility manufactures modified hot asphalt products from base asphalt materials provided by our refineries and third-party suppliers. Our Catoosa facility manufactures specialty modified asphalt and commodity asphalt products. We market these asphalt products in Arizona, California, Colorado, New Mexico, Oklahoma, Kansas, Missouri, Texas, Arkansas and northern Mexico. Our products are shipped via third-party trucking companies to commercial customers that provide asphalt based materials for commercial and government projects.

LUBRICANTS AND SPECIALTY PRODUCTS OPERATIONS

Our lubricants and specialty products operations consist of our Petro-Canada Lubricants, Red Giant Oil, Sonneborn and the Tulsa rack forward businesses.

Our Petro-Canada Lubricants business produces automotive, industrial and food grade lubricants and greases, base and process oils and specialty fluids. It is one of the largest manufacturers of high margin Group III base oils in North America. Products are marketed in over 80 countries worldwide to a diverse customer base through a global sales force and distributor network.

Our Red Giant Oil business provides high quality lubricants to the railroad industry, which represents a market of a small number of high-value customers who associate the Red Giant Oil name with a niche suite of products.

Sonneborn is a producer of specialty hydrocarbon chemicals such as white oils, petrolatums and waxes for the personal care, cosmetic, pharmaceutical and food processing industries. Combined with Petro-Canada Lubricants, it is one of the world's largest producers of pharmaceutical white oils.

Our Tulsa Refinery produces high quality base oils, process oils, waxes, horticultural oils and asphalt performance products. Products are marketed worldwide through strategically located terminals in the United States and selected distributors internationally.

The following table sets forth information about our lubricants and specialty products operations and includes Red Giant Oil for the period August 1, 2018 (date of acquisition) through December 31, 2020, and Sonneborn for the period February 1, 2019 (date of acquisition) through December 31, 2020.

	Years Ended December 31,		
	2020	2019	2018
<i>Lubricants and Specialty Products</i>			
Throughput (BPD)	19,645	20,251	19,590
Sales of produced refined products (BPD)	32,902	34,827	30,510
Sales of produced refined products:			
Finished products	49 %	49 %	48 %
Base oils	26 %	27 %	31 %
Other	25 %	24 %	21 %
Total	100 %	100 %	100 %

PCLI owns and operates a production facility located in Mississauga, Ontario having lubricant production capacity of 15,600 BPD and has the flexibility to match unique lubricant product formulations. The primary operating units are high-pressure hydrotreating and hydrofinishing, solvent dewaxing and catalytic dewaxing. In addition, the facility operates a hydrogen plant, naphtha hydrotreater and catalytic reformer, along with other utility units to support production. The Mississauga plant also includes packaging facilities and has extensive distribution capabilities with marine, truck and rail access.

Red Giant Oil, headquartered in Council Bluffs, Iowa, owns and operates blending and distribution facilities in Council Bluffs, Iowa; Joshua, TX and Newcastle, Wyoming.

Sonneborn has manufacturing facilities in Petrolia, Pennsylvania and the Netherlands. The Sonneborn Petrolia site has a production capacity of 6,000 BPD with flexibility to produce a full range of finished specialty products. The primary operating unit is a high-pressure hydrotreater with hydrofinishing. In addition, the facility operates a hydrogen plant along with other utility units to support production. The Petrolia plant also includes packaging facilities with distribution capabilities through rail and trucking. The Sonneborn Netherlands sites include processing facilities in Amsterdam and Koog with a production capacity of approximately 1,500 BPD. The primary operating units include base oil acid treating, percolation filtration, and bleaching & steaming operations. The Netherlands sites include packaging facilities with distribution capabilities through truck and marine.

HOLLY ENERGY PARTNERS, L.P.

HEP is a Delaware limited partnership that trades on the New York Stock Exchange under the trading symbol "HEP." HEP owns and operates logistic assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery processing units that principally support our refining and marketing operations, as well as other third-party refineries, in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. Additionally, HEP owns a 75% interest in UNEV Pipeline, LLC ("UNEV"), the owner of a pipeline running from Woods Cross, Utah to Las Vegas, Nevada (the "UNEV Pipeline") and associated product terminals, and a 50% ownership interest in each of Osage Pipe Line Company, LLC, the owner of a pipeline running from Cushing, Oklahoma to El Dorado, Kansas (the "Osage Pipeline"), Cheyenne Pipeline, LLC, the owner of a pipeline running from Fort Laramie, Wyoming to Cheyenne, Wyoming (the "Cheyenne Pipeline") and Cushing Connect Pipeline & Terminal LLC ("Cushing Connect"), the owner of a crude oil storage terminal in Cushing, Oklahoma and a pipeline under construction that will run from Cushing, Oklahoma to our Tulsa Refineries.

HEP generates revenues by charging tariffs for transporting petroleum products and crude oil through its pipelines, by charging fees for terminalling and storing refined products and other hydrocarbons and providing other services at its storage tanks, terminals and refinery processing units. HEP does not take ownership of products that it transports, terminals, stores or refines; therefore, it is not directly exposed to changes in commodity prices.

Investment in Joint Venture

Cushing Connect Joint Venture

In October 2019, HEP Cushing LLC, a wholly-owned subsidiary of HEP, and Plains Marketing, L.P., a wholly-owned subsidiary of Plains All American Pipeline, L.P. (“Plains”), formed a 50/50 joint venture, Cushing Connect, for (i) the development, construction, ownership and operation of a new 160,000 barrel per day common carrier crude oil pipeline (the “Cushing Connect Pipeline”) that will connect the Cushing, Oklahoma crude oil hub to our Tulsa Refineries and (ii) the ownership and operation of 1.5 million barrels of crude oil storage in Cushing, Oklahoma (the “Cushing Connect Terminal”). The Cushing Connect Terminal was fully in service beginning in April 2020, and the Cushing Connect Pipeline is expected to be placed in service during the second quarter of 2021. Long-term commercial agreements have been entered into to support the Cushing Connect assets.

Cushing Connect will contract with an affiliate of HEP to manage the construction and operation of the Cushing Connect Pipeline and with an affiliate of Plains to manage the operation of the Cushing Connect Terminal. The total investment in Cushing Connect will be shared proportionately among the partners, and HEP estimates its share of the cost of the Cushing Connect Terminal contributed by Plains and Cushing Connect Pipeline construction costs are approximately \$65.0 million. However, any Cushing Connect Pipeline construction costs exceeding 10% of the budget are borne solely by HEP.

Transportation Agreements

Agreements with HEP

HEP serves our refineries under long-term pipeline, terminal and tankage throughput agreements and refinery processing tolling agreements expiring from 2021 through 2036. Under these agreements, we pay HEP fees to transport, store and process throughput volumes of refined products, crude oil and feedstocks on HEP's pipelines, terminals, tankage, loading rack facilities and refinery processing units that result in minimum annual payments to HEP, including UNEV (a consolidated subsidiary of HEP). Under these agreements, the agreed upon tariff rates are subject to annual tariff rate adjustments on July 1 at a rate based upon the percentage change in Producer Price Index (“PPI”) or Federal Energy Regulatory Commission (“FERC”) index. As of December 31, 2020, these agreements required minimum annualized payments to HEP of \$351.1 million. However, as previously disclosed, subsequent to year end these agreements were modified to account for the conversion of our Cheyenne Refinery to renewable diesel production, and as of January 1, 2021, require minimum annualized payments to HEP of \$341.9 million.

Our transactions with HEP including the transactions discussed above and fees paid under our transportation agreements with HEP and UNEV are eliminated and have no impact on our consolidated financial statements.

As of December 31, 2020, HEP's assets included:

Pipelines

- approximately 800 miles of refined product pipelines, including 340 miles of leased pipelines, that transport gasoline, diesel and jet fuel principally from our Navajo Refinery in New Mexico to our customers in the metropolitan and rural areas of Texas, New Mexico, Arizona, Colorado, Utah and northern Mexico;
- approximately 510 miles of refined product pipelines that transport refined products from Delek's Big Spring refinery in Texas to its customers in Texas and Oklahoma;
- two 65-mile pipelines that transport intermediate feedstocks and crude oil from our Navajo Refinery crude oil distillation and vacuum facilities in Lovington, New Mexico to our petroleum refinery facilities in Artesia, New Mexico;
- one 65-mile intermediate pipeline that is used for the shipment of crude oil from the gathering systems in Barnsdall and Beeson, New Mexico to our Navajo Refinery;

- the SLC Pipeline, a 95-mile intrastate crude oil pipeline system that transports crude oil into the Salt Lake City, Utah area from the Utah terminus of the Frontier Pipeline, as well as crude oil flowing from Wyoming and Utah via Plains Rocky Mountain Pipeline;
- the Frontier Pipeline, a 289-mile crude oil pipeline running from Casper, Wyoming to Frontier Station, Utah through a connection to the SLC Pipeline;
- approximately 940 miles of crude oil trunk, gathering and connection pipelines located in west Texas, New Mexico and Oklahoma that primarily deliver crude oil to our Navajo Refinery;
- approximately 8 miles of refined product pipelines that support our Woods Cross Refinery located near Salt Lake City, Utah;
- gasoline and diesel connecting pipelines that support our Tulsa East facility;
- five intermediate product and gas pipelines between our Tulsa East and Tulsa West facilities;

- crude receiving assets located at our Cheyenne facility;
- a 75% interest in the UNEV Pipeline, a 427-mile, 12-inch refined products pipeline running from Woods Cross, Utah to Las Vegas, Nevada;
- a 50% interest in the Osage Pipeline, a 135-mile pipeline that transports crude oil from Cushing, Oklahoma to our El Dorado Refinery and also has a connection to the Jayhawk pipeline that services the CHS refinery in McPherson, Kansas;
- a 50% interest in the Cheyenne Pipeline, an 87-mile crude oil pipeline running from Fort Laramie, Wyoming to Cheyenne, Wyoming; and
- a 50% interest in Cushing Connect, a joint venture formed to construct a 160,000 BPD pipeline to connect the Cushing, Oklahoma crude oil hub to our Tulsa Refineries.

Refined Product Terminals and Refinery Tankage

- three refined product terminals located in Orla, Texas and Moriarty and Bloomfield, New Mexico, with an aggregate capacity of approximately 458,000 barrels, that are integrated with HEP's refined product pipeline system that serves our Navajo Refinery;
- one refined product terminal located in Spokane, Washington, with a capacity of approximately 420,000 barrels, that serves third-party common carrier pipelines;
- one refined product terminal near Mountain Home, Idaho, with a capacity of 120,000 barrels, that serves a nearby United States Air Force Base;
- two refined product terminals, located in Wichita Falls and Abilene, Texas, and one tank farm in Orla, Texas with aggregate capacity of approximately 600,000 barrels, that are integrated with HEP's refined product pipelines that serve Delek's Big Spring, Texas refinery;
- a refined product terminal in Catoosa, Oklahoma that stores specialty lubricant products and is utilized by our Tulsa Refineries;
- a refined product loading rack facility at each of our El Dorado, Tulsa, Navajo and Woods Cross Refineries and our Cheyenne facility, heavy product / asphalt loading rack facilities at our Tulsa East facility, Navajo Refinery Lovington facility and Cheyenne facility, LPG loading rack facilities at our El Dorado Refinery, Tulsa West facility and Cheyenne facility, lube oil loading racks at our Tulsa West facility and crude oil Leased Automatic Custody Transfer units located at our Cheyenne facility;
- on-site crude oil tankage at our Tulsa, Navajo and Woods Cross Refineries and Cheyenne facility having an aggregate storage capacity of approximately 1,530,000 barrels;
- on-site refined and intermediate product tankage at our El Dorado and Tulsa and Refineries and Cheyenne facility having an aggregate storage capacity of approximately 8,600,000 barrels;
- eleven crude oil tanks adjacent to our El Dorado Refinery with a capacity of approximately 1,100,000 barrels that primarily serve our El Dorado Refinery;
- crude oil tankage with an aggregate storage capacity of approximately 480,000 barrels that primarily serve our Navajo Refinery;
- Frontier Pipeline's tankage with an aggregate capacity of approximately 380,000 barrels;
- a 75% interest in UNEV Pipeline's product terminals near Cedar City, Utah and Las Vegas, Nevada with an aggregate capacity of approximately 660,000 barrels; and
- a 50% interest in Cushing Connect's crude oil tankage with a capacity of approximately 1,500,000 barrels in Cushing, Oklahoma.

Refinery Processing Units

- a naphtha fractionation tower at our El Dorado Refinery, with a capacity of 50,000 BPD of desulfurized naphtha;
- a hydrogen generation unit at our El Dorado Refinery, with a capacity of 6.1 million standard cubic feet per day of natural gas.
- a crude unit, which is primarily an atmospheric distillation tower, a desalter and heat exchangers, at our Woods Cross Refinery, with a feedstock capacity of 15,000 BPD of crude oil;
- a FCC unit at our Woods Cross Refinery, which converts crude oil to high-value refined products such as gasoline, diesel and liquefied petroleum gases, with a capacity of 8,000 BPD; and
- a polymerization unit at our Woods Cross Refinery, that uses the output of the fluid cracking unit and converts them into gasoline blendstock, with a capacity of 2,500 BPD.

ADDITIONAL OPERATIONS AND OTHER INFORMATION

Corporate Offices

Our principal corporate offices are leased and located in Dallas, Texas. Functions performed in our Dallas office include overall corporate management, refinery and HEP management, planning and strategy, corporate finance, crude acquisition, logistics, contract administration, marketing, investor relations, governmental affairs, accounting, tax, treasury, information technology, legal and human resources support functions.

Human Capital

Our People

Our people differentiate us from our peers. Our “One HFC Culture” focuses on four key values – safety, integrity, teamwork and ownership. These values influence our decisions, shape our behaviors and provide the opportunity for our employees to thrive. Safety is our first priority. We care about our people and have implemented policies and procedures designed to help make sure they return home safely every day. We focus on integrity and doing the right thing. We champion a culture of teamwork and ownership by supporting each other and empowering employees to take action where they see a need or opportunity.

As of December 31, 2020, we had 3,891 employees located in the following geographies: 2,933 employees in the United States, 711 employees in Canada and 247 employees in Europe and Asia. As of December 31, 2020, 1,306 employees were covered by collective bargaining agreements with various expiration dates ranging between 2021 and 2024. We have experienced no material interruptions of operations due to disputes with our employees and management attempts to have and believes that we have positive working relationships with our local unions and their members.

Oversight

Our Board of Directors and Board committees provide oversight on our strategies and policies related to human capital management. Our Compensation Committee is responsible for periodically reviewing HollyFrontier’s strategies and policies regarding the promotion of employee diversity, equity and inclusion, talent and performance management, pay equity and employee engagement, as well as our executive succession planning. Our Nominating, Governance and Social Responsibility Committee oversees our policies and practices regarding human rights in our operations and supply chain. This high level oversight is designed to ensure that our actions are well aligned with our strategies in attracting, retaining and developing a workforce that aligns with our values and strategies.

Diversity & Inclusion

Our leadership is committed to attracting, retaining and developing a highly engaged, high-performing, diverse workforce and cultivating an inclusive workplace where all employees feel valued and have a sense of belonging. Increasing our diversity and inclusion efforts is an organizational priority and strategic oversight of our efforts is provided by our Compensation Committee. We have introduced diversity awareness programs focused on increasing the number of underrepresented persons in engineering roles in our refineries and corporate office. Our university recruiting team has partnered with historically Black colleges and universities to offer full-time and summer internship opportunities and various diversity and inclusion organizations at universities to sponsor and participate in events, such as the North Texas Women’s Energy Network and the National Society of Black Engineers Convention. In addition, to help foster a culture of inclusion, we have two employee resource groups focused on strengthening our support of women and veterans in the workplace.

Health & Safety

The safety of our employees, contractors and communities is an overarching priority and fundamental to our operational success. We are grounded by our “Goal Zero” vision, which reflects our belief that safe production can be achieved each and every day. Our commitment to safety is embedded throughout our organization, from frontline employees and contractors to our executive leadership and board of directors. Our Operational Excellence Management System provides the framework through which we identify, monitor and reduce risks. Our Environment, Health and Safety (“EHS”) Leadership Council, comprised of company executives, including our CEO, business unit

leaders and corporate safety specialists, sets EHS strategy and reviews performance. The Environmental, Health, Safety and Public Policy Committee of our Board of Directors provides board-level oversight of our strategies and performance in these areas.

To achieve Goal Zero, our employee and contractor safety education and training programs are conducted on an ongoing basis. We set specific goals for workplace safety and measure attainment of those goals. Over the past five years ended December 31, 2020, our OSHA total recordable incident rate (“TRIR”) declined by 35 percent. In response to the coronavirus (“COVID-19”) pandemic, and with the health and safety of our employees as a top priority, we have temporarily modified our business practices by limiting employee and contractor presence at our facilities to essential operating personnel, using a work from home policy, restricting travel, and quarantining employees when necessary.

Total Rewards & Development

We believe that the health of our company is linked to the performance and health of our people. We want to inspire and empower our employees to feel confident in their long-term well-being and are committed to offering a comprehensive and competitive total rewards programs for our employees, as benchmarked against our peers. While our benefit offerings vary depending on each country's market practices, they are designed to support employee health, financial and emotional needs. Our benefits include comprehensive coverage for health care, a competitive retirement savings benefit, vacation and holiday time and other income protection and work life benefits. We also provide tools to help recognize and reward employee performance consistent with our One HFC Culture.

Consistent with our culture of ownership and growth, we offer training, development and engagement programs across every level of our organization to provide employees the opportunity to develop their career by enhancing skills and capabilities consistent with the needs of the business. In 2019, we launched HFC LEAD. "LEAD" stands for Leadership, Excellence and Development and is comprised of a number of programs focused on developing current and future leaders, including the Future HFC Leader Development, Front Line Leader, and Leading the HFC Way programs. We invested \$6.0 million in our employee training and development programs in fiscal 2020.

Governmental Regulation

We are subject to numerous international, federal, state, provincial and local laws and regulations regulating worker health and safety, the discharge of substances into the environment, or otherwise relating to the protection of the environment and natural resources. Permits or other authorizations are required under these laws and regulations for the operation of our refineries, pipelines and related facilities, which can result in the imposition of costly reporting, installation of pollution control equipment and maintenance obligations. Moreover, these permits and authorizations are subject to revocation, modification and renewal, as well as challenges from third parties.

Failure to comply with these laws and regulations may result in the assessment of sanctions, including administrative, civil and criminal penalties; the imposition of investigatory, remedial or corrective action obligations or the incurrence of capital expenditures; the occurrence of delays in the permitting, development or expansion of projects; the issuance of injunctive relief limiting or prohibiting certain operations; and reputational harm. In addition, many environmental laws provide a mechanism for citizens to file suit against regulated facilities for alleged environmental violations. Compliance with applicable environmental laws, regulations and permits or other authorizations will continue to have an impact on our operations, the results of our operations and our capital expenditures.

Rate Regulation - Some of HEP's existing pipelines are considered interstate common carrier pipelines subject to regulation by the Federal Energy Regulatory Commission ("FERC") under the Interstate Commerce Act (the "ICA"). The ICA requires that tariff rates for oil pipelines, a category that includes crude oil and petroleum product pipelines, be just and reasonable and not unduly discriminatory. The ICA permits interested persons to challenge newly proposed or changed rates and authorizes FERC to suspend the effectiveness of such rates for a period of up to seven months and to investigate such rates. If, upon completion of an investigation, FERC finds that the new or changed rate is unlawful, it is authorized to require the carrier to refund the revenues in excess of the prior tariff collected during the pendency of the investigation. FERC also may investigate, upon complaint or on its own motion, rates that are already in effect and may order a carrier to change its rates prospectively. Upon an appropriate showing, a shipper may obtain reparations for damages sustained during the two years prior to the filing of a complaint.

The Energy Policy Act of 1992 deemed petroleum products pipeline tariff rates that were (i) in effect for the 365-day period ending on the date of enactment or (ii) in effect on the 365th day preceding enactment and had not been subject to complaint, protest or investigation during the 365-day period, in each case, to be just and reasonable or "grandfathered" under the ICA. The Energy Policy Act also limited the circumstances under which a complaint can be made against such grandfathered rates. Petroleum products pipelines may change their rates within prescribed ceiling levels that are tied to an inflation index. Shippers may protest rate increases made within the ceiling levels, but such protests must show that the portion of the rate increase resulting from application of the index is substantially in excess of the

pipeline's increase in costs from the previous year. A pipeline must, as a general rule, utilize the indexing methodology to change its rates. Cost-of-service ratemaking, market-based rates and settlement rates are alternatives to the indexing approach and may be used in certain specified circumstances to change rates.

Clean Air Act - Our operations are subject to certain requirements of the Federal Clean Air Act (“CAA”) as well as related state and local laws and regulations. Certain CAA regulatory programs applicable to our facilities require capital expenditures for the installation of certain air pollution control devices, operational procedures to minimize emissions, and monitoring and reporting of emissions. Additionally, the Environmental Protection Agency (“EPA”) has the authority under the CAA to modify the formulation of the refined transportation fuel products we manufacture in order to limit the emissions associated with their final use. Also, the EPA has reduced several National Ambient Air Quality Standards (“NAAQS”), and implementation of such revised NAAQS could result in stricter permitting requirements, delay or the inability to obtain such permits, and increased expenditures for pollution control equipment, the costs of which could be significant. Moreover, in February 2016, a new EPA rule became effective that requires, among other things, benzene monitoring at the refinery fence line beginning in January 2018 and submittal of fence line monitoring data to the EPA on a quarterly basis; upgraded storage tank controls requirements, including new applicability thresholds; enhanced performance requirements for flares, continuous monitoring of flares and pressure release devices, and analysis and remedy of flare release events; compliance with emissions standards for delayed coking units; and requirements related to air emissions resulting from startup, shutdown and maintenance events. These new rules, as well as subsequent rulemaking under the CAA or similar laws, or new agency interpretations of existing laws and regulations, may necessitate additional expenditures in future years and result in increased costs on our operations.

Fuel Quality Regulation - We are subject to the EPA’s Control of Hazardous Air Pollutants from Mobile Sources (also known as the Mobile Source Air Toxics rule, or “MSAT2”) regulations that impose reductions in the benzene content of our produced gasoline. In addition to reducing benzene concentration in our gasoline, our refineries currently purchase benzene credits to meet these requirements. If economically justified or otherwise determined to be beneficial, we may implement additional benzene reduction projects to eliminate or reduce the need to purchase benzene credits.

Pursuant to the Energy Independence and Security Act of 2007 (“EISA”), and the EPA’s corresponding Renewable Fuel Standard (“RFS”) regulations, most refiners are required to blend increasing amounts of biofuels with refined products through 2022 or purchase Renewable Identification Numbers (“RINs”) in lieu of blending. Under the RFS, the percentage of renewable fuels that refineries are obligated to blend into their finished petroleum products is adjusted annually. In November 2018, the EPA finalized the RFS targets for 2019, which maintained the volume required for conventional (i.e., corn ethanol) renewable fuel, increased the volume required for advanced biofuels, and increased the volume required for cellulosic biofuel compared to the 2018 RFS requirements. The EPA also increased the biomass-based diesel volume for 2020 compared to 2019. The EPA has not yet finalized the 2021 RFS requirements for any fuel other than biodiesel, creating some uncertainty regarding our compliance obligations for 2021. Because the EISA requires specified volumes of biofuels, if the demand for motor fuels decreases in future years, even higher percentages of biofuels may be required.

The EPA has historically used its waiver authority to establish volumes lower than the statutory volumes required by EISA, but the EPA’s interpretation of its waiver authority, as well as its implementation of the RFS, has been subject to numerous court challenges. Lawsuits have been filed by the renewable fuel industry challenging the EPA’s grant of small refinery exemptions. For additional information regarding risks relating to our small refinery exemptions, see Item 1A, “Risk Factors - The availability and cost of renewable identification numbers and other required credits could have an adverse effect on our financial condition and results of operations.” Legal challenges of the EPA’s decision are ongoing. We cannot predict the outcome of these matters or whether they may result in increased RFS compliance costs. There also continues to be a shortage of advanced biofuel production resulting in increased difficulties meeting RFS mandates. As a result, we may be unable to blend sufficient quantities of renewable fuel to meet our requirements and, therefore, may have to purchase an increasing number of RINs. It is not possible at this time to predict with certainty what those volumes or costs may be, but given the potential increase in volumes and the volatile price of RINs, increases in renewable volume requirements could have an adverse impact on our results of operations.

Finally, while there is no current regulatory standard that authenticates RINs that may be purchased on the open market from third parties, we believe that the RINs we purchase are from reputable sources, are valid and serve to demonstrate compliance with applicable RFS requirements. However, if any of the RINs purchased by us on the open market are subsequently found by the EPA to be invalid, we

could incur significant costs, penalties, or other liabilities in connection with replacing any invalid RINs and resolving any enforcement action brought by the EPA.

In April 2014, the EPA promulgated the Tier 3 Motor Vehicle Emission and Fuel Standards, which requires a reduction in annual average gasoline sulfur content from 30 ppm to 10 ppm. These requirements, other CAA requirements, and other presently existing or future environmental regulations may cause us to make substantial capital expenditures and purchase sulfur credits at significant cost to enable our refineries to produce products that meet applicable requirements.

Climate Change - In recent years, various legislative and regulatory measures to address climate change and greenhouse gas (“GHG”) emissions (including carbon dioxide, methane and nitrous oxides) have been discussed or implemented. They include proposed and enacted federal regulation and state actions to develop statewide, regional or nationwide programs designed to control and reduce GHG emissions from fixed sources, such as our refineries, as well as power plants, mobile transportation sources and fuels. Measures to date have included but are not limited to cap and trade programs, carbon taxes, vehicle efficiency standards, electric vehicle mandates, combustion engine phaseouts and low carbon fuel standards. Although it is not possible to predict the requirements of any GHG legislation that may be enacted, any laws or regulations that may be adopted to restrict or reduce GHG emissions will likely require us to incur increased operating and capital costs. In August 2015, the EPA finalized the “Clean Power Plan” requiring states to reduce carbon dioxide emissions from coal-fired power plants that will likely result in a combination of plant closures, switching to renewable energy and natural gas, and demand reduction. However, in July 2019, the EPA issued a replacement rule titled the Affordable Clean Energy (“ACE”) Rule, which replaced the Clean Power Plan and is focused solely on electric generating units. However, in January 2021, the D.C. Circuit vacated the ACE rule, and the Biden Administration may consider reimplementing the Clean Power Plan or a similar rule. Neither the Clean Power Plan nor the Affordable Clean Energy Rule would directly affect our operations. To the extent the EPA fully implements a rule that imposes higher costs on electricity generating units it could result in increased power costs for our refineries in future years.

EPA rules require us to report GHG emissions from our refinery operations and consumer use of fuel products produced at our refineries on an annual basis. While the cost of compliance with the reporting rule is not material, data gathered under the rule may be used in the future to support additional regulation of GHG. Moreover, the EPA directly regulates GHG emissions from refineries and other major sources through the Prevention of Significant Deterioration (“PSD”) and Federal Operating Permit programs and may require Best Available Control Technology (“BACT”) for GHG emissions above a certain threshold if emissions of other pollutants would otherwise require PSD permitting. While this does not impose any limits or controls on GHG emissions from current operations, future projects or operational changes that increase GHG emissions, such as capacity increases, may be subject to emission limits or technological requirements pertaining to GHG emissions, such as BACT.

Severe limitations on GHG emissions could also adversely affect demand for the gasoline that we produce. Recently, activists concerned about the potential effects of climate change have directed their attention at sources of funding for fossil-fuel energy companies, which has resulted in certain financial institutions, funds and other sources of capital restricting or eliminating their investment in oil and natural gas activities. There is also a risk that financial institutions will be required to adopt policies that have the effect of reducing the funding provided to the fossil fuel sector. Recently, the Federal Reserve announced that it has joined the Network for Greening the Financial System, a consortium of financial regulators focused on addressing climate-related risks in the financial sector. Ultimately, this could make it more difficult to secure funding for exploration and production activities and result in decreased production of oil, which indirectly could have an adverse impact on our operations. Finally, it should be noted that some scientists have concluded that increasing concentrations of GHGs in the Earth’s atmosphere may produce climate changes that have significant physical effects, such as increased frequency and severity of storms, floods and other extreme weather events; if any such effects were to occur, they could have an adverse effect on our operations.

The incoming administration is proposing an “all of government” approach to climate change in which the federal government would use not only its regulatory and enforcement authority but also its policy and purchasing power to encourage investment and use of renewable energy sources and to otherwise impede and reduce fossil fuel use. This approach may include elements that could directly or indirectly result in decreased demand for transportation fuel and could have an adverse impact on our operations. For example, on January 27, 2021, President Biden issued an executive order that commits to substantial action on climate change, calling for, among other things, the increased use of zero-emissions vehicles by the federal government, the elimination of subsidies provided to the fossil fuel industry, and increased emphasis on climate-related risks across governmental agencies and economic sectors.

Water Discharges - Our operations are also subject to the Federal Clean Water Act (“CWA”), the Federal Safe Drinking Water Act (“SDWA”) and comparable state and local requirements. The CWA, the SDWA and analogous laws prohibit any discharge into surface waters, ground waters, injection wells and publicly-owned treatment works except in conformance with legal authorization, such as pre-treatment permits and National Pollutant Discharge Elimination System (“NPDES”) permits, issued by federal, state and local governmental agencies. The EPA commenced a study from 2015-2017 related to the discharges of metals and dioxin from petroleum refining operations and wastewater discharges from refineries in connection with the consideration of new effluent limitation guidelines that would be incorporated into refinery sector NPDES permits. To date, the EPA has not proposed any new effluent limitation guidelines applicable to our operations, but future rulemakings related to this issue could require us to incur increased costs related to the treatment of wastewater resulting from our operations.

The CWA also regulates filling or discharges to wetlands and other “waters of the United States.” On January 23, 2020, the EPA, in conjunction with the U.S. Army Corps of Engineers (the “Corps”), issued a final rule regarding the definition of “waters of the United States,” which narrowed the regulatory reach of the CWA regulations relative to a prior 2015 rulemaking. The final rule became effective June 22, 2020. Because the rule does not expand the scope of the CWA’s jurisdiction, it will not likely adversely impact our operations; however, the final rule is subject to litigation, and multiple challenges to the EPA’s prior rulemakings remains pending, both of which create uncertainty. Additionally, the new administration may seek to revise or withdraw the final rule, creating further uncertainty.

Hazardous Substances and Wastes - We generate wastes that may be subject to the Resource Conservation and Recovery Act and comparable state and local requirements. The EPA and various state agencies have limited the approved methods of disposal for certain hazardous and non-hazardous wastes. Although the EPA is currently working on several rulemakings that could impact how our refineries manage various waste streams, it does not appear that these rules will significantly impact our refineries.

The Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”), also known as “Superfund,” imposes strict, and under certain circumstances, joint and several liability on certain classes of persons who are considered to be responsible for the cost of cleaning up hazardous substances that have been released into the environment and for damages to natural resources. These persons include current and former owners or operators of property where a release has occurred, and any persons who disposed of, or arranged for the transport or disposal of, hazardous substances at the property. In the course of our historical operations, as well as in our current operations, we have generated waste, some of which falls within the statutory definition of a “hazardous substance” and some of which may have been disposed of at sites that may be subject to cleanup and cost recovery actions under CERCLA in the future. Similarly, locations now owned or operated by us, where third parties have disposed such hazardous substances in the past, may also be subject to cleanup and cost recovery actions under CERCLA. Some states have enacted laws similar to CERCLA which impose similar responsibilities and liabilities on responsible parties. It is also not uncommon for neighboring landowners and other third parties to file claims under state law for personal injury and property damage allegedly caused by hazardous substances or other pollutants released into the environment.

Oil Pollution Act - The Oil Pollution Act of 1990 (“OPA”) and regulations thereunder generally subject owners and operators of facilities to strict, joint and several liability for all containment and cleanup costs, natural resource damages, and potential governmental oversight costs arising from oil spills into the waters of the U.S. The OPA also imposes ongoing requirements on a responsible party, including the preparation of oil spill response plans and proof of financial responsibility to cover environmental cleanup and restoration costs that could be incurred in connection with an oil spill.

Other Environmental Regulations - Our Canadian assets and operations are also required to comply with various Canadian federal, provincial and municipal regulations. The regulations are in many cases conceptually similar to those described above for our U.S. operations. The principal legislation affecting our Canadian operations is the Canadian Environmental Protection Act, the Fisheries Act, the Greenhouse Gas Pollution Pricing Act and their regulations at a federal level and various provincial statutes and regulations such as the Ontario Environmental Protection Act, the Ontario Occupational Health and Safety Act and the Ontario Water Resources Act. All these laws contain broad prohibitions against causing harm to air, land, water, people or any other living organism and in many cases contain detailed prescriptive rules governing many aspects of our operations. Regulatory trends towards more stringent emission requirements and operating controls are expected to continue at federal, provincial and local levels.

Additionally, our assets and operations in the Netherlands are required to comply with Dutch regulations that are similar to, and in some cases more stringent than, those described above for our U.S. operations. The statutes to which our Dutch assets and operations are subject include the Environmental Protection Act, the Activities Decree, the Environmental Licensing (General Provisions) Act, the Water Act, the Soil Protection Act, the Major Accidents (Risks) Decree, the European Birds and Habitats Directive, the Economic Offences Act and other subordinate decrees and regulations relative to environmental control, permitting and enforcement. However, a large legislative operation is being developed that should lead to the integration of all environmental laws in one, being the Environment and Planning Act, which is expected to enter into force in January 2022. Generally, these regulations create a system of environmental permits covering the most significant emissions to water, air and soil, as well as other environmental impacts. The Netherlands also participates in certain broader European legal initiatives, including GHG cap and trade programs. Additionally, in December 2019, the High Council of the Netherlands upheld a court order for the government of the Netherlands to reduce the country's GHG emissions by 25% (compared to 1990) by 2020, and in January 2020, the Climate Act came into force, with the goal of significantly reducing GHG emissions by 49% (compared to 1990) by 2030 and by at least 95% (compared to 1990) by 2050. Furthermore, the target is that 100% of the electricity production will be CO₂ neutral in 2050. The Climate Act also establishes that the government must prepare a Climate Plan. The first Climate Plan covers the period between 2021 and 2030 and includes measures in view of a reduction of 49% of GHG emissions in 2030. It is unclear what further measures the Dutch government will take to reduce GHG emissions pursuant to this law.

Enforcement and Litigation Proceedings - As is the case with all companies engaged in industries similar to ours, we face potential exposure to future claims and lawsuits involving environmental matters. These matters include soil and water contamination, air pollution, GHG emissions, personal injury and property damage allegedly caused by substances that we manufactured, handled, used, released or disposed. We currently have environmental remediation projects that relate to recovery, treatment and monitoring activities resulting from past releases of refined product and crude oil into the environment. As of December 31, 2020, we had an accrual of \$115.0 million related to such environmental liabilities.

We are and have been the subject of various local, state, provincial, federal and private proceedings and inquiries relating to compliance with environmental laws and regulations and conditions, including those discussed above. Compliance with current and future environmental regulations is expected to require additional expenditures, including expenditures for investigation and remediation, which may be significant. To the extent that future expenditures for these purposes are material and can be reasonably determined, these costs are disclosed and accrued, if applicable.

Occupational Health and Safety - Our operations are subject to various laws and regulations relating to occupational health and safety, including the Occupational Safety and Health Act (“OSHA”), comparable state statutes, Canadian regulations applicable to our operations in Canada and Dutch regulations, including the Health and Safety Act, applicable to our operations in the Netherlands. We maintain a comprehensive safety program, including mechanical integrity and safety-related maintenance programs and training, to ensure compliance with all applicable laws and regulations to protect the safety of our workers and the public. Some of our operations are also subject to OSHA Process Safety Management (“PSM”) regulations and EPA Risk Management Plan (“RMP”) regulations, both of which are designed to prevent or minimize chemical accidents and any resulting releases of toxic, reactive, flammable or explosive chemicals. In January 2017, the EPA revised the RMP requirements for incident investigation and accident history reporting, emergency preparedness, and the performance of process hazard analyses and third party compliance audits. Many of the revised requirements do not become effective until 2021, and the EPA issued a final rule in December 2019 that rescinded several of the requirements of the 2017 rule. The new administration may consider reissuing some of the rescinded requirements or making other changes. Also in January 2017, OSHA announced changes to its National Emphasis Program, which specifically identified oil refineries as facilities for increased inspections and instructed inspectors to use data gathered from EPA RMP inspections to identify refiners for additional PSM inspections. Compliance with applicable state and federal occupational health and safety laws and regulations, as well as environmental regulations, has required, and continues to require, substantial expenditures.

Occupational health and environmental legislation, regulations and regulatory programs change frequently. We cannot predict what additional occupational health and environmental legislation or regulations will be enacted or become effective in the future or how existing or future laws or regulations will be administered or interpreted with respect to our operations. Compliance with more stringent laws or regulations or adverse changes in the interpretation of existing laws or regulations by government agencies could have an adverse effect on our financial position and the results of our operations and could require substantial expenditures for the installation and operation of systems and equipment that we do not currently possess.

Insurance

Our operations are subject to hazards of operations, including fire, explosion and weather-related perils. We maintain various insurance coverages, including business interruption insurance, subject to certain deductibles. We are not fully insured against certain risks because such risks are not fully insurable, coverage is unavailable, or premium costs, in our judgment, do not justify such expenditures.

We have a risk management oversight committee consisting of members from our senior management. This committee oversees our risk enterprise program, monitors our risk environment and provides direction for activities to mitigate identified risks that may adversely affect the achievement of our goals.

Item 1A. Risk Factors

Risk Factor Summary

Investing in us involves a degree of risk. You should carefully consider all information in this Form 10-K, including the Management's Discussion & Analysis section and the financial statements and related notes, prior to investing in our common stock. These risks and uncertainties include, but are not limited to, the following:

Risks Related to our Business:

- The prices of crude oil and refined and finished lubricant products materially affect our profitability, and are dependent upon many factors that are beyond our control.
- To successfully operate our facilities, we are required to expend significant amounts for capital outlays and operating expenditures. If we are unable to complete capital projects at their expected costs or in a timely manner, or if the market conditions assumed in our project economics deteriorate, our financial condition, results of operations, or cash flows could be materially and adversely affected.
- The COVID-19 pandemic or any other widespread outbreak of an illness or pandemic or other public health crisis, and actions taken in response thereto, as well as certain developments in the global oil markets, have had and may continue to have a material adverse effect on our operations, business, financial condition and results of operations and cash flows.
- Competition in the refining and marketing industry and in our lubricants and specialty products segment is highly competitive, an increase in competition could adversely affect our earnings and profitability.
- A disruption to or proration of the refined product distribution systems or manufacturing facilities we utilize could negatively impact our profitability.
- A material decrease in the supply of crude oil or other raw materials available to our refineries and other facilities could significantly reduce our production levels and negatively affect our operations.
- We depend upon HEP for a substantial portion of the crude supply and distribution network that serve our refineries, and we own a significant equity interest in HEP.
- Our acquisition strategy involves numerous risks, any of which could adversely affect us.
- An impairment of our long-lived assets or goodwill could reduce our earnings or negatively impact our financial condition and results of operations.
- Potential product, service or other related liability claims and litigation could adversely affect our business, reputation and results of operations.
- We sell many of our lubricants and specialty products through distributors, which presents risks that could adversely affect our operating results.
- Our hedging transactions may limit our gains and expose us to other risks.

Risks Related to Government Regulation

- There are various risks associated with greenhouse gases and climate change, including increased regulation of CO₂ emissions, that could result in increased operating costs and litigation and reduced demand for the refined products we produce and investment in our industry.
- The availability and cost of renewable identification numbers and other required credits could have an adverse effect on our financial condition and results of operations.
- We are subject to significant regulation and oversight by governmental agencies. We incur significant costs, and expect to incur additional costs in the future, to comply with existing, new and changing environmental, energy, health and safety laws and regulations, and face potential exposure for environmental matters.

- Our business is subject to complex and evolving global laws, regulations and security standards regarding privacy, cybersecurity and data protection, which could result in claims, increased cost of operations, or otherwise harm our business.

General Risk Factors

- Cyberattacks, data security breaches, information technology system failures, network disruptions, terrorist attacks or domestic vandalism, continued global hostilities or other sustained military campaigns could have a material adverse effect on our business, financial condition and results of operations.
- Our operations are subject to catastrophic losses, operational hazards and unforeseen interruptions and other disruptive risks for which we may not be adequately insured.
- We may not be able to obtain funding on acceptable terms or at all because of volatility and uncertainty in the credit and capital markets.. Our credit facility contains certain covenants and restrictions that may constrain our business and financing activities.
- Our business is subject to the risks of international operations, including currency fluctuations.
- We are exposed to the credit risks, and certain other risks, of our key customers and vendors.
- We may be unable to pay future dividends.
- We may be unable to adequately protect our intellectual property, which may increase our cost of doing business or otherwise hurt our ability to compete in the market.
- Changes in our credit profile may affect our relationship with our suppliers, which could have a material adverse effect on our liquidity and limit our ability to purchase sufficient quantities of crude oil to operate our refineries at desired capacity.
- Our business may suffer due to a departure of any of our key employees, a shortage of skilled labor or disruptions in our workforce. A portion of our workforce is unionized, and any disruptions in our labor force or adverse employee relations could adversely affect our business.
- The market price of our common stock may fluctuate significantly, and the value of a stockholder's investment could be impacted.
- Compliance with and changes in tax laws could materially and adversely impact our financial condition, results of operations and cash flows.

Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially and adversely affect our business operations. If any of the following risks were to actually occur, our business, financial condition, results of operations could be materially and adversely affected. The headings provided in this Item 1A. are for convenience and reference purposes only and shall not affect or limit the extent or interpretation of the risk factors.

RISKS RELATED TO OUR BUSINESS

The prices of crude oil and refined and finished lubricant products materially affect our profitability, and are dependent upon many factors that are beyond our control, including general market demand and economic conditions, seasonal and weather-related factors, regional and grade differentials and governmental regulations and policies.

Among these factors is the demand for crude oil and refined and finished lubricant products, which is largely driven by the conditions of local and worldwide economies, as well as by weather patterns, changes in consumer preferences and the taxation of these products relative to other energy sources. Governmental regulations and policies, particularly in the areas of taxation, energy and the environment, and more recently in response to the COVID-19 pandemic, also have a significant impact on our activities. Operating results can be affected by these industry factors, product and crude pipeline capacities, crude oil differentials (including regional and grade differentials), changes in transportation costs, accidents or interruptions in transportation, competition in the particular geographic areas that we serve, global market conditions, actions by foreign nations and factors that are specific to us, such as the success of particular marketing programs and the efficiency of our refinery operations. The demand for crude oil and refined and finished lubricant products

can also be reduced due to a local or national recession or other adverse economic condition, which results in lower spending by businesses and consumers on gasoline and diesel fuel, higher gasoline prices due to higher crude oil prices, a shift by consumers to more fuel-efficient vehicles or alternative fuel vehicles (such as ethanol or wider adoption of gas/electric hybrid vehicles), or an increase in vehicle fuel economy, whether as a result of technological advances by manufacturers, legislation mandating or encouraging higher fuel economy or the use of alternative fuel.

We do not produce crude oil and must purchase all our crude oil, the price of which fluctuates based upon worldwide and local market conditions. Our profitability depends largely on the spread between market prices for refined petroleum products and crude oil prices. This margin is continually changing and may fluctuate significantly from time to time. Crude oil and refined products are commodities whose price levels are determined by market forces beyond our control. For example, the reversal of certain existing pipelines or the construction of certain new pipelines transporting additional crude oil or refined products to markets that serve competing refineries could affect the market dynamic that has allowed us to take advantage of favorable pricing. A deterioration of crack spreads or price differentials between domestic and foreign crude oils could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Additionally, due to the seasonality of refined products markets and refinery maintenance schedules, results of operations for any particular quarter of a fiscal year are not necessarily indicative of results for the full year and can vary year to year in the event of unseasonably cool weather in the summer months and/or unseasonably warm weather in the winter months in the markets in which we sell our petroleum products. In general, prices for refined products are influenced by the price of crude oil. Although an increase or decrease in the price for crude oil may result in a similar increase or decrease in prices for refined products, there may be a time lag in the realization of the similar increase or decrease in prices for refined products. The effect of changes in crude oil prices on operating results, therefore, depends in part on how quickly refined product prices adjust to reflect these changes. A substantial or prolonged increase in crude oil prices without a corresponding increase in refined product prices, a substantial or prolonged decrease in refined product prices without a corresponding decrease in crude oil prices, or a substantial or prolonged decrease in demand for refined products could have a significant negative effect on our earnings and cash flow. Also, our crude oil and refined products inventories are valued at the lower of cost or market under the last-in, first-out (“LIFO”) inventory valuation methodology. If the market value of our inventory were to decline to an amount less than our LIFO cost, we would record a write-down of inventory and a non-cash charge to cost of products sold even when there is no underlying economic impact at that point in time. Continued volatility in crude oil and refined products prices could result in lower of cost or market inventory charges in the future, or in reversals reducing cost of products sold in subsequent periods should prices recover. For example, we recorded a charge and increase to cost of products sold in the amount of \$78.5 million and a non-cash decrease to cost of products sold in the amount of \$119.8 million for the years ended December 31, 2020 and 2019, respectively.

To successfully operate our facilities, we are required to expend significant amounts for capital outlays and operating expenditures. If we are unable to complete capital projects at their expected costs or in a timely manner, or if the market conditions assumed in our project economics deteriorate, our financial condition, results of operations, or cash flows could be materially and adversely affected.

Our facilities consist of many processing units, a number of which have been in operation for many years. One or more of the units may require unscheduled downtime for unanticipated maintenance or repairs that are more frequent than our scheduled turnaround for such units. Scheduled and unscheduled maintenance could reduce our revenues during the period of time that the units are not operating. We have taken significant measures to expand and upgrade units in our facilities by installing new equipment and redesigning older equipment to improve refinery capacity or to address changes in consumer preferences, such as the growing demand for renewable diesel and other lower carbon fuels. The installation and redesign of key equipment at our facilities, including the conversion of our Cheyenne Refinery to renewable diesel production and the construction of the renewable diesel and pre-treatment units at our Artesia facility, involves significant uncertainties, including the following: our upgraded equipment may not perform at expected levels; operating costs of the upgraded equipment may be higher than expected; the yield and product quality of new equipment may differ from design and/or specifications and redesign, modification or replacement of the equipment may be required to correct equipment that does not perform as expected, which could require facility shutdowns until the equipment has been redesigned or modified. Any of these risks associated with new equipment, redesigned older equipment, or repaired equipment could lead to lower revenues or higher costs or otherwise have a negative impact on our future financial condition and results of operations. In the third quarter of 2020, we permanently ceased refining operations at our Cheyenne Refinery and subsequently began converting certain assets at the Cheyenne Refinery to renewable diesel production due, in part, to uncompetitive operating and maintenance costs for the refinery.

One of the ways we may grow our business is through the construction of new refinery processing units (or the purchase and refurbishment of used units from another refinery) and the conversion or expansion of existing ones, such as the conversion of the Cheyenne Refinery to renewable diesel production and the connection of a new renewable diesel and a pre-treatment unit at the Navajo Refinery. Projects are generally initiated to increase the yields of higher-value products, increase the amount of lower cost crude oils that can be processed, increase refinery production capacity, meet new governmental requirements or take advantage of new government incentive programs, or maintain the operations of our existing assets. Additionally, our growth strategy includes projects that permit access to new and/or more profitable markets, including the growing demand for renewable diesel and other lower carbon fuels. The construction process involves numerous regulatory, environmental, political, and legal uncertainties, most of which are not fully within our control, including:

- third party challenges to, denials, or delays with respect to the issuance of requisite regulatory approvals and/or obtaining or renewing permits, licenses, registrations and other authorizations;
- societal and political pressures and other forms of opposition;
- compliance with or liability under environmental regulations;
- unplanned increases in the cost of construction materials or labor;
- disruptions in transportation of modular components and/or construction materials;
- severe adverse weather conditions, natural disasters, terrorists or cyberattacks, domestic vandalism or other events (such as equipment malfunctions, explosions, fires, spills) affecting our facilities, or those of vendors and suppliers;
- shortages of sufficiently skilled labor, or labor disagreements resulting in unplanned work stoppages;
- market-related increases in a project's debt or equity financing costs; and/or
- nonperformance or force majeure by, or disputes with, vendors, suppliers, contractors, or sub-contractors involved with a project.

If we are unable to complete capital projects at their expected costs or in a timely manner our financial condition, results of operations, or cash flows could be materially and adversely affected. Delays in making required changes or upgrades to our facilities could subject us to fines or penalties as well as affect our ability to supply certain products we make. In addition, our revenues may not increase immediately upon the expenditure of funds on a particular project. For instance, the construction of our previously announced renewable diesel units and pre-treatment unit at our Cheyenne and Artesia facilities will occur over an extended period of time and we will not receive any material increases in revenues until after completion of the project. Moreover, we may construct facilities to capture anticipated future growth in demand for refined products or renewable diesel in a region in which such growth does not materialize. As a result, new capital investments may not achieve our expected investment return, which could adversely affect our financial condition or results of operations.

In addition, we expect to execute turnarounds at our refineries, which involve numerous risks and uncertainties. These risks include delays and incurrence of additional and unforeseen costs. The turnarounds allow us to perform maintenance, upgrades, overhaul and repair of process equipment and materials, during which time all or a portion of the refinery will be under scheduled downtime.

Our forecasted internal rates of return are also based upon our projections of future market fundamentals which are not within our control, including changes in general economic conditions, available alternative supply, global market conditions, actions by foreign nations and customer demand.

The COVID-19 pandemic or any other widespread outbreak of an illness or pandemic or other public health crisis, and actions taken in response thereto, as well as certain developments in the global oil markets, have had and may continue to have a material adverse effect on our operations, business, financial condition and results of operations and cash flows.

Our success depends on the demand for petroleum products such as transportation fuels and finished lubricant products, which is largely driven by the conditions of local and worldwide economies, and the supply of crude oil and other feedstocks. COVID-19's spread across the globe and governmental actions in response thereto have negatively affected worldwide economic and commercial activity, significantly reduced global demand for oil, gas and refined products, and created significant volatility and disruption of financial and commodity markets in the first half of 2020. Other factors currently impacting crude oil supply include production levels implemented by OPEC members, other large oil producers such as Russia and domestic and Canadian oil producers. The oversupply of crude oil in the market has caused certain domestic and Canadian oil producers from whom we source crude oil to shut-in their production, which could impact our ability to readily source crude oil once the stored crude oil is depleted. While demand for refined products stabilized in the second half of 2020, this combination of events contributed to an overall drop in prices, as well as a lack of forward visibility in demand, for crude oil and refined products in 2020. See "Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations - Impact of COVID-19 on Our Business" for additional discussion of the impact of COVID-19 on our business.

In addition, the supply and demand for refined and finished lubricant products depends on many other factors outside of our control, some of which include:

- changes in domestic and international demand for, and the marketability of, our refined and finished lubricant products due to governmental actions, including travel bans and restrictions, quarantines, shelter in place orders, and shutdowns, which could result in a full or partial shutdown of our facilities;
- increased price volatility, including the price we receive for refined and finished lubricant products;
- the health of our workforce, including contractors and subcontractors, and their access to our facilities, which could result in a full or partial shutdown of our facilities if a significant portion of the workforce at a facility is impacted;

- the availability, distribution and effectiveness of vaccines for COVID-19;
- the ability or willingness of our vendors and suppliers to provide the equipment, parts, crude oil or other raw materials for our operations or otherwise fulfill their contractual obligations, which could reduce our production levels or otherwise cause our delay or failure to deliver refined or other finished lubricant products timely or at all or cause delay or failure to complete projects at our facilities;
- the ability or willingness of our customers to fulfill their contractual obligations or any material reduction in, or loss of, revenue from our customers;
- increased potential for the occurrence of operational hazards, including terrorism, cyberattacks or domestic vandalism, as well as information system failures or communication network disruptions;
- increased cost and reduced availability of capital for growth or capital expenditures;
- availability and operability of terminals, tankage and pipelines that store and transport crude oil and refined and finished lubricant products;
- delay by government authorities in issuing or maintaining permits necessary for our business or our capital projects;
- shareholder activism and activities by non-governmental organizations to limit sources of funding for the energy sector;
- increased costs of operation in relation to the COVID-19 outbreak, which costs may not be fully recoverable or adequately covered by insurance; and
- the impact of any economic downturn, recession or other disruption of the U.S. and global economies and financial and commodity markets.

The spread of COVID-19 has caused us to significantly modify our business practices (including limiting employee and contractor presence at our work locations, restricting travel unless approved by senior leadership, quarantining employees when necessary, reducing our expected total consolidated capital expenditures for 2020 and reducing utilization at our refineries), and we may take further actions as may be required by government authorities or that we determine are in the best interests of our employees, contractors, customers, suppliers and communities. There is no certainty that such measures will be sufficient to mitigate the risks posed by the virus, and our ability to perform critical functions could be adversely impacted. In addition, deterioration in gross margins and the economic slowdown resulting from the COVID-19 pandemic was a contributing factor in certain goodwill and long-lived asset impairments we recorded in 2020. See “An impairment of our goodwill or long-lived assets could reduce our earnings or negatively impact our financial condition and results of operations” for further discussion of the impairment risk in our business and the impairments we recorded in 2020. A reasonable expectation exists that further deterioration in gross margins or a prolonged economic slowdown due to the COVID-19 pandemic could result in an additional impairment of assets or of goodwill at some point in the future. Such impairment charges could be material.

The effects of COVID-19 are difficult to predict and the duration of any potential business disruption or the extent to which it may negatively affect our operating results is uncertain. Any additional impact will depend on future developments and new information that may emerge regarding the spread, severity and duration of the COVID-19 pandemic and the actions taken by authorities to contain it or manage its impact, all of which are beyond our control. In addition, if the volatility and seasonality in the oil and gas industry were to increase, the demand for our products and the prices that we will be able to charge for those products may decline. We continue to monitor the situation to assess further possible implications to our business and to take actions in an effort to mitigate adverse consequences. The effects of the COVID-19 pandemic, as well as the volatility in global oil markets, while uncertain, have and may continue to, materially adversely affect our business, financial condition, results of operations and/or cash flows, as well as our ability to pay dividends to our shareholders.

Competition in the refining and marketing industry is intense, and an increase in competition in the markets in which we sell our products could adversely affect our earnings and profitability.

We compete with a broad range of refining and marketing companies, including certain multinational oil companies. Because of their geographic diversity, larger and more complex refineries, integrated operations and greater resources, some of our competitors may be

better able to withstand volatile market conditions, to obtain crude oil in times of shortage and to bear the economic risks inherent in all areas of the refining industry.

We are not engaged in petroleum exploration and production activities and do not produce any of the crude oil feedstocks used at our refineries. We do not have a retail business and therefore are dependent upon others for outlets for our refined products. Certain of our competitors, however, obtain a portion of their feedstocks from company-owned production and have retail outlets. Competitors that have their own production or extensive retail outlets, with brand-name recognition, are at times able to offset losses from refining operations with profits from producing or retailing operations, and may be better positioned to withstand periods of depressed refining margins or feedstock shortages.

In recent years there have been several refining and marketing consolidations or acquisitions between entities competing in our geographic market. These transactions could increase the future competitive pressures on us.

The markets in which we compete may be impacted by competitors' plans for expansion projects and refinery improvements that could increase the production of refined products in our areas of operation and significantly affect our profitability.

Also, the potential operation of new or expanded refined product transportation pipelines, or the conversion of existing pipelines into refined product transportation pipelines, could impact the supply of refined products to our existing markets and negatively affect our profitability.

In addition, we compete with other industries that provide alternative means to satisfy the energy and fuel requirements of our industrial, commercial and individual consumers. The more successful these alternatives become as a result of governmental regulations, technological advances, consumer demand, improved pricing or otherwise, the greater the impact on pricing and demand for our products and our profitability. There are presently significant governmental and consumer pressures to increase the use of alternative fuels in the United States.

The market for our lubricants and specialty products segment is highly competitive and requires us to continuously develop and introduce new products and product enhancements.

Our ability to grow our Lubricants and Specialty Products segment depends, in part, on our ability to continuously develop, manufacture and introduce new products and product enhancements on a timely and cost-effective basis, in response to customers' demands for higher performance process lubricants, coatings, greases and other product offerings. Our competitors may develop new products or enhancements to their products that offer performance, features and lower prices that may render our products less competitive or obsolete, and, as a consequence, we may lose business and/or significant market share. Our efforts to respond to changes in consumer demand in a timely and cost-efficient manner to drive growth could be adversely affected by unfavorable margins or difficulties or delays in product development and service innovation, including the inability to identify viable new products, successfully complete research and development, obtain regulatory approvals, obtain intellectual property protection or gain market acceptance of new products or service techniques. The development and commercialization of new products require significant expenditures over an extended period of time, and some products that we seek to develop may never become profitable, and we could be required to write-off our investments related to a new product that does not reach commercial viability.

A disruption to or proration of the refined product distribution systems or manufacturing facilities we utilize could negatively impact our profitability.

We utilize various common carrier or other third party pipeline systems to deliver our products to market. The key systems utilized by the El Dorado, Navajo, Woods Cross, and Tulsa Refineries are NuStar Energy and Magellan, SFPP and Plains, Chevron and UNEV, and Magellan, respectively.

Our U.S. refineries also utilize systems owned by HEP. If these key pipelines or their associated tanks and terminals become inoperative or decrease the capacity available to us, we may not be able to sell our product, or we may be required to hold our product in inventory or supply products to our customers through an alternative pipeline or by rail or additional tanker trucks from the refinery, all of which could increase our costs and result in a decline in profitability.

We have manufacturing facilities in foreign countries that support the Lubricants and Specialty Products segment. If one of our facilities is damaged or disrupted, resulting in production being halted for an extended period, we may not be able to timely supply our customers. We take steps to mitigate this risk, including business continuity and contingency planning and procuring property insurance (including

business interruption) and casualty insurance. Nevertheless, the loss of sales in any one region over an extended period of time could have a material adverse effect on our business, financial condition and results of operations.

A material decrease in the supply of crude oil or other raw materials available to our refineries and other facilities could significantly reduce our production levels and negatively affect our operations.

To maintain or increase production levels at our refineries, we must continually contract for crude oil supplies from third parties. There are a limited number of crude oil suppliers in certain geographic regions, and in such cases, we may be required to source from a single third party supplier. If we are unable to maintain or extend our existing contracts with any such crude oil suppliers, or enter into new agreements on similar terms, the supply of crude oil could be adversely impacted, or we may incur a higher cost. A material decrease in crude oil production from the fields that supply our refineries, as a result of depressed commodity prices, lack of drilling activity, natural production declines, catastrophic events or otherwise, could result in a decline in the volume of crude oil available to our refineries. In addition, any prolonged disruption of a significant pipeline that is used in supplying crude oil to our refineries or the potential operation of a new, converted or expanded crude oil pipeline that transports crude oil to other markets could result in a decline in the volume of crude oil available to our refineries. Such an event could result in an overall decline in volumes of refined products processed at our refineries and therefore a corresponding reduction in our cash flow. In addition, the future growth of our operations will depend in part upon whether we can contract for additional supplies of crude oil at a greater rate than the rate of natural decline in our currently connected supplies. If we are unable to secure additional crude oil supplies of sufficient quality or crude pipeline expansion to our refineries, we will be unable to take full advantage of current and future expansion of our refineries' production capacities.

For certain raw materials and utilities used by our refineries and other facilities, there are a limited number of suppliers and, in some cases, we source from a single supplier and/or suppliers in economies that have experienced instability or the supplies are specific to the particular geographic region in which a facility is located. Any significant disruption in supply could affect our ability to obtain raw materials, or increase the cost of such raw materials, which could significantly reduce our production levels or have a material adverse effect on our business, financial condition and results of operations. In addition, certain raw materials that we use are subject to various regulatory laws, and a change in the ability to legally use such raw materials may impact our liquidity, financial position and results of operations.

It is also common in the refining industry for a facility to have a sole, dedicated source for its utilities, such as steam, electricity, water and gas. Having a sole or limited number of suppliers may limit our negotiating power, particularly in the case of rising raw material costs. Any new supply agreements we enter into may not have terms as favorable as those contained in our current supply agreements.

Additionally, there is growing concern over the reliability of water sources. The decreased availability or less favorable pricing for water as a result of population growth, drought or regulation could negatively impact our operations.

If our raw material, utility or water supplies were disrupted, our businesses may incur increased costs to procure alternative supplies or incur excessive downtime, which would have a direct negative impact on our operations.

We depend upon HEP for a substantial portion of the crude supply and distribution network that serve our refineries, and we own a significant equity interest in HEP.

At December 31, 2020, we owned a 57% limited partner interest and a non-economic general partner interest in HEP. HEP operates a system of crude oil and petroleum product pipelines, distribution terminals and refinery tankage in Idaho, Kansas, Nevada, New Mexico, Oklahoma, Texas, Utah, Washington and Wyoming and refinery units in Kansas and Utah. HEP generates revenues by charging tariffs for transporting petroleum products and crude oil through its pipelines, leasing certain pipeline capacity to third parties, charging fees for terminalling refined products and other hydrocarbons and storing and providing other services at its terminals. HEP serves the El Dorado, Navajo, Woods Cross and Tulsa Refineries under several long-term pipeline and terminal, tankage and throughput agreements expiring in 2022 through 2036 serves the El Dorado Refinery under long-term tolling agreements expiring in 2030 and serves the Woods Cross

Refinery under long-term tolling agreements expiring in 2031. Furthermore, our financial statements include the consolidated results of HEP. HEP is subject to its own operating and regulatory risks, including, but not limited to:

- its reliance on its significant customers, including us;
- competition from other pipelines;
- environmental regulations affecting pipeline operations;
- operational hazards and risks;
- pipeline tariff regulations affecting the rates HEP can charge;
- limitations on additional borrowings and other restrictions due to HEP's debt covenants; and
- other financial, operational and legal risks.

The occurrence of any of these risks could directly or indirectly affect HEP's as well as our financial condition, results of operations and cash flows as HEP is a consolidated VIE. Additionally, these risks could affect HEP's ability to continue operations which could affect their ability to serve our supply and distribution network needs.

While we own a 57% limited partner interest and a non-economic general partner interest in HEP, HEP is a publicly-traded master limited partnership and is a legally distinct entity. Conflicts of interest may arise between us and HEP, which may subject us to claims from HEP's public unitholders.

For additional information about HEP, see "Holly Energy Partners, L.P." under Items 1 and 2, "Business and Properties." For risks related to HEP's business, see Item 1A of HEP's Annual Report on Form 10-K for the fiscal year ended December 31, 2020.

Our acquisition strategy involves numerous risks, any of which could adversely affect us.

An additional component of our growth strategy is to selectively acquire complementary assets or businesses for our refining operations in order to increase earnings and cash flow. Our ability to do so will be dependent upon a number of factors, including our ability to identify attractive acquisition candidates, consummate acquisitions on favorable terms, successfully integrate acquired assets and obtain financing to fund acquisitions and to support our growth, and other factors beyond our control. Risks associated with acquisitions include those relating to:

- diversion of management time and attention from our existing business;
- challenges in managing the increased scope, geographic diversity and complexity of operations and inefficiencies that may result therefrom;
- difficulties in integrating the financial, technological and management standards, processes, procedures and controls of an acquired business with those of our existing operations;
- liability for known or unknown environmental conditions or other contingent liabilities not covered by indemnification or insurance;
- greater than anticipated expenditures required for compliance with environmental or other regulatory standards or for investments to improve operating results;
- difficulties or delays in achieving anticipated operational improvements or benefits or inaccurate assumptions about future synergies or revenues;
- incurrence of additional indebtedness to finance acquisitions or capital expenditures relating to acquired assets; and
- issuance of additional equity, which could result in further dilution of the ownership interest of existing stockholders.

Any acquisitions that we do consummate may have adverse effects on our business and operating results.

An impairment of our goodwill or long-lived assets could reduce our earnings or negatively impact our financial condition and results of operations.

An impairment of our goodwill or long-lived assets could reduce our earnings or negatively impact our results of operations and financial condition. We continually monitor our business, the business environment and the performance of our operations to determine if an event has occurred that indicates that a goodwill or long-lived asset may be impaired. If a triggering event occurs, which is a determination that involves judgment, we may be required to utilize cash flow projections to assess our ability to recover the carrying value based on the ability to generate future cash flows. We may also conduct impairment testing based on both the guideline public company and guideline transaction methods. Our goodwill and long-lived assets impairment analyses are sensitive to changes in key assumptions used in our analysis, estimates of future crack spreads, forecasted production levels, operating costs and capital expenditures. If the assumptions used

in our analysis are not realized, it is possible a material impairment charge may need to be recorded in the future. We cannot accurately predict the amount and timing of any additional impairments of goodwill or long-lived assets in the future.

As market prices for refined products and market prices for crude oil continue to fluctuate, we will need to continue to evaluate the carrying value of our refinery reporting units. During the year ended December 31, 2020, we recorded long-lived asset impairment charges of \$232.2 million that related to our Cheyenne Refinery, \$26.5 million for construction-in-progress consisting primarily of engineering work for potential upgrades to certain processing units at our Tulsa and El Dorado Refineries and \$204.7 million related to PCLI. Also, during the year ended December 31, 2020, we recorded a goodwill impairment charge of \$81.9 million that related to Sonneborn. A reasonable expectation exists that further deterioration in our operating results or overall economic conditions could result in an impairment of goodwill and / or additional long-lived asset impairments at some point in the future. Future impairment charges could be material to our results of operations and financial condition.

Potential product, service or other related liability claims and litigation could adversely affect our business, reputation and results of operations.

A significant portion of our operating responsibility on refined product pipelines is to insure the quality and purity of the products loaded at our loading racks. If our quality control measures were to fail, we may have contaminated or off-specification commingled pipelines and storage tanks or off-specification product could be sent to public gasoline stations. The development, manufacture and sale of specialty lubricant products also involves an inherent risk of exposure to potential product liability claims. These types of incidents could result in product liability claims from our customers. Our Lubricants and Specialty Products segment could also be subject to false advertising claims, product recalls, workplace exposure, product seizures and related adverse publicity.

Any of these incidents is a significant commercial risk. Substantial damage awards have been made in certain jurisdictions against manufacturers and resellers based upon claims for injuries caused by the use of or exposure to various products. There can be no assurance that product liability claims against us would not have a material adverse effect on our business, reputation or results of operations or our ability to maintain existing customers or retain new customers. Although we maintain product and other general liability insurance, there can be no assurance that the types or levels of coverage maintained are adequate to cover these potential risks, or that we will be able to continue to maintain existing insurance or obtain comparable insurance at a reasonable cost, if at all.

We sell many of our lubricants and specialty products through distributors, which presents risks that could adversely affect our operating results.

A large portion of our lubricants and specialty product sales, both in domestic and international markets, occur through distributors. As a result, we are dependent on these distributors to promote and create demand for our products. We cannot assure you that we will be successful in maintaining and strengthening our relationships with our distributors or establishing relationships with new distributors who have the ability to market, sell and support our products effectively. We may rely on one or more key distributors for a product or a region, and the loss of these distributors could reduce our revenue. The sales, business practices and reputation of our distributors may affect our business and our reputation. The consolidation of distributors, loss of a relationship with a distributor, significant disagreement with a distributor, or significant deterioration in the financial condition of a distributor could also have an adverse effect on our operating results and may also result in increased competition in the applicable jurisdiction.

Our hedging transactions may limit our gains and expose us to other risks.

We periodically enter into derivative transactions as it relates to inventory levels and/or future production to manage the risks from changes in the prices of crude oil, refined products and other feedstocks. These transactions limit our potential gains if commodity prices move above or below the certain price levels established by our hedging instruments. We hedge price risk on inventories above our target levels to minimize the impact these price fluctuations have on our earnings and cash flows. Consequently, our hedging results may fluctuate significantly from one reporting period to the next depending on commodity price fluctuations and our relative physical inventory positions. These transactions may also expose us to risks of financial losses; for example, if our production is less than we

anticipated at the time we entered into a hedge agreement or if a counterparty to our hedge agreements fails to perform its obligations under the agreements.

RISKS RELATED TO GOVERNMENT REGULATION

There are various risks associated with greenhouse gases and climate change that could result in increased operating costs and litigation and reduced demand for the refined products we produce and investment in our industry.

Climate change continues to attract considerable attention in the United States, Canada, Europe, and other regions. Numerous proposals have been made and could continue to be made at the international, national, regional and state levels of government to monitor and limit existing emissions of greenhouse gases, or “GHGs”, to restrict or eliminate such future emissions, and to require or incentivize the use of lower-carbon or renewable alternatives. As a result, our operations are subject to a series of regulatory, political, litigation, and financial risks associated with the refining of petroleum products and emission of GHGs.

The EPA has determined that emissions of carbon dioxide, methane and other GHGs present an endangerment to public health and the environment because emissions of such gases are, according to the EPA, contributing to warming of the earth's atmosphere and other climatic changes. The U.S. Supreme Court has also found that GHG emissions constitute a pollutant under the CAA. Accordingly, the EPA has adopted rules that, among other things, establish construction and operating permit reviews for GHG emissions from certain large stationary sources, require the monitoring and annual reporting of GHG emissions from certain petroleum and natural gas sources in the United States or to control or reduce emissions of GHGs, including methane, from such sources. In addition, the EPA, together with the DOT, implement GHG emission and corporate average fuel economy standards for vehicles manufactured in the United States. Moreover, on January 27, 2021, President Biden issued an executive order that commits to substantial action on climate change, calling for, among other things, the increased use of zero-emissions vehicles by the federal government, the elimination of subsidies provided to the fossil fuel industry, and increased emphasis on climate-related risks across governmental agencies and economic sectors. Additionally, various states and groups of states have adopted or are considering adopting legislation, regulations or other regulatory initiatives that are focused on such areas as GHG cap and trade programs, carbon taxes, reporting and tracking programs, restriction of emissions, electric vehicle mandates and combustion engine phaseouts. Similar such regulations exist at the provincial and federal levels in Canada, including a nation-wide greenhouse gas pricing initiative and regulations related to the control of GHGs from automobiles and light duty trucks and either cap and trade programs or carbon taxes in the provinces of Quebec, Ontario, and Alberta. The Netherlands also participates in certain European legal initiatives, including GHG cap and trade programs, and the Climate Act with the goal of significantly reducing GHG emissions by 49% (compared to 1990) by 2030 and by at least 95% (compared to 1990) by 2050. The Climate Act also establishes that the government must prepare a Climate Plan. The first Climate Plan covers the period between 2021 and 2030. This plan contains, amongst others, the principles by which the government intends to achieve the goals set out in the Climate Act. It is unclear what further measures the Dutch government will take to reduce GHG emissions pursuant to this law. At the international level, the United Nations-sponsored “Paris Agreement” calls for member nations to limit their GHG emissions through nationally-determined reduction goals reevaluated every five years after 2020. The United States initially joined and then withdrew from such agreement, effective November 4, 2020. Under the new administration, the United States rejoined the agreement effective February 19, 2021 and has instructed the federal government to begin formulating the United States' emissions reduction goal. EU member states have agreed to reduce emissions by at least 40% by 2030. The Netherlands target is 49% reduction in GHG emissions by 2030.

The adoption of legislation or regulatory programs to reduce emissions of GHGs could require us to incur increased operating costs, such as costs to purchase and operate emissions control systems, to acquire emissions allowances or comply with new regulatory or reporting requirements. Any such legislation or regulatory programs could also increase the cost of consuming, and thereby reduce demand for, the refined products that we produce. Additionally, political, litigation and financial risks may result in curtailed refinery activity, incurred liability, or other adverse effects on our business, financial condition and results of operations.

There are also increasing risks of litigation related to climate change effects. Governments and third-parties have brought suit against some fossil fuel companies alleging, among other things, that such companies created public and private nuisances by producing fuels that contributed to climate change, such as rising sea levels, and therefore are responsible for roadway and infrastructure damages as a

result, or alleging that the companies have been aware of the adverse effects of climate change for some time but defrauded their investors or customers by failing to adequately disclose those impacts. While we are not party to such suits at this time, we may become subject to such litigation in the future. Such cases could also adversely impact public perception and the demand for fossil fuels and petroleum products, which could subsequently result in decreased demand for our services and refined products and a drop in our share price.

Our share price could be adversely impacted if existing shareholders, including institutional investors, elect in the future to shift some or all of their investments into renewable energy or non-energy related sectors based on social and environmental considerations. Additionally, in recent years institutional lenders have become more attentive to sustainable lending practices and have been lobbied intensively, and often publicly, by environmental activists, proponents of the international Paris Agreement, and foreign citizenry concerned about climate change not to provide funding for fossil fuel energy companies. Limitation of investments in and financings for fossil fuel energy companies could result in the restriction, delay or cancellation of drilling programs or development or production activities, could result in a reduction of available capital funding for potential development projects and could also adversely affect demand for our services and refined products, all of which could impact our future financial results.

The availability and cost of renewable identification numbers and other required credits could have an adverse effect on our financial condition and results of operations.

Pursuant to the 2007 Energy Independence and Security Act, the EPA promulgated the RFS regulations reflecting the increased volume of renewable fuels mandated to be blended into the nation's fuel supply. The regulations, in part, require refiners to add annually increasing amounts of "renewable fuels" to their petroleum products or purchase credits, known as RINs, in lieu of such blending. We currently purchase RINs for some fuel categories on the open market in order to comply with the quantity of renewable fuels we are required to blend under the RFS regulations. Since the EPA first began mandating biofuels in excess of the "blend wall" (the 10% ethanol limit prescribed by most automobile warranties), the price of RINs has been extremely volatile. While we cannot predict the future prices of RINs, the costs to obtain the necessary number of RINs could be material. If we are unable to pass the costs of compliance with the RFS regulations on to our customers, if sufficient RINs are unavailable for purchase, if we have to pay a significantly higher price for RINs or if we are otherwise unable to meet the RFS mandates, our financial condition and results of operations could be adversely affected.

In the past, we have received small refinery exemptions under the RFS program for certain of our refineries. However, there is no assurance that such an exemption will be obtained for any of our refineries in future years. For example, the EPA has recently indicated it plans to more closely align the agency's criteria for granting small refinery exemptions with the recommendation of the Department of Energy, which could result in fewer such exemptions being granted. The failure to obtain such exemptions for certain of our refineries could result in the need to purchase more RINs than we currently have estimated and accrued for in our consolidated financial statements. EPA recently promulgated new RFS regulations that could require the agency to increase the volume of renewable fuel or RINs that refiners are required to purchase if the agency anticipates it will grant small refinery exemptions. This also could increase the number of RINs we need to purchase. Additionally, a recent decision by the U.S. Court of Appeals for the 10th Circuit vacated two small refinery exemption decisions for the 2016 compliance year and remanded the case to the EPA for further proceedings. That decision is before the Supreme Court for further review. It is not clear at this time what steps the EPA will take with respect to our 2016 small refinery exemptions, or how the case will impact future small refinery exemptions.

In addition, the RFS regulations are highly complex and evolving, requiring us to periodically update our compliance systems. The RFS regulations require the EPA to determine and publish the applicable annual volume and percentage standards for each compliance year by November 30 for the forthcoming year, and such blending percentages could be higher or lower than amounts estimated and accrued for in our consolidated financial statements. The future cost of RINs is difficult to estimate until such time as the EPA finalizes the applicable standards for the forthcoming compliance year, but the EPA does not always do so by the statutory deadline. Moreover, in addition to increased price volatility in the RINs market, there have been multiple instances of RINs fraud occurring in the marketplace over the past several years. The EPA has initiated several enforcement actions against refiners who purchase fraudulent RINs, resulting in substantial costs to the refiner. We cannot predict with certainty our exposure to increased RINs costs in the future, nor can we predict the extent by which costs associated with RFS regulations will impact our future results of operations.

We incur significant costs, and expect to incur additional costs in the future, to comply with existing, new and changing environmental, energy, health and safety laws and regulations, and face potential exposure for environmental matters.

Operations of our facilities and pipelines are subject to international, foreign, federal, state, provincial and local laws regulating, among other things, the generation, storage, handling, use, transportation and distribution of petroleum and hazardous substances by pipeline, truck, rail, ship and barge, the emission and discharge of materials into the environment, waste management, and characteristics and composition of gasoline and diesel fuels, and other matters otherwise relating to the protection of the environment. In addition, we have manufacturing and distribution operations in foreign countries that are subject to the environmental laws and regulations of such foreign countries. Permits or other authorizations are required under these laws for the operation of our facilities, pipelines and related operations, and these permits and authorizations are subject to revocation, modification and renewal or may require operational changes, which may involve significant costs. Furthermore, a violation of permit conditions or other legal or regulatory requirements could result in substantial fines, criminal sanctions, permit revocations, injunctions, refinery shutdowns, and reputational harm. In addition, major modifications of our operations due to changes in the law could require changes to our existing permits or expensive upgrades to our existing pollution control equipment, which could have a material adverse effect on our business, financial condition, or results of operations. For example, in October 2015, the EPA lowered the NAAQS for ozone from 75 to 70 parts per billion for both the 8-hour primary and secondary standards and, in 2018, published attainment/nonattainment designations. State implementation of the revised NAAQS could result in stricter permitting requirements, delay or prohibit our ability to obtain such permits, and result in increased expenditures for pollution control equipment, the costs of which could be significant. Also, in February 2016, a new EPA rule became effective that amends three refinery standards already in effect, imposing additional or, in some cases, new emission control requirements on subject refineries. The final rule requires, among other things, benzene monitoring at the refinery fence line and submittal of fence line monitoring data to the EPA on a quarterly basis; upgraded storage tank controls requirements, including new applicability thresholds; enhanced performance requirements for flares, continuous monitoring of flares and pressure release devices and analysis and remedy of flare release events; and compliance with emissions standards for delayed coking units. In November 2018, the EPA published amendments to the new rules to clarify and correct certain requirements. These rules, as well as subsequent rulemaking under the CAA or similar laws, or new agency interpretations of existing laws and regulations, may necessitate additional expenditures in future years and result in increased costs on our operations. Compliance with applicable environmental laws, regulations and permits will continue to have an impact on our operations, results of our operations and capital requirements.

As is the case with all companies engaged in industries similar to ours, we face potential exposure to future claims and lawsuits involving environmental matters. The matters include, but are not limited to, soil, groundwater and waterway contamination, air pollution, personal injury and property damage allegedly caused by substances which we processed, manufactured, handled, used, released or disposed.

We are and have been the subject of various local, state, provincial, federal, foreign, international and private proceedings relating to environmental regulations, conditions and inquiries. Current and future environmental regulations are expected to require additional expenditures, including expenditures for investigation and remediation, which may be significant, at our facilities. To the extent that future expenditures for these purposes are material and can be reasonably determined, these costs are disclosed and accrued.

Our operations are also subject to various foreign and domestic laws and regulations relating to occupational health and safety. We maintain safety, training and maintenance programs as part of our ongoing efforts to ensure compliance with applicable laws and regulations but cannot guarantee that these efforts will always be successful. Compliance with applicable health and safety laws and regulations has required and continues to require substantial expenditures. Failure to appropriately manage occupational health and safety risks associated with our business could also adversely impact our employees, communities, stakeholders, reputation and results of operations.

The costs of environmental and safety regulations are already significant and compliance with more stringent laws or regulations or adverse changes in the interpretation of existing regulations by government agencies or courts could have an adverse effect on the

financial position and the results of our operations and could require substantial expenditures for the installation and operation of systems and equipment that we do not currently possess.

We are also subject to existing, and may in the future be subject to new or changing, domestic and foreign energy policy legislation. For example, in the United States, the Energy Independence and Security Act mandates annually increasing levels for the use of renewable fuels such as ethanol and increasing energy efficiency goals, among other steps. Dutch law also focuses on increasing the use of renewal fuels, and in Canada, fuel content legislation exists at the federal and provincial level. These statutory mandates may have the impact over time of offsetting projected increases in the demand for refined petroleum products in certain markets, particularly gasoline. In the near term, the new renewable fuel standard presents ethanol production and logistics challenges for both the ethanol and refining industries and may require additional capital expenditures or expenses by us to accommodate increased ethanol use. Other legislative changes may similarly alter the expected demand and supply projections for refined petroleum products in ways that cannot be predicted.

For additional information on regulations and related liabilities or potential liabilities affecting our business, see “Regulation” under Items 1 and 2, “Business and Properties,” and Item 3, “Legal Proceedings.”

We are subject to significant regulation and oversight by governmental agencies.

New laws, policies, regulations, rulemaking and oversight, as well as changes to those currently in effect, could adversely impact our earnings, cash flows and operations. Our assets and operations are subject to regulation and oversight by foreign, federal, state and local regulatory authorities. Legislative changes, as well as regulatory actions taken by these agencies, have the potential to adversely affect our profitability. In addition, a certain degree of regulatory uncertainty is created by the new administration because it remains unclear specifically what the new administration may do with respect to future policies and regulations that may affect us. Regulation affects almost every part of our business. Furthermore, we could incur additional costs to comply with such statutes, rules, regulations and orders. Should we fail to comply with any applicable statutes, rules, regulations, and orders of regulatory authorities, we could be subject to substantial penalties and fines. New laws, regulations or policy changes sometimes arise from unexpected sources. New laws or regulations, unexpected policy changes or interpretations of existing laws or regulations, applicable to our income, operations, assets or another aspect of our business, could have a material adverse impact on our earnings, cash flow, financial condition and results of operations.

Our business is subject to complex and evolving global laws, regulations and security standards regarding privacy, cybersecurity and data protection (“data protection laws”). Many of these laws are subject to change and uncertain interpretation, and could result in claims, increased cost of operations, or otherwise harm our business.

The constantly evolving regulatory and legislative environment surrounding data privacy and protection poses increasingly complex compliance challenges, and complying with such data protection laws could increase the costs and complexity of compliance. While we do not collect significant amounts of personal information from consumers, we do have personal information from our employees, job applicants and some business partners, such as contractors and distributors. Any failure, whether real or perceived, by us to comply with applicable data protection laws could result in proceedings or actions against us by governmental entities or others, subject us to significant fines, penalties, judgments, and negative publicity, require us to change our business practices, increase the costs and complexity of compliance, and adversely affect our business. Our compliance with recently enacted laws like the General Data Protection Regulation, and other similar privacy/security laws, as well as any associated inquiries or investigations or any other government actions related to these laws, may increase our operating costs.

Increases in required fuel economy and regulation of CO₂ emissions from motor vehicles may reduce demand for transportation fuels.

The EPA and the National Highway Traffic Safety Administration (“NHTSA”) are required to promulgate requirements regarding the Corporate Average Fuel Economy (“CAFE”) of the nation's passenger fleet. On August 28, 2012, the EPA and NHTSA adopted standards through model year 2025 in two phases. The first phase established final standards for 2017-2021 model year vehicles that are projected to require 40.3 - 41.0 m.p.g. in model year 2021 on an average industry fleet-wide basis. The second phase of the CAFE program represents non-final “augural” standards for 2022-2025 model year vehicles that are projected to require 48.7 - 49.7 m.p.g. in model year 2025 on an average industry fleet-wide basis. However, following the change in presidential administrations, there have been attempts to modify these standards. In August 2018, the EPA and NHTSA proposed the Safer Affordable Fuel Economy Rule which amended the existing CAFE standards and proposed new standards covering model years through 2026. While the EPA issued a rule in September 2019 that seeks to preempt the ability of states to set stricter standards than those set by the federal government, no final rule has yet been issued regarding amendments to the current CAFE standards. All of these rulemakings will likely be subject to challenge by a variety of parties seeking stricter GHG and CAFE standards. Additionally, several states are seeking to promote zero emission vehicles, such as electric vehicles, and to mandate transition away from internal combustion engines. Any increases in fuel economy standards, along with mandated increases in use of renewable fuels discussed above, as well as electric vehicle mandates or combustion engine bans, could result in decreasing demand for petroleum fuels. Decreasing demand for petroleum fuels could have a material effect on our financial condition and results of operation.

GENERAL RISK FACTORS

Cyberattacks or security breaches could have a material adverse effect on our business, financial condition and results of operations.

Our business is dependent upon information systems and other digital technologies for controlling our plants and pipelines, processing transactions and summarizing and reporting results of operations. The secure processing, maintenance and transmission of information is critical to our operations. We monitor our information systems on a 24/7 basis in an effort to detect cyberattacks or security breaches. Preventative and detective measures we utilize include independent cybersecurity audits and penetration tests. We implemented these efforts along with other risk mitigation procedures to detect and address unauthorized and damaging activity on our network, stay abreast of the increasing threat landscape and improve our security posture. Information technology system failures, communications network disruptions (whether intentional by a third party or due to natural disaster), and security breaches could still impact equipment and software used to control plants and pipelines, resulting in improper operation of our assets, potentially including delays in the delivery or availability of our customers’ products, contamination or degradation of the products we transport, store or distribute, or releases of hydrocarbon products and other damage to our facilities for which we could be held liable.

Furthermore, we collect and store sensitive data in the ordinary course of our business, including personally identifiable information of our employees as well as our proprietary business information and that of our customers, suppliers, investors and other stakeholders. Despite our security measures, our information systems may become the target of cyberattacks or security breaches (including employee error, malfeasance or other breaches), which could result in the theft or loss of the stored information, misappropriation of assets, disruption of transactions and reporting functions, our ability to protect customer or company information and our financial reporting. Even with insurance coverage, a claim could be denied or coverage delayed. A cyber-attack or security breach could result in liability under data privacy laws, regulatory penalties, damage to our reputation or a loss of consumer confidence in our products and services, or additional costs for remediation and modification or enhancement of our information systems to prevent future occurrences, all of which could have a material and adverse effect on our business, financial condition or results of operations.

Our operations are subject to catastrophic losses, operational hazards and unforeseen interruptions and other disruptive risks for which we may not be adequately insured.

Our operations are subject to catastrophic losses, operational hazards, unforeseen interruptions and other disruptive risks such as natural disasters, adverse weather, accidents, maritime disasters (including those involving marine vessels/terminals), fires, explosions, hazardous materials releases, terror or cyberattacks, domestic vandalism, power failures, mechanical failures and other events beyond our control. These events could result in an injury, loss of life, property damage or destruction, as well as a curtailment or an interruption in our operations and may affect our ability to meet marketing commitments.

We may not be able to maintain or obtain insurance of the type and amount we desire at commercially reasonable rates and exclusions from coverage may limit our ability to recover the amount of the full loss in all situations. As a result of market conditions, premiums and deductibles for certain of our insurance policies could increase. In some instances, certain insurance could become unavailable or available only for reduced amounts of coverage.

There can be no assurance that insurance will cover all or any damages and losses resulting from these types of hazards. We are not fully insured against all risks to our business and therefore, we self-insure certain risks. If any of our facilities were to experience an interruption in operations, our earnings could be materially adversely affected (to the extent not recoverable through insurance) because of lost production and repair costs.

The energy industry is highly capital intensive, and the entire or partial loss of individual facilities can result in significant costs to both industry companies, such as us, and their insurance carriers. In recent years, several large energy industry claims have resulted in significant increases in the level of premium costs and deductible periods for participants in the energy industry. As a result of large energy industry claims, insurance companies that have historically participated in underwriting energy-related facilities may discontinue that practice or demand significantly higher premiums or deductible periods to cover these facilities. If significant changes in the number or financial solvency of insurance underwriters for the energy industry occur, or if other adverse conditions over which we have no control prevail in the insurance market, we may be unable to obtain and maintain adequate insurance at reasonable cost. In addition, we cannot assure you that our insurers will renew our insurance coverage on acceptable terms, if at all, or that we will be able to arrange for adequate alternative coverage in the event of non-renewal. Further, our underwriters could have credit issues that affect their ability to pay claims. If a significant accident or event occurs that is self-insured or not fully insured, it could have a material adverse effect on our business, financial condition and results of operations.

We may be subject to information technology system failures, communications network disruptions and data breaches.

We depend on the efficient and uninterrupted operation of hardware and software systems and infrastructure, including our operating, communications and financial reporting systems. These systems are critical in meeting customer expectations, effectively tracking, maintaining and operating our equipment, directing and compensating our employees, and interfacing with our financial reporting system. We have implemented safeguards and other preventative measures to protect our systems and data, including sophisticated network security and internal control measures; however, our information technology systems and communications network, and those of our information technology and communication service providers, remain vulnerable to interruption by fire, earthquake, power loss, telecommunications failure, terrorist attacks, Internet failures, computer malware, cyberattacks, data breaches and other events unforeseen or generally beyond our control.

We may not be able to obtain funding on acceptable terms or at all because of volatility and uncertainty in the credit and capital markets. This may hinder or prevent us from meeting our future capital needs.

The domestic and global financial markets and economic conditions are disrupted and volatile from time to time due to a variety of factors, including low consumer confidence, high unemployment, geoeconomic and geopolitical issues, weak economic conditions and uncertainty in the financial services sector. In addition, the fixed-income markets have experienced periods of extreme volatility, which negatively impacted market liquidity conditions. Recently, the equity and debt markets for many energy industry companies have been adversely affected by low oil prices. As a result, the cost of raising money in the debt and equity capital markets has increased substantially at times while the availability of funds from these markets diminished significantly. In particular, as a result of concerns about the stability of financial markets generally and the solvency of lending counterparties specifically, the cost of obtaining money from the credit markets may increase as many lenders and institutional investors increase interest rates, enact tighter lending standards, refuse to refinance existing debt on similar terms or at all and reduce, or in some cases cease to provide, funding to borrowers. In addition, lending counterparties under any existing revolving credit facility and other debt instruments may be unwilling or unable to meet their

funding obligations, or we may experience a decrease in our capacity to issue debt or obtain commercial credit or a deterioration in our credit profile, including a rating agency lowering or withdrawing of our credit ratings if, in its judgment, the circumstances warrant. Due to these factors, we cannot be certain that new debt or equity financing will be available on acceptable terms. If funding is not available when needed, or is available only on unfavorable terms, we may be unable to meet our obligations as they come due or we may be required to sell assets. Moreover, without adequate funding, we may be unable to execute our growth strategy, complete future acquisitions or construction projects, take advantage of other business opportunities or respond to competitive pressures, comply with regulatory requirements, or meet our short-term or long-term working capital requirements, any of which could have a material adverse effect on our revenues and results of operations. Failure to comply with regulatory requirements in a timely manner or meet our short-term or long-term working capital requirements could subject us to regulatory action.

Our business is subject to the risks of international operations, including currency fluctuations

We derive a portion of our revenue and earnings from international operations. Our acquisitions of Petro-Canada Lubricants and Sonneborn have expanded our operations and sales in foreign countries and correspondingly may increase our exposure to foreign exchange risks. Any significant change in the value of the currencies of the countries in which we do business against the U.S. dollar could affect our revenue, competitiveness and cost of doing business, which could have a material adverse effect on our business, financial condition and results of operations.

In addition, compliance with applicable U.S. and foreign laws and regulations, such as import and export requirements, anti-corruption laws, data privacy regulations and foreign exchange controls and cash repatriation restrictions, environmental laws, labor laws and anti-competition regulations, increases the cost of doing business in foreign jurisdictions. Although we have implemented policies and procedures to comply with these laws and regulations, a violation by any of our employees, contractors, distributors or agents could nevertheless occur. In some cases, compliance with the laws and regulations of one country could violate the laws and regulations of another country. Violations of these laws and regulations could materially adversely affect our company's brand, international growth efforts and business.

In addition, global market risks, actions by foreign nations and other international conditions, particularly in a time of increasing economic and global instability, may have a material adverse effect on our results and operations. The consequences of such uncertainty cannot be anticipated or quantified.

We are exposed to the credit risks, and certain other risks, of our key customers and vendors.

We are subject to risks of loss resulting from nonpayment or nonperformance by our customers. We derive a significant portion of our revenues from contracts with key customers.

If any of our key customers default on their obligations to us, our financial results could be adversely affected. Furthermore, some of our customers may be highly leveraged and subject to their own operating and regulatory risks. In addition, nonperformance by vendors who have committed to provide us with products or services could result in higher costs or interfere with our ability to successfully conduct our business.

Any substantial increase in the nonpayment and/or nonperformance by our customers or vendors could have a material adverse effect on our results of operations and cash flows.

Terrorist attacks, and the threat of terrorist attacks or domestic vandalism, have resulted in increased costs to our business. Continued global hostilities or other sustained military campaigns may adversely impact our results of operations.

The long-term impacts of terrorist attacks and the threat of future terrorist attacks on the energy transportation industry in general, and on us in particular, are unknown. Increased security measures taken by us as a precaution against possible terrorist attacks or domestic vandalism have resulted in increased costs to our business. Uncertainty surrounding continued global hostilities or other sustained military campaigns, and the possibility that infrastructure facilities could be direct targets of, or indirect casualties of, an act of terror, may affect our operations in unpredictable ways, including disruptions of crude oil supplies and markets for refined products. In addition, disruption or significant increases in energy prices could result in government-imposed price controls. Any one of, or a combination of, these occurrences could have a material adverse effect on our business, financial condition and results of operations.

Changes in the insurance markets attributable to terrorist attacks and domestic vandalism could make certain types of insurance more difficult for us to obtain. Moreover, the insurance that may be available to us may be significantly more expensive than our existing insurance coverage. Instability in the financial markets as a result of terrorism, vandalism or war could also affect our ability to raise capital including our ability to repay or refinance debt.

We may be unable to pay future dividends.

We will only be able to pay dividends from our available cash on hand, cash from operations or borrowings under our credit agreement. The declaration of future dividends on our common stock is evaluated quarterly and will be at the discretion of our board of directors and will depend upon many factors, including our results of operations, financial condition, earnings, capital requirements, and restrictions in our debt agreements and legal requirements. We cannot assure you that any dividends will be paid or the frequency or amounts of such payments.

We may be unable to adequately protect our intellectual property, which may increase our cost of doing business or otherwise hurt our ability to compete in the market.

We use intellectual property in the ordinary course of our business, including trademarks, trade secrets, copyrighted work and innovations, some of which is material to our business. We take measures to identify and protect our intellectual property through practices appropriate for securing and protecting exclusive rights in and to our intellectual property, including applying for registrations in the United States and in various foreign countries. Despite our efforts to protect such intellectual property, it is possible that competitors or other unauthorized third parties may obtain, copy, use or disclose our trademarks (or other marks likely to cause confusion among our consumers), technologies, products and processes. In addition, the laws and/or judicial systems and enforcement mechanisms of foreign countries in which we create, market and sell our products may afford little or no effective protection of our intellectual property. We may also be subject to infringement complaints from others challenging our use of a technology. We cannot guarantee that our efforts to enforce our intellectual property rights against unauthorized use and appropriation, or our efforts to defend against third party claims of infringement would be successful. These potential risks to our intellectual property could subject us to increased competition and negatively impact our liquidity, financial position and results of operations.

Changes in our credit profile, or a significant increase in the price of crude oil, may affect our relationship with our suppliers, which could have a material adverse effect on our liquidity and limit our ability to purchase sufficient quantities of crude oil to operate our refineries at desired capacity.

An unfavorable credit profile, or a significant increase in the price of crude oil, could affect the way crude oil suppliers view our ability to make payments and induce them to shorten the payment terms of their invoices with us or require credit enhancement. Due to the large dollar amounts and volume of our crude oil and other feedstock purchases, any imposition by our suppliers of more burdensome payment terms or credit enhancement requirements on us may have a material adverse effect on our liquidity and our ability to make payments to our suppliers. This in turn could cause us to be unable to operate our refineries at desired capacity. A failure to operate our refineries at desired capacity could adversely affect our profitability and cash flow.

Our credit facility contains certain covenants and restrictions that may constrain our business and financing activities.

The operating and financial restrictions and covenants in our credit facility and any future financing agreements could adversely affect our ability to finance future operations or capital needs or to engage, expand or pursue our business activities. For example, our revolving credit facility imposes usual and customary requirements for this type of credit facility, including: (i) limitations on liens and indebtedness; (ii) a prohibition on changes in control and (iii) restrictions on engaging in mergers and consolidations. If we fail to satisfy the covenants set forth in the credit facility or another event of default occurs under the credit facility, the maturity of the loan could be accelerated or we could be prohibited from borrowing for our future working capital needs and issuing letters of credit. We might not have, or be able to obtain, sufficient funds to make these immediate payments. If we desire to undertake a transaction that is prohibited by the covenants in our credit facility, we will need to obtain consent under our credit facility. Such refinancing may not be possible or may not be available on commercially acceptable terms.

Our business may suffer due to a departure of any of our key senior executives or other key employees. Furthermore, a shortage of skilled labor may make it difficult for us to maintain labor productivity.

Our future performance depends to a significant degree upon the continued contributions of our senior management team and key technical personnel. We do not currently maintain key person life insurance, non-compete agreements, or employment agreements with respect to any member of our senior management team. The loss or unavailability to us of any member of our senior management team or a key technical employee could significantly harm us. We face competition for these professionals from our competitors, our customers

and other companies operating in our industry. To the extent that the services of members of our senior management team and key technical personnel would be unavailable to us for any reason, we may be required to hire other personnel to manage and operate our company. We may not be able to locate or employ such qualified personnel on acceptable terms, or at all.

Furthermore, our operations require skilled and experienced laborers with proficiency in multiple tasks. A shortage of trained workers due to retirements or otherwise could have an adverse impact on our labor productivity and costs and our ability to expand production in the event there is an increase in the demand for our products and services, which could adversely affect our operations.

A portion of our workforce is unionized, and any disruptions in our labor force or adverse employee relations could adversely affect our business.

We depend on unionized labor for the operation of many of our facilities. As of December 31, 2020, approximately 29% of our employees were represented by labor unions under collective bargaining agreements with various expiration dates. In addition, employees who are not currently represented by labor unions may seek union representation in the future. We may not be able to renegotiate our collective bargaining agreements when they expire on satisfactory terms or at all. If we are unable to renegotiate our collective bargaining agreements when they expire, any work stoppages or other labor disturbances at these facilities could have an adverse effect on our business, impact our ability to make distributions to our unitholders and payments of our debt obligations, and increase our costs. In addition, our existing labor agreements may not prevent a strike or work stoppage or other adverse employee relations event at any of our facilities in the future, and any work stoppage could negatively affect our results of operations and financial condition.

The market price of our common stock may fluctuate significantly, and the value of a stockholder's investment could be impacted.

The market price of our common stock may be influenced by many factors, some of which are beyond our control, including:

- our quarterly or annual earnings or those of other companies in our industry;
- changes in accounting standards, policies, guidance, interpretations or principles;
- general economic, industry global and stock market conditions;
- the failure of securities analysts to cover our common stock or changes in financial estimates by analysts;
- future sales of our common stock;
- announcements by us or our competitors of significant contracts or acquisitions;
- sales of common stock by us, our senior officers or our affiliates; and/or
- the other factors described in these Risk Factors.

In recent years, the stock market has experienced extreme price and volume fluctuations. This volatility has had a significant impact on the market price of securities issued by many companies, including companies in our industry. The price of our common stock could fluctuate based upon factors that have little or nothing to do with our company, and these fluctuations could materially reduce our stock price.

Compliance with and changes in tax laws could materially and adversely impact our financial condition, results of operations and cash flows.

We are subject to extensive tax liabilities, including federal and state income taxes and transactional taxes such as excise, sales and use, payroll, franchise, withholding and property taxes. New tax laws and regulations and changes in existing tax laws and regulations could result in increased expenditures by us for tax liabilities in the future and could materially and adversely impact our financial condition, results of operations and cash flows.

Additionally, many tax liabilities are subject to periodic audits by taxing authorities, and such audits could subject us to interest and penalties.

Item 1B. Unresolved Staff Comments

We do not have any unresolved staff comments.

Item 3. Legal Proceedings

Commitment and Contingency Reserves

In the ordinary course of business, we may become party to legal, regulatory or administrative proceedings or governmental investigations, including environmental and other matters. Damages or penalties may be sought from us in some matters and certain matters may require years to resolve. While the outcome and impact of these proceedings and investigations on us cannot be predicted with certainty, based on advice of counsel and information currently available to us, management believes that the resolution of these proceedings and investigations through settlement or adverse judgment will not either individually or in the aggregate have a material adverse effect on our financial condition, results of operations or cash flows.

The environmental proceedings are reported to comply with SEC regulations which require us to disclose proceedings arising under provisions regulating the discharge of materials into the environment or protecting the environment when a governmental authority is party to the proceedings and such proceedings involve potential monetary sanctions that we reasonably believe could exceed \$300,000 or more. Certain disclosures made under the SEC's prior \$100,000 threshold will remain until their resolution.

Environmental Matters

Our respective subsidiaries have or will develop corrective action plans regarding these disclosures that will be implemented in consultation with the respective federal and state agencies. It is not possible to predict the ultimate outcome of these proceedings, although none are currently expected to have a material effect on our financial condition, results of operations or cash flows.

Cheyenne

HollyFrontier Cheyenne Refining LLC ("HFCR") has been in discussions with the Wyoming Department of Environmental Quality ("WDEQ") and the United States Environmental Protection Agency ("EPA") relating to alleged violations of air quality emission limitations and requirements related to operation of certain refinery units at the Cheyenne Refinery.

Notices of Violations were issued by the WDEQ in late 2016 and 2018. On July 18, 2019, HFCR and the WDEQ entered into a consent decree, and on August 9, 2019, HFCR paid penalties in the amount of \$117,000 related to alleged violations of air quality limits that occurred during the second quarter of 2016 through the second quarter of 2017. Separately, on October 23, 2019, HFCR received a Notice of Violation from the WDEQ for possible violations of air quality standards during the first and second quarters of 2019. HFCR and WDEQ have been in discussions to resolve WDEQ's alleged violations of air quality limits that occurred during the third quarter of 2017 through calendar year 2019. The WDEQ and HFCR also previously agreed that the discussions would also include exceedances that occurred during the first quarter of 2020 through the cessation of petroleum refining operations at the Cheyenne Refinery in the third quarter of 2020. During a settlement conference on November 9, 2020, WDEQ proposed a settlement that would impose a penalty of \$95,075 to resolve the alleged violations that occurred during the third quarter of 2017 through the date of the refinery shutdown. As part of the settlement process, on January 15, 2021, the State of Wyoming filed a complaint with the Wyoming District Court addressing the alleged violations. The WDEQ and HFCR agreed on the terms of a consent decree to resolve the alleged violations, and on February 18, 2021, a Joint Motion for Entry of Consent Decree and the Consent Decree were filed with the Wyoming District Court. HFCR expects that the Wyoming District Court will enter the Consent Decree during the first quarter of 2021.

El Dorado

HollyFrontier El Dorado Refining LLC ("HFEDR") has been engaged in discussions with, and has responded to document requests from, the EPA, the U.S. Department of Justice ("DOJ") and the State of Kansas regarding alleged Clean Air Act civil violations relating to flaring devices and other equipment at the refinery. Topics of the discussions included: (a) three information requests for activities

beginning in January 2009, (b) Risk Management Program compliance issues relating to a November 2014 inspection and subsequent events, (c) a Notice of Violation issued by the EPA in August 2017, and (d) possible late reporting under the Emergency Planning and Community Right-to-Know Act for the release of sulfur dioxide and visible emissions from October 2018.

Some of the foregoing civil investigations resulted from fires that occurred at the El Dorado Refinery in September 2017, October 2018 and March 2019. An employee fatality occurred during the September 2017 event. On May 28, 2020, HFEDR reached a settlement in the form of a proposed consent decree with the EPA, the DOJ, and the State of Kansas regarding the alleged Clean Air Act civil violations relating to flaring devices and other equipment at the refinery, as well as compliance with the Clean Air Act's Risk Management Program ("RMP").

The proposed consent decree was lodged with the U.S. District Court for the District of Kansas, and the 30-day public comment period ended on July 18, 2020. On July 27, 2020, the EPA, the DOJ and the State of Kansas filed their Unopposed Motion to enter the Consent Decree with the U.S. District Court for the District of Kansas, and on August 27, 2020, the consent decree was entered by the district judge and became effective. Pursuant to the consent decree, among other terms and conditions, HFEDR is required to complete certain projects, implement protocols regarding the examination of its fired heaters and conduct a third party RMP audit of certain of its processes. In addition, HFEDR is required to pay a civil penalty of \$2 million to the United States and \$2 million to the State of Kansas in two installments, the first half within 30 days of entry of the consent decree and the second within six months of entry of the consent decree. The initial payment of \$1 million each was paid to the EPA on September 18, 2020 and the State of Kansas on September 22, 2020, and HFEDR has undertaken several of the required projects. The consent decree resolves the alleged federal and state civil Clean Air Act liability for penalties and injunctive relief, other than potential civil penalties for RMP violations. Finally, as part of the settlement, a 2009 consent decree applicable to the refinery was terminated.

The Occupational Safety and Health Administration (“OSHA”) conducted investigations into both the September 2017 and March 2019 events identified above, and HFEDR settled the OSHA claims related to those investigations in 2018 and 2019, respectively. In April 2019, HFEDR became aware that the EPA also initiated a criminal investigation into one or more of the foregoing events. HFEDR has received a grand jury subpoena requesting certain documents be provided to the EPA with respect to the September 2017 event. We are cooperating with this investigation.

Tulsa

HollyFrontier Tulsa Refining LLC (“HFTR”) operates under two Consent Decrees with the EPA and the Oklahoma Department of Environmental Quality (“ODEQ”) for the East and West Refineries. On April 3, 2019, the EPA notified HFTR of potential violations of the Consent Decrees. On December 1, 2020, ODEQ, on behalf of ODEQ and the EPA, issued two demand letters alleging violations under the Consent Decrees, which stemmed from inspections conducted by the EPA at the refineries from May 1 through 5, 2017, as well as from a review of the refineries’ records. The alleged violations included the failure to comply with applicable continuous emissions monitoring system (CEMS) requirements and exceedances of the hydrogen sulfide (H₂S) emission limits. During a follow-up conference call with ODEQ, on January 6, 2021, ODEQ shared its stipulated penalty amounts for alleged violations pursuant to the two Consent Decrees. HFTR submitted timely responses to the ODEQ demand letters on February 8, 2021. It is too soon to predict the outcome of this matter.

Woods Cross

HollyFrontier Woods Cross Refining LLC (“HFWCR”) operates under a federal consent decree with the EPA and the Utah Department of Environmental Quality. On November 3, 2020, HFWCR received a letter from the EPA identifying potential violations of HFWCR’s federal consent decree that occurred from calendar year 2015 through the date of the letter. HFWCR provided a response letter to the EPA on December 3, 2020 disputing certain of the potential violations in the EPA’s November 3, 2020 letter, and HFWCR supplemented its response letter on February 5, 2021 with additional information. It is too soon to predict the outcome of this matter.

Federal Trade Commission

On July 23, 2019, the Federal Trade Commission (“FTC”) issued a Civil Investigative Demand and a related Subpoena Duces Tecum requesting we provide specified information relating to the Sonneborn acquisition that closed on February 1, 2019.

We cooperated with the FTC in its investigation. On December 2, 2020, the FTC notified us that no further action was warranted, and it had closed the investigation.

Renewable Fuel Standard

Various subsidiaries of HollyFrontier are currently intervenors in three lawsuits brought by renewable fuel interest groups against the EPA in federal courts alleging violations of the Renewable Fuel Standard under the Clean Air Act and challenging the EPA's handling of small refinery exemptions. We intervened to vigorously defend the EPA's position on small refinery exemptions because we believe the EPA correctly applied applicable law to the matters at issue.

On January 24, 2020, in the first of these lawsuits, the U.S. Court of Appeals for the Tenth Circuit vacated the small refinery exemptions granted to two of our refineries for 2016 and remanded the case to the EPA for further proceedings. On April 15, 2020, the Tenth Circuit entered its mandate, remanding the matter back to the EPA. On September 4, 2020, various subsidiaries of HollyFrontier filed a Petition for a Writ of Certiorari with the U.S. Supreme Court appealing the Tenth Circuit decision. On

January 8, 2021, the U.S. Supreme Court granted HollyFrontier's petition. We anticipate decision from the Supreme Court in June 2021. We expect that we will not know what steps the EPA will take with respect to our 2016 small refinery exemptions or how the case will impact future small refinery exemptions until after the Supreme Court's decision in this matter.

The second lawsuit is before the Tenth Circuit. The matter is fully briefed and remains pending before that court.

The third lawsuit is before the DC Circuit. Briefing of the issues before the court commenced on December 7, 2020; however, in light of the Supreme Court's decision to hear HollyFrontier's appeal of the Tenth Circuit decision, this case was stayed pending a decision from the Supreme Court.

In December 2020, various subsidiaries of HollyFrontier also filed a petition for review in the DC Circuit challenging EPA's denial of small refinery exemption petitions for years prior to 2016. The petition was consolidated with petitions from eight other refining companies challenging the same decision. In light of the Supreme Court's decision to hear HollyFrontier's appeal of the Tenth Circuit decision, this case was stayed pending a decision from the Supreme Court.

Other

We are a party to various other litigation and proceedings that we believe, based on advice of counsel, will not either individually or in the aggregate have a materially adverse impact on our financial condition, results of operations or cash flows.

Item 4. Mine Safety Disclosures

Not Applicable.

PART II

Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is traded on the New York Stock Exchange under the trading symbol "HFC."

In November 2019, our Board of Directors approved a \$1.0 billion share repurchase program, which replaced all existing share repurchase programs. The timing and amount of stock repurchases will depend on market conditions and corporate, regulatory and other relevant considerations. We do not intend to repurchase common stock under our \$1.0 billion share repurchase program until commodity prices and demand for products normalize. This program may be discontinued at any time by the Board of Directors. The following table includes repurchases made under this program during the fourth quarter of 2020.

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares that May Yet Be Purchased under the Plans or Programs
October 2020	—	\$ —	—	\$ 1,000,000,000
November 2020	—	\$ —	—	\$ 1,000,000,000
December 2020	—	\$ —	—	\$ 1,000,000,000
Total for October to December 2020	—		—	

As of February 16, 2021, we had approximately 101,664 stockholders, including beneficial owners holding shares in street name.

We intend to consider the declaration of a dividend on a quarterly basis, although there is no assurance as to future dividends since they are dependent upon future earnings, capital requirements, our financial condition and other factors.

Item 6. Selected Financial Data

The following table shows our selected financial information as of the dates or for the periods indicated. This table should be read in conjunction with Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes thereto included elsewhere in this Annual Report on Form 10-K.

	Years Ended December 31,				
	2020	2019	2018	2017	2016
(In thousands, except per share data)					
FINANCIAL DATA					
For the period					
Sales and other revenues	\$ 11,183,643	\$ 17,486,578	\$ 17,714,666	\$ 14,251,299	\$ 10,535,700
Income (loss) before income taxes	(747,046)	1,171,504	1,524,467	868,863	(171,534)
Income tax expense (benefit)	(232,147)	299,152	347,243	(12,379)	19,411
Net income (loss)	(514,899)	872,352	1,177,224	881,242	(190,945)
Less net income attributable to noncontrolling interest	86,549	99,964	79,264	75,847	69,508
Net income (loss) attributable to HollyFrontier stockholders	<u>\$ (601,448)</u>	<u>\$ 772,388</u>	<u>\$ 1,097,960</u>	<u>\$ 805,395</u>	<u>\$ (260,453)</u>
Earnings (loss) per share - basic	\$ (3.72)	\$ 4.64	\$ 6.25	\$ 4.54	\$ (1.48)
Earnings (loss) per share - diluted	\$ (3.72)	\$ 4.61	\$ 6.19	\$ 4.52	\$ (1.48)
Cash dividends declared per common share	\$ 1.40	\$ 1.34	\$ 1.32	\$ 1.32	\$ 1.32
Average number of common shares outstanding:					
Basic	161,983	166,287	175,009	176,174	176,101
Diluted	161,983	167,385	176,661	177,196	176,101
Net cash provided by operating activities	\$ 457,931	\$ 1,548,611	\$ 1,554,416	\$ 951,390	\$ 606,948
Net cash used for investing activities	\$ (330,162)	\$ (972,914)	\$ (360,520)	\$ (959,670)	\$ (801,597)
Net cash provided by (used for) financing activities	\$ 353,226	\$ (848,255)	\$ (664,328)	\$ (72,630)	\$ 838,695
At end of period					
Cash, cash equivalents and investments in marketable securities	\$ 1,368,318	\$ 885,162	\$ 1,154,752	\$ 630,757	\$ 1,134,727
Working capital	\$ 1,935,605	\$ 1,620,261	\$ 2,128,224	\$ 1,640,118	\$ 1,767,780
Total assets	\$ 11,506,864	\$ 12,164,841	\$ 10,994,601	\$ 10,692,154	\$ 9,435,661
Total debt	\$ 3,142,718	\$ 2,455,640	\$ 2,411,540	\$ 2,498,993	\$ 2,235,137
Total equity	\$ 5,722,203	\$ 6,509,426	\$ 6,459,059	\$ 5,896,940	\$ 5,301,985

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

This Item 7 contains “forward-looking” statements. See “Forward-Looking Statements” at the beginning of this Annual Report on Form 10-K. In this document, the words “we,” “our,” “ours” and “us” refer only to HollyFrontier and its consolidated subsidiaries or to HollyFrontier or an individual subsidiary and not to any other person with certain exceptions. Generally, the words “we,” “our,” “ours” and “us” include HEP and its subsidiaries as consolidated subsidiaries of HollyFrontier, unless when used in disclosures of transactions or obligations between HEP and HollyFrontier or its other subsidiaries. This document contains certain disclosures of agreements that are specific to HEP and its consolidated subsidiaries and do not necessarily represent obligations of HollyFrontier. When used in descriptions of agreements and transactions, “HEP” refers to HEP and its consolidated subsidiaries.

OVERVIEW

We are an independent petroleum refiner and marketer that produces high-value light products such as gasoline, diesel fuel, jet fuel, specialty lubricant products and specialty and modified asphalt. We own and operate refineries located in Kansas, Oklahoma, New Mexico and Utah and market our refined products principally in the Southwest United States, the Rocky Mountains extending into the Pacific Northwest and in other neighboring Plains states. In addition, we produce base oils and other specialized lubricants in the United States, Canada and the Netherlands, and export products to more than 80 countries. We also own a 57% limited partner interest and a non-economic general partner interest in HEP, 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.

In the third quarter of 2020, we permanently ceased petroleum refining operations at our Cheyenne Refinery and subsequently began converting certain assets at our Cheyenne Refinery to renewable diesel production. This decision was primarily based on a positive outlook in the market for renewable diesel and the expectation that future free cash flow generation at our Cheyenne Refinery would be challenged due to lower gross margins resulting from the economic impact of the COVID-19 pandemic and compressed crude differentials due to dislocations in the crude oil market. Additional factors included uncompetitive operating and maintenance costs forecasted for our Cheyenne Refinery and the anticipated loss of the EPA's small refinery exemption. The renewable diesel units are expected to be completed in the first quarter of 2022 with an expected capital budget between \$125-\$175 million.

During the second quarter of 2020, we recorded long-lived asset impairment charges of \$232.2 million related to our Cheyenne Refinery asset group. In connection with the cessation of petroleum refining operations at our Cheyenne Refinery, we recognized \$24.7 million in decommissioning expense for the year ended December 31, 2020. In addition, for the year ended December 31, 2020, we recorded a reserve of \$9.0 million against our repair and maintenance supplies inventory and \$3.8 million in employee severance costs related to the conversion of our Cheyenne Refinery to renewable diesel production. These decommissioning, inventory reserve and severance costs were recognized in operating expenses, of which \$24.8 million was recorded in our Refining segment and \$12.7 million was recorded in our Corporate and Other segment.

During the second quarter of 2020, we also initiated and completed a corporate restructuring, which is expected to save approximately \$30 million per year of ongoing cash expenses. As a result of this restructuring, we recorded \$3.7 million in employee severance costs, which were recognized primarily as operating expenses in our Refining segment and selling, general and administrative expenses in our Corporate and Other segment.

During the first quarter of 2021, we initiated a restructuring within our Lubricants and Specialty Products segment, which is expected to save approximately \$15 million per year of ongoing cash expenses. Over the next twelve months, we anticipate pre-tax costs of \$8 -\$10 million for severance obligations.

On November 12, 2018, we entered into an equity purchase agreement to acquire 100% of the issued and outstanding capital stock of Sonneborn. The acquisition closed on February 1, 2019. Cash consideration paid was \$662.7 million. Sonneborn is a producer of specialty hydrocarbon chemicals such as white oils, petrolatums and waxes with manufacturing facilities in the United States and Europe.

On July 10, 2018, we entered into a definitive agreement to acquire Red Giant Oil, a privately-owned lubricants company. The acquisition closed on August 1, 2018. Cash consideration paid was \$54.2 million. Red Giant Oil is one of the largest suppliers of locomotive engine oil in North America and is headquartered in Council Bluffs, Iowa with storage and distribution facilities in Iowa and Wyoming, along with a blending and packaging facility in Texas.

For the year ended December 31, 2020, net loss attributable to HollyFrontier stockholders was \$(601.4) million compared to net income of \$772.4 million and \$1,098.0 million for the years ended December 31, 2019, and 2018, respectively. Overall gross refining margins per produced barrel sold for 2020 decreased 54% over the year ended December 31, 2019 due to lower crack spreads and crude oil basis differentials. Included in our financial results for the year ended December 31, 2020 were non-cash items consisting of goodwill and long-lived asset impairment charges.

Pursuant to the 2007 Energy Independence and Security Act, the EPA promulgated the RFS regulations, which increased the volume of renewable fuels mandated to be blended into the nation's fuel supply. The regulations, in part, require refiners to add annually increasing amounts of "renewable fuels" to their petroleum products or purchase credits, known as RINs, in lieu of such blending. Compliance with RFS regulations significantly increases our cost of products sold, with RINs costs totaling \$148.5 million for the year ended December 31, 2020.

Impact of COVID-19 on Our Business

The COVID-19 pandemic caused a decline in U.S. and global economic activity starting in the first quarter of 2020. This decrease reduced both volumes and unit margins across our businesses, resulting in lower gross margins and earnings. Following a rebound in the late second and third quarters, demand for transportation fuels continued to be weak compared to 2019. In response to this level of demand, during the fourth quarter of 2020, we operated our Refining segment refineries at an average crude charge of 379,910 BPD.

In our Lubricants and Specialty Products segment, the Rack Forward portion saw improvement in industrial and transportation-related end markets, which drove higher demand and unit margins during the second half of 2020. Within the Rack Back portion, demand for base oils increased to 2019 levels while supply was limited due to a number of factors, which drove higher margins and utilization at our facilities in the third quarter.

The stabilization of demand drove a broad increase in commodity prices, resulting in values for our inventories held at December 31, 2020 above the costs of these inventories using the last-in, first-out ("LIFO") method and in a lower of cost or market valuation gain of \$149.2 million for the three months ended December 31, 2020. We also drew down on our inventory levels to better manage working capital in the fourth quarter of 2020, which resulted in a \$35 million increase in cost of products sold for the quarter.

Our standalone (excluding HEP) liquidity was approximately \$2,696.3 million at December 31, 2020, consisting of cash and cash equivalents of \$1,346.3 million and an undrawn \$1.35 billion credit facility maturing in 2022. Our standalone (excluding HEP) long-term debt was \$1.75 billion as of December 31, 2020, which consists of \$350.0 million in 2.625% senior notes due in 2023, \$1.0 billion of 5.875% senior notes due in 2026 and \$400.0 million in 4.500% senior notes due in 2030.

OUTLOOK

The impact of the COVID-19 pandemic on the global macroeconomy created an unprecedented reduction in demand in the first half of 2020, as well as a lack of forward visibility, for many of the transportation fuels, lubricants and specialty products and the associated transportation and terminal services we provide. We have seen improvement in demand for these products and services since the initial wave of COVID-19 infections during the second quarter of 2020, and with the increasing availability of vaccines, we believe there is a path to a fulsome recovery in demand in 2021.

In response to the COVID-19 pandemic, and with the health and safety of our employees as a top priority, we continue a range of initiatives, including limiting onsite staff at all of our facilities, implementing a work-from-home policy for certain employees and restricting travel unless approved by senior leadership. We will continue to monitor COVID-19 developments and the dynamic environment to properly address these policies going forward.

Within our Refining segment, for the first quarter of 2021, we expect to run between 350,000-380,000 barrels per day of crude oil. In addition to continued weakness in demand resulting from the COVID-19 pandemic, the crude charge in the first quarter of 2021 has also been adversely impacted by scheduled maintenance at our Tulsa West and Woods Cross refineries as well as reduced availability, and an increase in the price, of natural gas due to the recent extreme cold weather throughout the Mid-Continent and Southwest. We expect to adjust refinery production levels commensurate with market demand.

Within our Lubricants and Specialty Products segment, we expect a normal seasonal rebound in the first quarter of 2021. However, we do not have enough visibility to issue forward guidance at this time. Similar to our Refining segment, we expect to adjust production levels commensurate with market demand.

At HEP, we expect to see demand for transportation and terminal services grow with underlying demand for transportation fuels and crude oil. In 2021, HEP expects to hold the quarterly distribution constant at \$0.35 per unit, or \$1.40 on an annualized basis. HEP remains committed to its distribution strategy focused on funding all capital expenditures and distributions within free cash flow and maintaining distributable cash flow coverage of 1.3x or greater with the goal of reducing leverage to 3.0-3.5x.

During the third quarter of 2020, we increased our liquidity by \$750.0 million with the issuance of \$350.0 million in 2.625% senior notes due in 2023 and \$400.0 million in 4.500% senior notes due in 2030. This additional liquidity may be used for general corporate purposes and is expected to support the planned growth of our renewables business and the unexpected economic impact of COVID-19, as needed. We do not intend to repurchase common stock under our \$1.0 billion share repurchase program until demand for our products normalize.

On March 27, 2020, the U.S. government passed the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”), an approximately \$2 trillion stimulus package that includes various provisions intended to provide relief to individuals and businesses in the form of tax changes, loans and grants, among others. At this time, we have not sought relief in the form of loans or grants from the CARES Act; however, we have benefited from certain tax deferrals in the CARES Act and may benefit from other tax provisions if we meet the requirements to do so. We anticipate \$50.0 million to \$60.0 million in cash tax benefit in 2021 from the loss carryback potential under the CARES Act. As a result of the net operating loss incurred in the year ended December 31, 2020, we will also file refund claims of approximately \$21.0 million to recover estimated tax payments made during the year.

The extent to which our future results are affected by the COVID-19 pandemic will depend on various factors and consequences beyond our control, such as the duration and scope of the pandemic, additional actions by businesses and governments in response to the pandemic and the speed and effectiveness of responses to combat the virus. The COVID-19 pandemic, and the volatile regional and global economic conditions stemming from it, could also exacerbate the risk factors identified in this Form 10-K under “Risk Factors” in Item 1A. The COVID-19 pandemic may also materially adversely affect our results in a manner that is either not currently known or that we do not currently consider to be a significant risk to our business.

A more detailed discussion of our financial and operating results for the years ended December 31, 2020 and 2019 is presented in the following sections. Discussions of year-over-year comparisons for 2019 and 2018 can be found in “Management's Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2019.

RESULTS OF OPERATIONS

Financial Data

	Years Ended December 31,		
	2020	2019	2018
	(In thousands, except per share data)		
Sales and other revenues	\$ 11,183,643	\$ 17,486,578	\$ 17,714,666
Operating costs and expenses:			
Cost of products sold (exclusive of depreciation and amortization):			
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	9,158,805	13,918,384	13,940,782
Lower of cost or market inventory valuation adjustment	78,499	(119,775)	136,305
	9,237,304	13,798,609	14,077,087
Operating expenses (exclusive of depreciation and amortization)	1,300,277	1,394,052	1,285,838
Selling, general and administrative expenses (exclusive of depreciation and amortization)	313,600	354,236	290,424
Depreciation and amortization	520,912	509,925	437,324
Goodwill and long-lived asset impairments	545,293	152,712	—
Total operating costs and expenses	11,917,386	16,209,534	16,090,673
Income (loss) from operations	(733,743)	1,277,044	1,623,993
Other income (expense):			
Earnings of equity method investments	6,647	5,180	5,825
Interest income	7,633	22,139	16,892
Interest expense	(126,527)	(143,321)	(131,363)
Gain on business interruption insurance settlement	81,000	—	—
Gain on sales-type leases	33,834	—	—
Loss on early extinguishment of debt	(25,915)	—	—
Gain on foreign currency transactions	2,201	5,449	6,197
Other, net	7,824	5,013	2,923
	(13,303)	(105,540)	(99,526)
Income (loss) before income taxes	(747,046)	1,171,504	1,524,467
Income tax expense (benefit)	(232,147)	299,152	347,243
Net income (loss)	(514,899)	872,352	1,177,224
Less net income attributable to noncontrolling interest	86,549	99,964	79,264
Net income (loss) attributable to HollyFrontier stockholders	\$ (601,448)	\$ 772,388	\$ 1,097,960
Earnings (loss) per share:			
Basic	\$ (3.72)	\$ 4.64	\$ 6.25
Diluted	\$ (3.72)	\$ 4.61	\$ 6.19
Cash dividends declared per common share	\$ 1.40	\$ 1.34	\$ 1.32
Average number of common shares outstanding:			
Basic	161,983	166,287	175,009
Diluted	161,983	167,385	176,661

Other Financial Data

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Net cash provided by operating activities	\$ 457,931	\$ 1,548,611	\$ 1,554,416
Net cash used for investing activities	\$ (330,162)	\$ (972,914)	\$ (360,520)
Net cash provided by (used for) financing activities	\$ 353,226	\$ (848,255)	\$ (664,328)
Capital expenditures	\$ 330,160	\$ 293,763	\$ 311,029
EBITDA ⁽¹⁾	\$ (193,789)	\$ 1,702,647	\$ 1,996,998

(1) Earnings before interest, taxes, depreciation and amortization, which we refer to as “EBITDA,” is calculated as net income (loss) attributable to HollyFrontier stockholders plus (i) interest expense, net of interest income, (ii) income tax provision, and (iii) depreciation and amortization. EBITDA is not a calculation provided for under GAAP; however, the amounts included in the EBITDA calculation are derived from amounts included in our consolidated financial statements. EBITDA should not be considered as an alternative 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 is not necessarily comparable to similarly titled measures of other companies. EBITDA is presented here because it is a widely used financial indicator used by investors and analysts to measure performance. EBITDA is also used by our management for internal analysis and as a basis for financial covenants. EBITDA presented above is reconciled to net income under “Reconciliations to Amounts Reported Under Generally Accepted Accounting Principles” following Item 7A of Part II of this Form 10-K.

Supplemental Segment Operating Data

Our operations are organized into three reportable segments, Refining, Lubricants and Specialty Products and HEP. See Note 20 “Segment Information” in the Notes to Consolidated Financial Statements for additional information on our reportable segments.

Refining Segment Operating Data

Our refinery operations include the El Dorado, Tulsa, Navajo and Woods Cross Refineries. The following tables set forth information, including non-GAAP performance measures, about our consolidated refinery operations, which has been retrospectively adjusted to reflect the revised regional groupings upon the Cheyenne Refinery permanently ceasing petroleum refining operations in the third quarter of 2020. The cost of products and refinery gross and net operating margins do not include the non-cash effects of long-lived asset impairment charges, 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” following Item 7A of Part II of this Form 10-K.

	Years Ended December 31,		
	2020	2019	2018
Consolidated			
Crude charge (BPD) ⁽¹⁾	365,190	388,860	384,380
Refinery throughput (BPD) ⁽²⁾	395,080	417,570	413,780
Sales of produced refined products (BPD) ⁽³⁾	391,670	414,370	408,390
Refinery utilization ⁽⁴⁾	90.2 %	96.0 %	94.9 %
Average per produced barrel ⁽⁵⁾			
Refinery gross margin	\$ 7.29	\$ 15.92	\$ 16.50
Refinery operating expenses ⁽⁶⁾	6.05	6.12	6.06
Net operating margin	\$ 1.24	\$ 9.80	\$ 10.44
Refinery operating expenses per throughput barrel ⁽⁷⁾	\$ 6.00	\$ 6.07	\$ 5.98

(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 405,000 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” following Item 7A of Part II of this Form 10-K.
- (6) Represents total Mid-Continent and West regions operating expenses, exclusive of long-lived asset impairment charges and depreciation and amortization, divided by sales volumes of refined products produced at our refineries.
- (7) Represents total Mid-Continent and West regions operating expenses, exclusive of long-lived asset impairment charges and depreciation and amortization, divided by refinery throughput.

Lubricants and Specialty Products Segment Operating Data

The following table sets forth information about our lubricants and specialty products operations and includes Red Giant Oil for the period August 1, 2018 (date of acquisition) through December 31, 2020, and Sonneborn for the period February 1, 2019 (date of acquisition) through December 31, 2020.

	Years Ended December 31,		
	2020	2019	2018
<i>Lubricants and Specialty Products</i>			
Throughput (BPD)	19,645	20,251	19,590
Sales of produced barrels sold (BPD)	32,902	34,827	30,510

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)				
Year Ended December 31, 2020				
Sales and other revenues	\$ 505,424	\$ 1,667,809	\$ (370,023)	\$ 1,803,210
Cost of products sold	456,194	1,185,116	(370,023)	1,271,287
Operating expenses	96,463	119,605	—	216,068
Selling, general and administrative expenses	22,276	135,540	—	157,816
Depreciation and amortization	29,071	51,585	—	80,656
Goodwill and long-lived asset impairments ⁽⁴⁾	167,017	119,558	—	286,575
Income (loss) from operations	<u>\$ (265,597)</u>	<u>\$ 56,405</u>	<u>\$ —</u>	<u>\$ (209,192)</u>
Year Ended December 31, 2019				
Sales and other revenues	\$ 661,523	\$ 1,883,920	\$ (452,915)	\$ 2,092,528
Cost of products sold	620,660	1,412,291	(452,915)	1,580,036
Operating expenses	116,984	114,539	—	231,523
Selling, general and administrative expenses	31,854	136,741	—	168,595
Depreciation and amortization	37,001	51,780	—	88,781
Goodwill impairment ⁽⁵⁾	152,712	—	—	152,712
Income (loss) from operations	<u>\$ (297,688)</u>	<u>\$ 168,569</u>	<u>\$ —</u>	<u>\$ (129,119)</u>
Year Ended December 31, 2018				
Sales and other revenues	\$ 682,892	\$ 1,650,056	\$ (520,245)	\$ 1,812,703
Cost of products sold	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	<u>\$ (120,763)</u>	<u>\$ 197,101</u>	<u>\$ —</u>	<u>\$ 76,338</u>

- (1) Rack back consists of our 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.
- (4) During the year ended December 31, 2020, a goodwill impairment charge of \$81.9 million was recorded in rack forward. Also, during the year ended December 31, 2020, a long-lived asset impairment charge of \$204.7 million was recorded of which \$167.0 million was in rack back and \$37.7 million was in rack forward.
- (5) During the year ended December 31, 2019, a goodwill impairment charge of \$152.7 million was recorded in the PCLI reporting unit within the Lubricants and Specialty Products segment. We separately allocated this charge for purposes of management’s discussion and analysis presentation of rack back and rack forward results entirely to rack back.

Results of Operations - Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Summary

Net loss attributable to HollyFrontier stockholders for the year ended December 31, 2020 was \$(601.4) million (\$(3.72) per basic and diluted share), a \$1,373.8 million decrease compared to net income of \$772.4 million (\$4.64 per basic and \$4.61 per diluted share) for the year ended December 31, 2019. Net income decreased due principally to long-lived asset and goodwill impairment charges of \$545.3 million offset by an \$81.0 million gain recognized upon the settlement of a business interruption insurance claim. In addition, net income decreased as a result of lower gross refining margins and lower refining segment sales volumes. For the year ended December 31, 2020, lower of cost or market inventory reserve adjustments decreased pre-tax earnings by \$78.5 million compared to an increase of \$119.8 million for the year ended December 31, 2019. Refinery gross margins for the year ended December 31, 2020 decreased to \$7.29 per produced barrel from \$15.92 for the year ended December 31, 2019. The year ended December 31, 2019 included a goodwill impairment charge of \$152.7 million.

Sales and Other Revenues

Sales and other revenues decreased 36% from \$17,486.6 million for the year ended December 31, 2019 to \$11,183.6 million for the year ended December 31, 2020 due to a year-over-year decrease in sales prices and lower refined product sales volumes. Sales and other revenues for the years ended December 31, 2020 and 2019 include \$98.0 million and \$121.0 million, respectively, in HEP revenues attributable to pipeline and transportation services provided to unaffiliated parties. Additionally, sales and other revenues included \$1,792.7 million and \$2,081.2 million in unaffiliated revenues related to our Lubricants and Specialty Products segment for the years ended December 31, 2020 and 2019, respectively.

Cost of Products Sold

Total cost of products sold decreased 33% from \$13,798.6 million for the year ended December 31, 2019 to \$9,237.3 million for the year ended December 31, 2020, due principally to lower crude oil costs and lower refined product sales volumes. Additionally, for the year ended December 31, 2020, we recognized a \$78.5 million lower of cost or market inventory valuation charge compared to a benefit of \$119.8 million for the same period of 2019, resulting in a new \$318.9 million inventory reserve at December 31, 2020. The lower of cost or market reserve at December 31, 2020 is based on market conditions and prices at that time. During the year ended December 31, 2019, we recorded a \$36.6 million RINs cost reduction as a result of our Cheyenne Refinery and Woods Cross Refinery small refinery exemptions. Also, during the year ended December 31, 2019, we recorded an \$18.0 million reduction to cost of products sold as a result of U.S. blender's tax credit legislation that was signed in December 2019 and applied retroactively for the years 2019 and 2018.

Gross Refinery Margins

Gross refinery margin per barrel sold decreased 54% from \$15.92 for the year ended December 31, 2019 to \$7.29 for the year ended December 31, 2020. This was due to a decrease in the average per barrel sold sales price during the current year period, partially offset by decreased crude oil and feedstock prices. Gross refinery margin per barrel does not include the non-cash effects of lower of cost or market inventory valuation adjustments, long-lived asset impairment charges or depreciation and amortization. See "Reconciliations to Amounts Reported Under Generally Accepted Accounting Principles" following Item 7A of Part II of this Form 10-K for a reconciliation to the income statement of sale prices of products sold and cost of products purchased.

Operating Expenses

Operating expenses, exclusive of depreciation and amortization, decreased 7% from \$1,394.1 million for the year ended December 31, 2019 to \$1,300.3 million for the year ended December 31, 2020 due principally to lower repair and maintenance costs primarily related to the shutdown of our Cheyenne Refinery, partially offset by decommissioning costs associated with the Cheyenne Refinery shutdown recorded in the year ended December 31, 2020. Prior year period operating expenses included higher repair and maintenance costs related to a February 2019 fire in an FCC unit at our El Dorado Refinery.

Selling, General and Administrative Expenses

Selling, general and administrative expenses decreased 11% from \$354.2 million for the year ended December 31, 2019 to \$313.6 million for the year ended December 31, 2020 due principally to lower professional services and employee-related expenses. We incurred \$2.0 million and \$24.2 million in direct acquisition and integration costs for our Sonneborn business during the years ended December 31, 2020 and 2019.

Depreciation and Amortization Expenses

Depreciation and amortization increased 2% from \$509.9 million for the year ended December 31, 2019 to \$520.9 million for the year ended December 31, 2020. This increase was due principally to depreciation and amortization attributable to capitalized improvement projects and capitalized refinery turnaround costs, partially offset by lower depreciation expense resulting from the assets impaired in the current year period.

Goodwill and Long-lived Asset Impairments

During the year ended December 31, 2020, we recorded long-lived asset impairment charges of \$232.2 million that related to our Cheyenne Refinery, \$26.5 million for construction-in-progress consisting primarily of engineering work for potential upgrades to certain processing units at our Tulsa and El Dorado Refineries and \$204.7 million related to PCLI. Also, during the year ended December 31, 2020, we recorded a goodwill impairment charge of \$81.9 million that related to Sonneborn. During the year ended December 31, 2019 we recorded a goodwill impairment charge of \$152.7 million that related to PCLI. See Note 11 “Goodwill, Long-lived Assets and Intangibles” in the Notes to Consolidated Financial Statements for additional information on these impairments.

Interest Income

Interest income for the year ended December 31, 2020 was \$7.6 million compared to \$22.1 million for the year ended December 31, 2019. This decrease was primarily due to lower interest rates on cash investments.

Interest Expense

Interest expense was \$126.5 million for the year ended December 31, 2020 compared to \$143.3 million for the year ended December 31, 2019. This decrease was primarily due to lower market interest rates on HEP’s credit facility and HEP’s refinancing of its 6.0% senior notes due 2024, partially offset by interest expense on our senior notes issued in 2020. Additionally, we recorded unrealized losses on the mark-to-market change in the fair value of the embedded derivative in our catalyst financing arrangements of \$4.3 million for the year ended December 31, 2020 and \$6.4 million for the same period in 2019. For the years ended December 31, 2020 and 2019, interest expense included \$52.9 million and \$74.8 million, respectively, in interest costs attributable to HEP operations.

Gain on Business Interruption Insurance Settlement

During the year ended December 31, 2020, we recorded a gain of \$81.0 million upon the settlement of our business interruption claim with our insurance carrier related to a loss at our Woods Cross Refinery that occurred in the first quarter of 2018.

Gain on Sales-type Leases

During the second quarter of 2020, HEP and Delek US Holdings, Inc. renewed the original throughput agreement on specific HEP assets. Portions of the new throughput agreement meet the definition of sales-type leases, which resulted in an accounting gain of \$33.8 million upon the initial recognition of the sales-type lease during the year ended December 31, 2020.

Loss on Early Extinguishment of Debt

For the year ended December 31, 2020, HEP recorded a \$25.9 million loss on the redemption of its \$500 million aggregate principal amount of 6.0% senior notes maturing August 2024 at a redemption cost of \$522.5 million.

Gain on Foreign Currency Transactions

Remeasurement adjustments resulting from the foreign currency conversion of the intercompany financing notes payable by PCLI net of mark-to-market valuations on foreign exchange forward contracts with banks which hedge the foreign currency exposure on these intercompany notes were gains of \$2.2 million and \$5.4 million for the years ended December 31, 2020 and 2019, respectively. For the years ended December 31, 2020 and 2019, gain on foreign currency transactions included losses of \$7.3 million and \$17.4 million, respectively, on foreign exchange forward contracts (utilized as an economic hedge).

Income Taxes

For the year ended December 31, 2020, we recorded an income tax benefit of \$232.1 million compared to income tax expense of \$299.2 million for the year ended December 31, 2019. This decrease was due principally to a pre-tax loss during the year ended December 31, 2020 compared to pre-tax earnings for the year ended December 31, 2019. Our effective tax rates were 31.1% and 25.5% for the years ended December 31, 2020 and 2019, respectively. The year-over-year increase in the effective tax rate is due principally to the

relationship between the pre-tax results and the earnings attributable to the noncontrolling interest that is not included in income for tax purposes and benefits related to the CARES Act.

LIQUIDITY AND CAPITAL RESOURCES

HollyFrontier Credit Agreement

We have a \$1.35 billion senior unsecured revolving credit facility maturing in February 2022 (the “HollyFrontier Credit Agreement”). The HollyFrontier Credit Agreement may be used for revolving credit loans and letters of credit from time to time and is available to fund general corporate purposes. At December 31, 2020, we were in compliance with all covenants, had no outstanding borrowings and had outstanding letters of credit totaling \$5.7 million under the HollyFrontier Credit Agreement.

HollyFrontier Senior Notes

On September 28, 2020, we completed a public offering of \$350.0 million in aggregate principal amount of 2.625% senior notes maturing October 2023 and \$400.0 million in aggregate principal amount of 4.500% senior notes maturing October 2030. We intend to use the net proceeds for general corporate purposes, which may include capital expenditures. These senior notes are unsecured and unsubordinated obligations of ours and rank equally with all our other existing and future unsecured and unsubordinated indebtedness.

HollyFrontier Financing Arrangements

In December 2018, certain of our wholly-owned subsidiaries entered into financing arrangements whereby such subsidiaries sold a portion of their precious metals catalyst to a financial institution and then leased back the precious metals catalyst in exchange for total cash received of \$32.5 million. The volume of the precious metals catalyst and the lease rate are fixed over the one-year term of each lease, and the lease payments are recorded as interest expense. The leases mature on February 1, 2022. Upon maturity, we must either satisfy the obligation at fair market value or refinance to extend the maturity.

HEP Credit Agreement

HEP has a \$1.4 billion senior secured revolving credit facility maturing in July 2022 (the “HEP Credit Agreement”) and is available to fund capital expenditures, investments, acquisitions, distribution payments, working capital and for general partnership purposes. It is also available to fund letters of credit up to a \$50 million sub-limit and has a \$300 million accordion. During the year ended December 31, 2020, HEP received advances totaling \$258.5 million and repaid \$310.5 million under the HEP Credit Agreement. At December 31, 2020, HEP was in compliance with all of its covenants, had outstanding borrowings of \$913.5 million and no outstanding letters of credit under the HEP Credit Agreement.

HEP Senior Notes

On February 4, 2020, HEP closed a private placement of \$500.0 million in aggregate principal amount of 5.0% HEP senior unsecured notes maturing February 2028. On February 5, 2020, HEP redeemed its existing \$500.0 million aggregate principal amount of 6.0% senior notes maturing August 2024 at a redemption cost of \$522.5 million. HEP recognized a \$25.9 million early extinguishment loss consisting of a \$22.5 million debt redemption premium and unamortized discount and financing costs of \$3.4 million. HEP funded the \$522.5 million redemption with proceeds from the issuance of its 5.0% senior notes and borrowings under the HEP Credit Agreement.

See Note 13 “Debt” in the Notes to Consolidated Financial Statements for additional information on our debt instruments.

HEP Common Unit Continuous Offering Program

In May 2016, HEP established a continuous offering program under which HEP may issue and sell common units from time to time, representing limited partner interests, up to an aggregate gross sales amount of \$200 million. During the year ended December 31, 2020, HEP did not issue any common units under this program. As of December 31, 2020, HEP has issued 2,413,153 common units under this program, providing \$82.3 million in gross proceeds.

Liquidity

We believe our current cash and cash equivalents, along with future internally generated cash flow and funds available under our credit facilities, will provide sufficient resources to fund currently planned capital projects and our liquidity needs for the foreseeable future. We expect that, to the extent necessary, we can raise additional funds from time to time through equity or debt financings in the public and private capital markets. In addition, subject to our current cash conservation strategies as discussed above in “Outlook,” components of our growth strategy include the expansion of existing units at our facilities and selective acquisition of complementary assets for our refining operations intended to increase earnings and cash flow. We also expect to use cash for payment of cash dividends, which are at the discretion of our Board of Directors, and, once commodity prices and demand for products normalize, for the repurchases of our common stock under our share repurchase program.

Our standalone (excluding HEP) liquidity was approximately \$2.70 billion at December 31, 2020, consisting of cash and cash equivalents of \$1.35 billion and an undrawn \$1.35 billion credit facility.

We consider all highly-liquid instruments with a maturity of three months or less at the time of purchase to be cash equivalents. Cash equivalents are stated at cost, which approximates market value. These primarily consist of investments in conservative, highly-rated instruments issued by financial institutions, government and corporate entities with strong credit standings and money market funds.

In November 2019, our Board of Directors approved a \$1.0 billion share repurchase program, which replaced all existing share repurchase programs, authorizing us to repurchase common stock in the open market or through privately negotiated transactions. The timing and amount of stock repurchases will depend on market conditions and corporate, regulatory and other relevant considerations. This program may be discontinued at any time by our Board of Directors. As of December 31, 2020, we had not repurchased common stock under this stock repurchase program. In addition, we are authorized by our Board of Directors to repurchase shares in an amount sufficient to offset shares issued under our compensation programs. We do not intend to repurchase common stock under our \$1.0 billion share repurchase program until commodity prices and demand for products normalize.

Cash and cash equivalents increased \$483.2 million for the year ended December 31, 2020. Net cash provided by operating and financing activities of \$457.9 million and \$353.2 million, respectively, exceeded cash used for investing activities of \$330.2 million for the year ended December 31, 2020.

Cash Flows – Operating Activities

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Net cash flows provided by operating activities were \$457.9 million for the year ended December 31, 2020 compared to \$1,548.6 million for the year ended December 31, 2019, a decrease of \$1,090.7 million. Net loss for the year ended December 31, 2020 was \$514.9 million, a decrease of \$1,387.3 million compared to net income of \$872.4 million for the year ended December 31, 2019. Non-cash adjustments to net income / loss consisting of depreciation and amortization, goodwill and long-lived asset impairments, lower of cost or market inventory valuation adjustment, earnings of equity method investments, inclusive of distributions, loss on early extinguishment of debt, gain on sales-type leases, gain / loss on sale of assets, deferred income taxes, equity-based compensation expense and fair value changes to derivative instruments totaled \$1,019.1 million for the year ended December 31, 2020 compared to \$700.5 million for the same period in 2019. Adjusted for non-cash items, changes in working capital increased operating cash flows by \$43.5 million and \$312.8 million for the years ended December 31, 2020 and 2019, respectively. Additionally, for the year ended December 31, 2020, turnaround expenditures decreased to \$94.7 million from \$318.4 million for the same period of 2019.

Cash Flows – Investing Activities and Planned Capital Expenditures

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Net cash flows used for investing activities were \$330.2 million for the year ended December 31, 2020 compared to \$972.9 million for the year ended December 31, 2019, a decrease of \$642.8 million, primarily driven by prior year investing activity reflecting the acquisition of Sonneborn for a net cash outflow of \$662.7 million. Cash expenditures for properties, plants and equipment for 2020 increased to \$330.2 million from \$293.8 million for the same period in 2019. These include HEP capital expenditures of \$59.3 million and \$30.1 million for the years ended December 31, 2020 and 2019, respectively. Additionally, HEP invested \$2.4 million and \$17.9 million in the Cushing Connect Pipeline & Terminal LLC joint venture for the years ending December 31, 2020 and 2019, respectively.

HollyFrontier Corporation

Each year our Board of Directors approves our annual capital budget which includes specific projects that management is authorized to undertake. Additionally, when conditions warrant or as new opportunities arise, additional projects may be approved. The funds appropriated for a particular capital project may be expended over a period of several years, depending on the time required to complete the project. Therefore, our planned capital expenditures for a given year consist of expenditures appropriated in that year's capital budget plus expenditures for projects appropriated in prior years which have not yet been completed. Refinery turnaround spending is amortized over the useful life of the turnaround.

The refining industry is capital intensive and requires on-going investments to sustain our refining operations. This includes replacement of, or rebuilding, refinery units and components that extend the useful life. We also invest in projects that improve operational reliability

and profitability via enhancements that improve refinery processing capabilities as well as production yield and flexibility. Our capital expenditures also include projects related to renewable diesel, environmental, health and safety compliance and include initiatives as a result of federal and state mandates.

Our refinery operations and related emissions are highly regulated at both federal and state levels, and we invest in our facilities as needed to remain in compliance with these standards. Additionally, when faced with new emissions or fuels standards, we seek to execute projects that facilitate compliance and also improve the operating costs and / or yields of associated refining processes.

HEP

Each year the Holly Logistic Services, L.L.C. board of directors approves HEP's annual capital budget, which specifies capital projects that HEP management is authorized to undertake. Additionally, at times when conditions warrant or as new opportunities arise, special projects may be approved. The funds allocated for a particular capital project may be expended over a period in excess of a year, depending on the time required to complete the project. Therefore, HEP's planned capital expenditures for a given year consist of expenditures approved for capital projects included in its current year capital budget as well as, in certain cases, expenditures approved for capital projects in capital budgets for prior years. In addition, HEP may spend funds periodically to perform capital upgrades or additions to its assets where a customer reimburses HEP for such costs. The upgrades or additions would generally benefit the customer over the remaining life of the related service agreements.

Expected capital and turnaround cash spending for 2021 is as follows:

	Expected Cash Spending Range	
	(In millions)	
HollyFrontier Capital Expenditures		
Refining	\$ 190.0	\$ 220.0
Renewable Diesel Units	520.0	550.0
Lubricants and Specialty Products	40.0	50.0
Turnarounds and catalyst	320.0	350.0
Total HollyFrontier	1,070.0	1,170.0
HEP		
Maintenance	14.0	18.0
Expansion and joint venture investment	30.0	35.0
Refining unit turnarounds	5.0	8.0
Total HEP	49.0	61.0
Total	\$ 1,119.0	\$ 1,231.0

Cash Flows – Financing Activities

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Net cash flows provided by financing activities were \$353.2 million for the year ended December 31, 2020 compared to net cash flows used for financing activities of \$848.3 million for the year ended December 31, 2019, an increase of \$1,201.5 million. During the year ended December 31, 2020, we received \$742.1 million in net proceeds from the issuance of HFC's 2.625% and 4.500% senior notes, purchased \$7.6 million of treasury stock and paid \$229.5 million in dividends. Also during this period, HEP received \$258.5 million and repaid \$310.5 million under the HEP Credit Agreement, paid \$522.5 million upon the redemption of HEP's 6.0% senior notes and received \$491.3 million in net proceeds from the issuance of HEP 5.0% senior notes, paid distributions of \$89.0 million to noncontrolling interests and received contributions from noncontrolling interests of \$23.9 million. During the year ended December 31, 2019, we purchased \$533.1 million of treasury stock and paid \$225.2 million in dividends. Also during 2019, HEP received \$365.5 million and repaid \$323.0 million under the HEP Credit Agreement, paid distributions of \$132.3 million to noncontrolling interests and received a contribution of \$3.2 million from noncontrolling interests.

Contractual Obligations and Commitments

The following table presents our long-term contractual obligations as of December 31, 2020 in total and by period due beginning in 2021. The table below does not include our contractual obligations to HEP under our long-term transportation agreements as these related-party transactions are eliminated in the Consolidated Financial Statements. A description of these agreements is provided under “Holly Energy Partners, L.P.” under Items 1 and 2, “Business and Properties.”

Contractual Obligations and Commitments	Total	Payments Due by Period			
		2021	2022 & 2023	2024 & 2025	Thereafter
(In thousands)					
HollyFrontier Corporation					
Long-term debt - principal ⁽¹⁾	\$ 1,750,000	\$ —	\$ 350,000	\$ —	\$ 1,400,000
Long-term debt - interest ⁽²⁾	509,203	85,937	169,578	153,500	100,188
Financing arrangements ⁽³⁾	43,948	43,948	—	—	—
Supply agreements ⁽⁴⁾	1,487,924	538,616	506,011	443,297	—
Transportation and storage agreements ⁽⁵⁾	1,163,751	129,661	226,648	226,553	580,889
Operating and finance leases ⁽⁶⁾	352,838	103,593	154,585	52,463	42,197
Other long-term obligations	31,597	14,422	15,304	1,579	292
	<u>5,339,261</u>	<u>916,177</u>	<u>1,422,126</u>	<u>877,392</u>	<u>2,123,566</u>
Holly Energy Partners					
Long-term debt - principal ⁽⁷⁾	1,413,500	—	913,500	—	500,000
Long-term debt - interest ⁽⁸⁾	207,283	44,200	61,000	50,000	52,083
Operating and finance leases ⁽⁶⁾	113,061	8,383	15,802	14,222	74,654
Other agreements	3,310	1,933	1,377	—	—
	<u>1,737,154</u>	<u>54,516</u>	<u>991,679</u>	<u>64,222</u>	<u>626,737</u>
Total	<u>\$ 7,076,415</u>	<u>\$ 970,693</u>	<u>\$ 2,413,805</u>	<u>\$ 941,614</u>	<u>\$ 2,750,303</u>

- (1) Our long-term debt consists of the \$350.0 million principal balance on our 2.625% senior notes, \$1.0 billion principal balance on our 5.875% senior notes and \$400.0 million principal balance on our 4.500% senior notes.
- (2) Interest payments consist of interest on our 2.625% senior notes, 5.875% senior notes and 4.500% senior notes.
- (3) We have a financing arrangement related to the sale and subsequent lease-back of certain of our precious metals.
- (4) We have long-term supply agreements to secure certain quantities of crude oil, feedstock and other resources used in the production process at market prices. We have estimated future payments under these fixed-quantity agreements expiring between 2021 and 2025 using current market rates. Additionally, commitments include purchases of 20,000 BPD of crude oil under a 10-year agreement that commenced in 2015 to supply our Woods Cross Refinery.
- (5) Consists of contractual obligations under agreements with third parties for the transportation of crude oil, natural gas and feedstocks to our refineries and for terminal and storage services under contracts expiring between 2021 and 2039.
- (6) Operating and finance lease obligations include options to extend terms that are reasonably certain of being exercised.
- (7) HEP's long-term debt consists of the \$500.0 million principal balance on the 5.0% HEP senior notes and \$913.5 million of outstanding borrowings under the HEP Credit Agreement. The HEP Credit Agreement expires in 2022.

- (8) Interest payments consist of interest on the 5.0% HEP senior notes and interest on long-term debt under the HEP Credit Agreement. Interest on the HEP Credit Agreement debt is based on the weighted average rate of 2.10% at December 31, 2020.

CRITICAL ACCOUNTING POLICIES

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities as of the date of the financial statements. Actual results may differ from these estimates under different assumptions or conditions. We consider the following policies to be the most critical to understanding the judgments that are involved and the uncertainties that could impact our results of operations, financial condition and cash flows. For additional information, see Note 1 “Description of Business and Summary of Significant Accounting Policies” in the Notes to Consolidated Financial Statements.

Inventory Valuation

Inventories related to our refining operations are stated at the lower of cost, using the LIFO method for crude oil and unfinished and finished refined products, or market. In periods of rapidly declining prices, LIFO inventories may have to be written down to market value due to the higher costs assigned to LIFO layers in prior periods. In addition, the use of the LIFO inventory method may result in increases or decreases to cost of sales in years that inventory volumes decline as the result of charging cost of sales with LIFO inventory costs generated in prior periods. At December 31, 2020 and 2019, market values had fallen below historical LIFO inventory costs and, as a result, we recorded lower of cost or market inventory valuation reserves of \$318.9 million and \$240.4 million, respectively.

At December 31, 2020, our lower of cost or market inventory valuation reserve was \$318.9 million. This amount, or a portion thereof, is subject to reversal as a reduction to cost of products sold in subsequent periods as inventories giving rise to the reserve are sold, and a new reserve is established. Such a reduction to cost of products sold could be significant if inventory values return to historical cost price levels. Additionally, further decreases in overall inventory values could result in additional charges to cost of products sold should the lower of cost or market inventory valuation reserve be increased.

Inventories consisting of process chemicals, materials and maintenance supplies and RINs are stated at the lower of weighted-average cost or net realizable value. Inventories of our Petro-Canada Lubricants and Sonneborn businesses are stated at the lower of cost, using the FIFO method, or net realizable value.

In connection with our announcement of the conversion of our Cheyenne Refinery to renewable diesel production, we recorded a reserve of \$9.0 million for the year ended December 31, 2020 against our repair and maintenance supplies inventory.

Goodwill and Long-lived Assets

As of December 31, 2020, our goodwill balance was \$2.3 billion, with goodwill assigned to our Refining, Lubricants and Specialty Products and HEP segments of \$1,733.5 million, \$247.6 million and \$312.9 million, respectively. Goodwill represents the excess of the cost of an acquired entity over the fair value of the assets acquired and liabilities assumed. Goodwill is not subject to amortization and is tested annually or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Our goodwill impairment testing first entails either a quantitative assessment or an optional qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If we determine that based on the qualitative factors that it is more likely than not that the carrying value of the reporting unit is greater than its fair value, a quantitative test is performed in which we estimate the fair value of the related reporting unit. If the carrying amount of a reporting unit exceeds its fair value, the goodwill of that reporting unit is impaired, and we measure goodwill impairment as the excess of the carrying amount of reporting unit over the related fair value.

For purposes of long-lived asset impairment evaluation, we have grouped our long-lived assets as follows: (i) our refinery asset groups, which include certain HEP logistics assets, (ii) our Lubricants and Specialty Products asset groups and (iii) our HEP asset groups, which comprises HEP assets not included in our refinery asset groups. These asset groups represent the lowest level for which independent cash flows can be identified. Our long-lived assets are evaluated for impairment by identifying whether indicators of impairment exist and if so, assessing whether the long-lived assets are recoverable from estimated future undiscounted cash flows. The actual amount of impairment loss measured, if any, is equal to the amount by which the asset group's carrying value exceeds its fair value.

Goodwill and long-lived asset impairments

During the second quarter of 2020, we determined that indicators of potential goodwill and long-lived asset impairments were present and performed recoverability testing for long-lived assets and an interim test for goodwill impairment as of May 31, 2020. Impairment indicators included the recent economic slowdown caused by the COVID-19 pandemic, reductions in the prices of our finished goods and raw materials and the related decrease in our gross margins, as well as the recent decline in our market capitalization. Additionally, our second quarter announcement of the planned conversion of our Cheyenne Refinery to renewable diesel production was also considered a

triggering event requiring assessment of potential impairments to the carrying value of our Cheyenne Refinery asset group. As a result of our long-lived asset recoverability testing, we determined that the carrying value of the long-lived assets of our Cheyenne Refinery and PCLI asset groups were not recoverable, and thus recorded long-lived asset impairment charges of \$232.2 million and \$204.7 million, respectively, in the second quarter of 2020. Our interim goodwill impairment testing indicated that there was no impairment of goodwill at our Refining and Lubricants and Specialty Products reporting units as of May 31, 2020. The estimated fair values of the Cheyenne Refinery and PCLI asset groups were determined using a combination of the income and cost approaches. The income approach was based on management's best estimates of the expected future cash flows over the remaining useful life of the asset group. The cost approach utilized assumptions for the current replacement costs of similar assets adjusted for estimated depreciation and economic obsolescence.

As of July 1, 2020, we performed our annual goodwill impairment testing quantitatively and determined there was no impairment of goodwill attributable to our reporting units at that time. The excess of the fair values of the reporting units over their respective carrying values ranged from 10% to 229%. Increasing the discount rate by 1.0% or reducing the terminal cash flow growth rate by 1.0% would not have changed the results of our goodwill impairment testing performed in the second and third quarters of 2020.

During the fourth quarter of 2020, we incurred long-lived asset impairment charges of \$26.5 million for construction-in-progress, consisting primarily of engineering work for potential upgrades to certain processing units at our Tulsa and El Dorado Refineries. During the quarter, we concluded not to pursue these projects in light of recent economic and market conditions.

Additionally, in the fourth quarter of 2020, our budgeting processes identified downward forecast revisions specific to the Sonneborn reporting unit within our Lubricants and Specialty Products segment largely from declines in gross margin as compared to historic levels and an increase in forecasted capital expenditures. As such, we concluded it was more likely than not that the carrying value of the Sonneborn reporting unit exceeded its fair value, and we performed an interim quantitative test for goodwill impairment as of December 1, 2020. As a result of our impairment testing, we recognized a goodwill impairment charge of \$81.9 million during the fourth quarter for the Sonneborn reporting unit. Our annual test performed on July 1, 2020 indicated that the fair value of our El Dorado reporting unit exceeded its carrying value by approximately 10%. However, based on our reviews of updated budgets, and other factors such as economic and industry conditions we concluded that El Dorado and our other reporting units within our Lubricants and Specialty Products segment did not require an interim impairment test during the fourth quarter.

We continually monitor and evaluate various factors for potential indicators of goodwill and long-lived asset impairment. A reasonable expectation exists that further deterioration in our operating results or overall economic conditions could result in an impairment of goodwill and / or additional long-lived asset impairments at some point in the future. Future impairment charges could be material to our results of operations and financial condition.

In performing our impairment tests of long-lived assets and goodwill, we developed cash flow forecasts for each of our asset groups and reporting units. Significant judgment is involved in performing these fair value estimates since the results are based on forecasted financial information. The cash flow forecasts include significant assumptions such as planned utilization, end user demand, selling prices, gross margins, operating costs and capital expenditures. Another key assumption applied to these forecasts to determine the fair value of an asset group or reporting unit is the discount rate. The discount rate is intended to reflect the weighted average cost of capital for a market participant and the risks associated with the realization of the estimated future cash flows. Assumptions about the effects of the COVID-19 pandemic on future demand and market conditions are inherently subjective and difficult to forecast. Our fair value estimates are based on projected cash flows, which we believe to be reasonable.

Contingencies

We are subject to proceedings, lawsuits and other claims related to environmental, labor, product and other matters. We are required to assess the likelihood of any adverse judgments or outcomes to these matters as well as potential ranges of probable losses. A determination of the amount of reserves required, if any, for these contingencies is made after careful analysis of each individual issue. The required reserves may change in the future due to new developments in each matter or changes in approach such as a change in settlement strategy in dealing with these matters.

RISK MANAGEMENT

We use certain strategies to reduce some commodity price and operational risks. We do not attempt to eliminate all market risk exposures when we believe that the exposure relating to such risk would not be significant to our future earnings, financial position, capital resources or liquidity or that the cost of eliminating the exposure would outweigh the benefit.

Commodity Price Risk Management

Our primary market risk is commodity price risk. We are exposed to market risks related to the volatility in crude oil and refined products, as well as volatility in the price of natural gas used in our refining operations. We periodically enter into derivative contracts in the form of commodity price swaps, forward purchase and sales and futures contracts to mitigate price exposure with respect to our inventory positions, natural gas purchases, sales prices of refined products and crude oil costs.

Foreign Currency Risk Management

We are exposed to market risk related to the volatility in foreign currency exchange rates. We periodically enter into derivative contracts in the form of foreign exchange forward and foreign exchange swap contracts to mitigate the exposure associated with fluctuations on intercompany notes with our foreign subsidiaries that are not denominated in the U.S. dollar.

As of December 31, 2020, we have the following notional contract volumes related to all outstanding derivative contracts used to mitigate commodity price and foreign currency risk (all maturing in 2021):

Contract Description	Total Outstanding Notional	Unit of Measure
Natural gas price swaps - long	1,800,000	MMBTU
NYMEX futures (WTI) - short	160,000	Barrels
Forward gasoline and diesel contracts - long	195,000	Barrels
Foreign currency forward contracts	418,192,532	U.S. dollar
Forward commodity contracts (platinum) ⁽¹⁾	40,867	Troy ounces

(1) Represents an embedded derivative within our catalyst financing arrangements, which may be refinanced or require repayment under certain conditions. See Note 13 "Debt" in the Notes to Consolidated Financial Statements for additional information on these financing arrangements.

The following sensitivity analysis provides the hypothetical effects of market price fluctuations to the commodity hedged under our derivative contracts:

Derivative Contracts	Estimated Change in Fair Value at December 31,	
	2020	2019
	(In thousands)	
Hypothetical 10% change in underlying commodity prices	\$ 344	\$ 7,420

Interest Rate Risk Management

The market risk inherent in our fixed-rate debt is the potential change arising from increases or decreases in interest rates as discussed below.

For the fixed rate HollyFrontier Senior Notes and HEP Senior Notes, changes in interest rates will generally affect fair value of the debt, but not earnings or cash flows. The outstanding principal, estimated fair value and estimated change in fair value (assuming a hypothetical 10% change in the yield-to-maturity rates) for this debt as of December 31, 2020 is presented below:

	Outstanding Principal	Estimated Fair Value	Estimated Change in Fair Value
	(In thousands)		
HollyFrontier Senior Notes	\$ 1,750,000	\$ 1,903,867	\$ 31,428
HEP Senior Notes	\$ 500,000	\$ 506,540	\$ 14,535

For the variable rate HEP Credit Agreement, changes in interest rates would affect cash flows, but not the fair value. At December 31, 2020, outstanding borrowings under the HEP Credit Agreement were \$913.5 million. A hypothetical 10% change in interest rates applicable to the HEP Credit Agreement would not materially affect cash flows.

Our operations are subject to hazards of petroleum processing operations, including but not limited to fire, explosion and weather-related perils. We maintain various insurance coverages, including property damage and business interruption insurance, subject to certain deductibles and insurance policy terms and conditions. We are not fully insured against certain risks because such risks are not fully insurable, coverage is unavailable, or premium costs, in our judgment, do not justify such expenditures.

Financial information is reviewed on the counterparties in order to review and monitor their financial stability and assess their ongoing ability to honor their commitments under the derivative contracts. We have not experienced, nor do we expect to experience, any difficulty in the counterparties honoring their commitments.

We have a risk management oversight committee consisting of members from our senior management. This committee oversees our risk enterprise program, monitors our risk environment and provides direction for activities to mitigate identified risks that may adversely affect the achievement of our goals.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

See “Risk Management” under “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Reconciliations to Amounts Reported Under Generally Accepted Accounting Principles

Reconciliations of earnings before interest, taxes, depreciation and amortization (“EBITDA”) to amounts reported under generally accepted accounting principles in financial statements.

Earnings before interest, taxes, depreciation and amortization, which we refer to as EBITDA, is calculated as net income (loss) attributable to HollyFrontier stockholders plus (i) interest expense, net of interest income, (ii) income tax provision, and (iii) depreciation and amortization. EBITDA is not a calculation provided for under GAAP; however, the amounts included in the EBITDA calculation are derived from amounts included in our consolidated financial statements. EBITDA should not be considered as an alternative 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 is not necessarily comparable to similarly titled measures of other companies. EBITDA is presented here because it is a widely used financial indicator used by investors and analysts to measure performance. EBITDA is also used by our management for internal analysis and as a basis for financial covenants.

Set forth below is our calculation of EBITDA.

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Net income (loss) attributable to HollyFrontier stockholders	\$ (601,448)	\$ 772,388	\$ 1,097,960
Add (subtract) income tax provision	(232,147)	299,152	347,243
Add interest expense	126,527	143,321	131,363
Subtract interest income	(7,633)	(22,139)	(16,892)
Add depreciation and amortization	520,912	509,925	437,324
EBITDA	<u>\$ (193,789)</u>	<u>\$ 1,702,647</u>	<u>\$ 1,996,998</u>

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 long-lived asset impairment charges, 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

	Years Ended December 31,		
	2020	2019	2018
	(Dollars in thousands, except per barrel amounts)		
Consolidated			
Net operating margin per produced barrel sold	\$ 1.24	\$ 9.80	\$ 10.44
Add average refinery operating expenses per produced barrel sold	6.05	6.12	6.06
Refinery gross margin per produced barrel sold	\$ 7.29	\$ 15.92	\$ 16.50
Times produced barrels sold (BPD)	391,670	414,370	408,390
Times number of days in period	366	365	365
Refining gross margin	\$ 1,045,030	\$ 2,407,821	\$ 2,459,529
Add (subtract) rounding	523	215	285
West and Mid-Continent regions gross margin	1,045,553	2,408,036	2,459,814
Add West and Mid-Continent regions cost of products sold	7,992,047	12,062,661	12,313,533
Add Cheyenne Refinery sales and other revenues	501,589	1,126,091	1,403,216
Refining segment sales and other revenues	9,539,189	15,596,788	15,596,788
Add lubricants and specialty products segment sales and other revenues	1,803,210	2,092,528	1,812,703
Add HEP segment sales and other revenues	497,848	532,777	506,220
Subtract corporate, other and eliminations	(656,604)	(735,515)	(780,820)
Sales and other revenues	<u>\$ 11,183,643</u>	<u>\$ 17,486,578</u>	<u>\$ 17,714,666</u>

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

Years Ended December 31,

	2020	2019	2018
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(Dollars in thousands, except per barrel amounts)

Consolidated

Average refinery operating expenses per produced barrel sold	\$ 6.05	\$ 6.12	\$ 6.06
Times produced barrels sold (BPD)	391,670	414,370	408,390
Times number of days in period	366	365	365
Refinery operating expenses	\$ 867,275	\$ 925,620	\$ 903,318
Add (subtract) rounding	(381)	(338)	(162)
West and Mid-Continent regions operating expenses	866,894	925,282	903,156
Add Cheyenne Refinery operating expenses	121,151	170,206	152,053
Total refining segment operating expenses	988,045	1,095,488	1,055,209
Add lubricants and specialty products segment operating expenses	216,068	231,523	167,820
Add HEP segment operating expenses	147,692	161,996	146,430
Subtract corporate, other and eliminations	(51,528)	(94,955)	(83,621)
Operating expenses (exclusive of depreciation and amortization)	\$ 1,300,277	\$ 1,394,052	\$ 1,285,838

Item 8. Financial Statements and Supplementary Data

MANAGEMENT'S REPORT ON ITS ASSESSMENT OF THE COMPANY'S INTERNAL CONTROL OVER FINANCIAL REPORTING

Management of HollyFrontier Corporation (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management assessed the Company's internal control over financial reporting as of December 31, 2020 using the criteria for effective control over financial reporting established in "Internal Control - Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this assessment, management concludes that, as of December 31, 2020, the Company maintained effective internal control over financial reporting.

The Company's independent registered public accounting firm has issued an attestation report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. That report is included herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of HollyFrontier Corporation

Opinion on Internal Control over Financial Reporting

We have audited HollyFrontier Corporation's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, HollyFrontier Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, cash flows, and equity for each of the three years in the period ended December 31, 2020, and the related notes of the Company and our report dated February 24, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on its Assessment of the Company's Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Dallas, Texas

February 24, 2021

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of HollyFrontier Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of HollyFrontier Corporation (the Company) as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, cash flows, and equity for each of the three years in the period ended December 31, 2020, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 24, 2021 expressed an unqualified opinion thereon.

Adoption of ASU No. 2016-02 (Topic 842)

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for leases in 2019 to reflect the accounting method change due to the adoption of ASU 2016-02, Leases (Topic 842).

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Valuation of Goodwill

Description of the Matter At December 31, 2020, the Company's goodwill was \$2,294 million, including goodwill assigned to the Refining, Lubricants and Specialty Products, and HEP segments of \$1,733 million, \$248 million, and \$313 million, respectively. As described in Note 1 and Note 11 of the financial statements, goodwill is tested for impairment at least annually on July 1 at the reporting unit level or more frequently if events or changes in circumstances indicate the asset might be impaired. During the fourth quarter of 2020, the Company performed interim goodwill impairment testing of the Sonneborn reporting unit included in the Lubricants and Specialty Products segment, resulting in an impairment charge of \$82 million on this reporting unit.

Auditing management's goodwill impairment tests was complex and highly judgmental for the Company's Sonneborn and El Dorado Refinery reporting units due to the significant estimation required to determine the fair value of these reporting units. In particular, the fair value estimates were sensitive to significant assumptions, such as revenue growth rates, gross margins, and discount rates, which are affected by expectations about future market or economic conditions. These assumptions have a significant effect on the fair value estimates.

How We Addressed the Matter in Our Audit We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's goodwill impairment testing process. For example, we tested controls over management's review of the significant inputs and assumptions used in determining the reporting unit fair values.

To test the estimated fair value of the Company's Sonneborn and El Dorado Refinery reporting units, we performed audit procedures with the support of a valuation specialist that included, among others, assessing methodologies and testing the significant assumptions discussed above and the underlying data used by the Company in its analysis. We compared the significant assumptions used by management to relevant industry and economic trends, published forward prices, third party analyst reports, historical operating results and other relevant factors. We performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the reporting units that would result from changes in the assumptions. We also tested management's reconciliation of the fair value of the reporting units to the market capitalization of the Company.

Environmental Liabilities

Description of the Matter At December 31, 2020, the Company's accrual for environmental liabilities was \$115 million, of which \$94 million was classified as other long-term liabilities. As described in Note 1 and Note 12 of the consolidated financial statements, these accruals include remediation and monitoring costs expected to be incurred over an extended period of time. Liabilities are recorded when site restoration and environmental remediation, cleanup and other obligations are either known or considered probable and can be reasonably estimated.

Auditing management's estimates for environmental liabilities was challenging and highly judgmental due to the significant judgment required to develop assumptions related to future costs expected for the remediation of environmental obligations. In particular, the liability estimates require judgment with respect to costs, time frame and extent of required remedial and clean-up activities.

How We Addressed the Matter in Our Audit We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's accrued environmental liability cost estimate and review process.

To test management's accrued environmental liabilities, we performed audit procedures that included, among others, obtaining a rollforward of the environmental liabilities reflecting activity in the accruals for the past year, performing a look back analysis comparing the prior year short-term accrual estimates to actual current year expenditures, and comparing actual expenditures made to supporting invoices and cash payments. We also utilized an environmental specialist to assist in our evaluation of certain environmental site accruals, including the testing of a sample of cost estimates by inspecting relevant supporting documentation and performing a search of publicly filed records with environmental agencies to test the completeness of environmental liabilities.

Impairment of Long-Lived Assets

Description of the Matter As described in Note 11 of the financial statements, the Company recognized long-lived asset impairment charges of \$204.7 million during the second quarter of 2020 related to property, plant, and equipment and other long-lived assets associated with the PCLI asset group. The Company evaluates long-lived assets for impairment by first identifying whether indicators of impairment exist. If indicators are present for an asset group, the Company evaluates recoverability by comparing the estimated future undiscounted cash flows to the carrying amount of the asset group. If the asset group's carrying amount exceeds its estimated future undiscounted cash flows, the fair value of the asset group is then estimated by management and compared to its carrying amount. An impairment charge is recognized on a long-lived asset group when the carrying amount exceeds fair value.

Auditing management's evaluation of long-lived asset impairment at PCLI involved a high degree of subjectivity and auditor judgment due to the estimation required to assess significant assumptions utilized in estimating the fair value of the asset group based on a discounted cash flow model, such as assumptions related to revenue growth rates, gross margins, and the discount rate. These assumptions have a significant effect on the fair value estimates.

How We Addressed the Matter in Our Audit We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's long-lived asset impairment evaluation process, including controls over management's review of significant assumptions used.

To test the Company's long-lived asset impairment evaluation process, we performed audit procedures that included, among others, assessing the methodologies used, evaluating the significant assumptions discussed above and testing the completeness and accuracy of the underlying data used by the Company in its analysis. We compared the significant assumptions used by management to relevant industry and economic trends, external market data, historical operating results, and other relevant factors. We also performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the asset group that would result from changes in the underlying assumptions. We involved our valuation specialists to assist in our evaluation of certain significant assumptions used on the calculation of fair value estimates including the fair value of real and personal property and the discount rate.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1977.

Dallas, Texas
February 24, 2021

HOLLYFRONTIER CORPORATION
CONSOLIDATED BALANCE SHEETS

(In thousands, except share data)

	December 31,	
	2020	2019
ASSETS		
Current assets:		
Cash and cash equivalents (HEP: \$21,990 and \$13,287, respectively)	\$ 1,368,318	\$ 885,162
Accounts receivable: Product and transportation (HEP: \$14,543 and \$18,732, respectively)	590,526	834,771
Crude oil resales	39,510	44,914
	630,036	879,685
Inventories: Crude oil and refined products	965,858	1,282,789
Materials, supplies and other (HEP: \$895 and \$833, respectively)	207,618	191,413
	1,173,476	1,474,202
Income taxes receivable	91,348	5,478
Prepayments and other (HEP: \$8,591 and \$6,795, respectively)	47,583	61,662
Total current assets	3,310,761	3,306,189
Properties, plants and equipment, at cost (HEP: \$2,119,295 and \$2,047,674, respectively)	7,299,517	7,237,297
Less accumulated depreciation (HEP: \$(644,149) and \$(552,786)), respectively)	(2,726,378)	(2,414,585)
	4,573,139	4,822,712
Operating lease right-of-use assets (HEP: \$2,979 and \$2,652, respectively)	350,548	467,109
Other assets: Turnaround costs	314,816	521,278
Goodwill (HEP: \$312,873 and \$312,873, respectively)	2,293,935	2,373,907
Intangibles and other (HEP: \$365,773 and \$319,569, respectively)	663,665	673,646
	3,272,416	3,568,831
Total assets	\$ 11,506,864	\$ 12,164,841
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable (HEP: \$28,565 and \$18,050, respectively)	\$ 1,000,959	\$ 1,215,555
Income taxes payable	1,801	27,965
Operating lease liabilities (HEP \$3,827 and \$3,608, respectively)	97,937	104,415
Accrued liabilities (HEP: \$29,518 and \$30,418, respectively)	274,459	337,993
Total current liabilities	1,375,156	1,685,928
Long-term debt (HEP: \$1,405,603 and \$1,462,031, respectively)	3,142,718	2,455,640
Noncurrent operating lease liabilities (HEP \$68,454 and \$72,000, respectively)	285,785	364,420
Deferred income taxes (HEP: \$449 and \$424, respectively)	713,703	889,270
Other long-term liabilities (HEP: \$55,105 and \$59,021, respectively)	267,299	260,157
Commitments and contingencies (Note 19)		
Equity:		
HollyFrontier stockholders' equity:		
Preferred stock, \$1.00 par value – 5,000,000 shares authorized; none issued	—	—
Common stock \$0.01 par value – 320,000,000 shares authorized; 256,046,051 and 256,042,575 shares issued as of December 31, 2020 and December 31, 2019	2,560	2,560

Parenthetical amounts represent asset and liability balances attributable to Holly Energy Partners, L.P. (“HEP”) as of December 31, 2020 and 2019. HEP is a variable interest entity.

See accompanying notes.

HOLLYFRONTIER CORPORATION
CONSOLIDATED STATEMENTS OF INCOME

(In thousands, except per share data)

	Years Ended December 31,		
	2020	2019	2018
Sales and other revenues	\$ 11,183,643	\$ 17,486,578	\$ 17,714,666
Operating costs and expenses:			
Cost of products sold (exclusive of depreciation and amortization):			
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	9,158,805	13,918,384	13,940,782
Lower of cost or market inventory valuation adjustment	78,499	(119,775)	136,305
	9,237,304	13,798,609	14,077,087
Operating expenses (exclusive of depreciation and amortization)	1,300,277	1,394,052	1,285,838
Selling, general and administrative expenses (exclusive of depreciation and amortization)	313,600	354,236	290,424
Depreciation and amortization	520,912	509,925	437,324
Goodwill and long-lived asset impairments	545,293	152,712	—
Total operating costs and expenses	11,917,386	16,209,534	16,090,673
Income (loss) from operations	(733,743)	1,277,044	1,623,993
Other income (expense):			
Earnings of equity method investments	6,647	5,180	5,825
Interest income	7,633	22,139	16,892
Interest expense	(126,527)	(143,321)	(131,363)
Gain on business interruption insurance settlement	81,000	—	—
Gain on sales-type leases	33,834	—	—
Loss on early extinguishment of debt	(25,915)	—	—
Gain on foreign currency transactions	2,201	5,449	6,197
Other, net	7,824	5,013	2,923
	(13,303)	(105,540)	(99,526)
Income (loss) before income taxes	(747,046)	1,171,504	1,524,467
Income tax expense (benefit):			
Current	(55,420)	220,486	270,274
Deferred	(176,727)	78,666	76,969
	(232,147)	299,152	347,243
Net income (loss)	(514,899)	872,352	1,177,224
Less net income attributable to noncontrolling interest	86,549	99,964	79,264
Net income (loss) attributable to HollyFrontier stockholders	\$ (601,448)	\$ 772,388	\$ 1,097,960
Earnings (loss) per share:			
Basic	\$ (3.72)	\$ 4.64	\$ 6.25
Diluted	\$ (3.72)	\$ 4.61	\$ 6.19
Average number of common shares outstanding:			
Basic	161,983	166,287	175,009
Diluted	161,983	167,385	176,661

See accompanying notes.

HOLLYFRONTIER CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)

	Years Ended December 31,		
	2020	2019	2018
Net income (loss)	\$ (514,899)	\$ 872,352	\$ 1,177,224
Other comprehensive income (loss):			
Foreign currency translation adjustment	6,226	13,337	(38,227)
Hedging instruments:			
Change in fair value of cash flow hedging instruments	(7,475)	14,364	5,166
Reclassification adjustments to net income (loss) on settlement of cash flow hedging instruments	2,604	(19,713)	6,055
Net unrealized gain (loss) on hedging instruments	(4,871)	(5,349)	11,221
Pension and other post-retirement benefit obligations:			
Actuarial gain (loss) on pension plans	1,862	(990)	(923)
Pension plans gain reclassified to net income (loss)	(422)	—	—
Actuarial gain (loss) on post-retirement healthcare plans	(1,129)	(2,412)	2,612
Post-retirement healthcare plans gain reclassified to net income (loss)	(3,564)	(3,587)	(3,481)
Actuarial gain (loss) on retirement restoration plan	(230)	(224)	258
Retirement restoration plan loss reclassified to net income (loss)	22	6	27
Net change in pension and other post-retirement benefit obligations	(3,461)	(7,207)	(1,507)
Other comprehensive income (loss) before income taxes	(2,106)	781	(28,513)
Income tax benefit	(794)	(370)	(5,585)
Other comprehensive income (loss)	(1,312)	1,151	(22,928)
Total comprehensive income (loss)	(516,211)	873,503	1,154,296
Less noncontrolling interest in comprehensive income	86,549	99,964	79,264
Comprehensive income (loss) attributable to HollyFrontier stockholders	\$ (602,760)	\$ 773,539	\$ 1,075,032

See accompanying notes.

HOLLYFRONTIER CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Years Ended December 31,		
	2020	2019	2018
Cash flows from operating activities:			
Net income (loss)	\$ (514,899)	\$ 872,352	\$ 1,177,224
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	520,912	509,925	437,324
Goodwill and long-lived asset impairments	545,293	152,712	—
Lower of cost or market inventory valuation adjustment	78,499	(119,775)	136,305
Earnings of equity method investments, inclusive of distributions	1,084	(213)	(149)
Loss on early extinguishment of debt	25,915	—	—
Gain on sales-type leases	(33,834)	—	—
(Gain) loss on sale of assets	(201)	50	2,171
Deferred income taxes	(176,727)	78,666	76,969
Equity-based compensation expense	31,654	42,269	42,172
Change in fair value – derivative instruments	26,456	36,888	(31,515)
(Increase) decrease in current assets:			
Accounts receivable	254,684	(150,437)	35,793
Inventories	230,142	91,599	136,551
Income taxes receivable	(85,442)	32,368	7,752
Prepayments and other	(2,541)	3,633	(10,340)
Increase (decrease) in current liabilities:			
Accounts payable	(241,765)	312,794	(326,030)
Income taxes payable	(25,897)	9,048	15,281
Accrued liabilities	(85,708)	13,748	53,281
Turnaround expenditures	(94,692)	(318,415)	(217,228)
Other, net	4,998	(18,601)	18,855
Net cash provided by operating activities	457,931	1,548,611	1,554,416
Cash flows from investing activities:			
Additions to properties, plants and equipment	(270,877)	(263,651)	(256,888)
Additions to properties, plants and equipment – HEP	(59,283)	(30,112)	(54,141)
Acquisitions, net of cash acquired	—	(662,665)	(54,179)
Investment in equity company - HEP	(2,438)	(17,886)	—
Proceeds from sale of assets	1,554	194	3,100
Other, net	882	1,206	1,588
Net cash used for investing activities	(330,162)	(972,914)	(360,520)
Cash flows from financing activities:			
Borrowings under credit agreements	258,500	365,500	337,000
Repayments under credit agreements	(310,500)	(323,000)	(426,000)
Proceeds from issuance of senior notes – HFC	748,925	—	—
Proceeds from issuance of senior notes – HEP	500,000	—	—
Redemption of senior notes - HEP	(522,500)	—	—
Purchase of treasury stock	(7,642)	(533,083)	(363,437)

See accompanying notes.

HOLLYFRONTIER CORPORATION
CONSOLIDATED STATEMENTS OF EQUITY

(In thousands)

HollyFrontier Stockholders' Equity

	Common Stock	Additional Capital	Retained Earnings	Accumulated Other Comprehensive Income	Treasury Stock	Non- controlling Interest	Total Equity
Balance at December 31, 2017	\$ 2,560	\$ 4,132,696	\$ 3,346,615	\$ 29,869	\$ (2,140,911)	\$ 526,111	\$ 5,896,940
Net income	—	—	1,097,960	—	—	79,264	1,177,224
Dividends (\$1.32 declared per common share)	—	—	(233,544)	—	—	—	(233,544)
Distributions to noncontrolling interest holders	—	—	—	—	—	(125,653)	(125,653)
Other comprehensive loss, net of tax	—	—	—	(22,928)	—	—	(22,928)
Equity attributable to HEP common unit issuances, net of tax	—	42,199	—	—	—	58,134	100,333
Issuance of common stock under incentive compensation plans, net of forfeitures	—	(17,742)	—	—	17,742	—	—
Equity-based compensation	—	38,972	—	—	—	3,200	42,172
Purchase of treasury stock	—	—	—	—	(367,470)	—	(367,470)
Purchase of HEP units for restricted grants	—	—	—	—	—	(568)	(568)
Adoption of accounting standards	—	—	(14,129)	6,682	—	—	(7,447)
Balance at December 31, 2018	\$ 2,560	\$ 4,196,125	\$ 4,196,902	\$ 13,623	\$ (2,490,639)	\$ 540,488	\$ 6,459,059
Net income	—	—	772,388	—	—	99,964	872,352
Dividends (\$1.34 declared per common share)	—	—	(225,170)	—	—	—	(225,170)
Distributions to noncontrolling interest holders	—	—	—	—	—	(132,268)	(132,268)
Other comprehensive income, net of tax	—	—	—	1,151	—	—	1,151
Equity attributable to HEP common unit issuances, net of tax	—	—	—	—	—	(139)	(139)
Issuance of common stock under incentive compensation plans, net of forfeitures	—	(31,314)	—	—	31,314	—	—
Equity-based compensation	—	39,736	—	—	—	2,533	42,269
Purchase of treasury stock	—	—	—	—	(528,483)	—	(528,483)
Purchase of HEP units for restricted grants	—	—	—	—	—	(1,893)	(1,893)
Contributions from noncontrolling interests	—	—	—	—	—	22,548	22,548
Balance at December 31, 2019	\$ 2,560	\$ 4,204,547	\$ 4,744,120	\$ 14,774	\$ (2,987,808)	\$ 531,233	\$ 6,509,426
Net income (loss)	—	—	(601,448)	—	—	86,549	(514,899)
Dividends (\$1.40 declared per common share)	—	—	(229,493)	—	—	—	(229,493)
Distributions to noncontrolling interest holders	—	—	—	—	—	(89,001)	(89,001)
Other comprehensive loss, net of tax	—	—	—	(1,312)	—	—	(1,312)
Issuance of common stock under incentive compensation plans	—	(26,938)	—	—	26,938	—	—
Equity-based compensation	—	29,460	—	—	—	2,194	31,654
Purchase of treasury stock	—	—	—	—	(7,642)	—	(7,642)
Purchase of HEP units for restricted grants	—	—	—	—	—	(1,032)	(1,032)
Contributions from noncontrolling interests	—	—	—	—	—	23,899	23,899
Other	—	603	—	—	—	—	603
Balance at December 31, 2020	\$ 2,560	\$ 4,207,672	\$ 3,915,179	\$ 13,462	\$ (2,968,512)	\$ 553,842	\$ 5,722,203

See accompanying notes.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: Description of Business and Summary of Significant Accounting Policies

Description of Business: References herein to HollyFrontier Corporation (“HollyFrontier”) include HollyFrontier and its consolidated subsidiaries. In accordance with the Securities and Exchange Commission’s (“SEC”) “Plain English” guidelines, this Annual Report on Form 10-K has been written in the first person. In these financial statements, the words “we,” “our,” “ours” and “us” refer only to HollyFrontier and its consolidated subsidiaries or to HollyFrontier or an individual subsidiary and not to any other person, with certain exceptions. Generally, the words “we,” “our,” “ours” and “us” include Holly Energy Partners, L.P. (“HEP”) and its subsidiaries as consolidated subsidiaries of HollyFrontier, unless when used in disclosures of transactions or obligations between HEP and HollyFrontier or its other subsidiaries. These financial statements contain certain disclosures of agreements that are specific to HEP and its consolidated subsidiaries and do not necessarily represent obligations of HollyFrontier. When used in descriptions of agreements and transactions, “HEP” refers to HEP and its consolidated subsidiaries.

We are an independent petroleum refiner and marketer that produces high-value light products such as gasoline, diesel fuel, jet fuel, specialty lubricant products and specialty and modified asphalt. We own and operate petroleum refineries that serve markets throughout the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. In addition, we produce base oils and other specialized lubricants in the United States, Canada and the Netherlands, with retail and wholesale marketing of our products through a global sales network with locations in Canada, the United States, Europe, China and Latin America.

As of December 31, 2020, we:

- owned and operated a petroleum refinery in El Dorado, Kansas (the “El Dorado Refinery”), two refinery facilities located in Tulsa, Oklahoma (collectively, the “Tulsa Refineries”), a refinery in Artesia, New Mexico that is operated in conjunction with crude oil distillation and vacuum distillation and other facilities situated 65 miles away in Lovington, New Mexico (collectively, the “Navajo Refinery”) and a refinery in Woods Cross, Utah (the “Woods Cross Refinery”);
- owned a facility in Cheyenne, Wyoming, which operated as a petroleum refinery until early August 2020, at which time its assets began to be converted to renewable diesel production (the “Cheyenne Refinery”);
- owned and operated Petro-Canada Lubricants Inc. (“PCLI”) located in Mississauga, Ontario, which produces base oils and other specialty lubricant products;
- owned and operated Sonneborn (as defined below) with manufacturing facilities in Petrolia, Pennsylvania and the Netherlands, which produce specialty lubricant products, such as white oils, petrolatums and waxes;
- owned and operated Red Giant Oil Company LLC (“Red Giant Oil”), which supplies locomotive engine oil and has storage and distribution facilities in Iowa and Wyoming, along with a blending and packaging facility in Texas;
- owned and operated HollyFrontier Asphalt Company LLC (“HFC Asphalt”), which operates various asphalt terminals in Arizona, New Mexico and Oklahoma; and
- owned a 57% limited partner interest and a non-economic general partner interest in HEP, a variable interest entity (“VIE”). HEP owns and operates logistic assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery processing units that principally support our refining and marketing operations in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States.

In the third quarter of 2020, we permanently ceased petroleum refining operations at our Cheyenne Refinery and subsequently began converting certain assets at our Cheyenne Refinery to renewable diesel production. This decision was primarily based on a positive outlook in the market for renewable diesel and the expectation that future free cash flow generation at our Cheyenne Refinery would

be challenged due to lower gross margins resulting from the economic impact of the COVID-19 pandemic and compressed crude differentials due to dislocations in the crude oil market. Additional factors included uncompetitive operating and maintenance costs forecasted for our Cheyenne Refinery and the anticipated loss of the Environmental Protection Agency's ("EPA") small refinery exemption.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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During the second quarter of 2020, we recorded long-lived asset impairment charges of \$232.2 million related to our Cheyenne Refinery asset group. In connection with the cessation of petroleum refining operations at our Cheyenne Refinery, we recognized \$24.7 million in decommissioning expense for the year ended December 31, 2020. In addition, for the year ended December 31, 2020, we recorded a reserve of \$9.0 million against our repair and maintenance supplies inventory and \$3.8 million in employee severance costs related to the conversion of our Cheyenne Refinery to renewable diesel production. These decommissioning, inventory reserve and severance costs were recognized in operating expenses, of which \$24.8 million was recorded in our Refining segment and \$12.7 million was recorded in our Corporate and Other segment.

During the second quarter of 2020, we also initiated and completed a corporate restructuring. As a result of this restructuring, we recorded \$3.7 million in employee severance costs, which were recognized primarily as operating expenses in our Refining segment and selling, general and administrative expenses in our Corporate and Other segment.

On November 12, 2018, we entered into an equity purchase agreement to acquire 100% of the issued and outstanding capital stock of Sonneborn US Holdings Inc. and 100% of the membership rights in Sonneborn Coöperatief U.A. (collectively, "Sonneborn"). The acquisition closed on February 1, 2019.

On July 10, 2018, we entered into a definitive agreement to acquire Red Giant Oil, a privately-owned lubricants company. The acquisition closed on August 1, 2018.

See Note 2 for additional information on these acquisitions.

Principles of Consolidation: Our consolidated financial statements include our accounts and the accounts of partnerships and joint ventures that we control through an ownership interest greater than 50% or through a controlling financial interest with respect to variable interest entities. All significant intercompany transactions and balances have been eliminated.

Variable Interest Entities: HEP is a VIE as defined under U.S. generally accepted accounting principles ("GAAP"). A VIE is a legal entity whose equity owners do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support or, as a group, the equity holders lack the power, through voting rights, to direct the activities that most significantly impact the entity's financial performance, the obligation to absorb the entity's expected losses or rights to expected residual returns. As the general partner of HEP, we have the sole ability to direct the activities of HEP that most significantly impact HEP's financial performance, and therefore as HEP's primary beneficiary, we consolidate HEP.

In 2019, HEP Cushing LLC, a wholly-owned subsidiary of HEP, and Plains Marketing, L.P., a wholly-owned subsidiary of Plains All American Pipeline, L.P. ("Plains"), formed a 50/50 joint venture, Cushing Connect Pipeline & Terminal LLC. Cushing Connect Pipeline & Terminal LLC and its two subsidiaries, Cushing Connect Pipeline and Cushing Connect Terminal, are each VIE's because they do not have sufficient equity at risk to finance their activities without additional financial support. HEP is the primary beneficiary of two of these entities as HEP is constructing and will operate the Cushing Connect Pipeline, and HEP has more ability to direct the activities that most significantly impact the financial performance of Cushing Connect Pipeline & Terminal LLC and Cushing Connect Pipeline. Therefore, HEP consolidates these two entities. HEP is not the primary beneficiary of Cushing Connect Terminal, which HEP accounts for using the equity method of accounting.

Use of Estimates: The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash Equivalents: We consider all highly liquid instruments with a maturity of three months or less at the date of purchase to be cash equivalents. Cash equivalents are stated at cost, which approximates market value and are primarily invested in highly-rated instruments issued by government or municipal entities with strong credit standings.

Balance Sheet Offsetting: We purchase and sell inventories of crude oil with certain same-parties that are net settled in accordance with contractual net settlement provisions. Our policy is to present such balances on a net basis since it presents our accounts receivables and payables consistent with our contractual settlement provisions.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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Accounts Receivable: Our accounts receivable consist of amounts due from customers that are primarily companies in the petroleum industry. Credit is extended based on our evaluation of the customer's financial condition, and in certain circumstances collateral, such as letters of credit or guarantees, is required. We reserve for doubtful accounts based on our historical loss experience as well as expected credit losses from current economic conditions and management's expectations of future economic conditions. Credit losses are charged to the allowance for doubtful accounts when an account is deemed uncollectible. Our allowance for doubtful accounts was \$3.4 million at December 31, 2020 and \$4.5 million at December 31, 2019.

Accounts receivable attributable to crude oil resales generally represent the sale of excess crude oil to other purchasers and / or users in cases when our crude oil supplies are in excess of our immediate needs as well as certain reciprocal buy / sell exchanges of crude oil. At times we enter into such buy / sell exchanges to facilitate the delivery of quantities to certain locations. In many cases, we enter into net settlement agreements relating to the buy / sell arrangements, which may mitigate credit risk.

Inventories: Inventories related to our refining operations are stated at the lower of cost, using the last-in, first-out ("LIFO") method for crude oil and unfinished and finished refined products, or market. Cost, consisting of raw material, transportation and conversion costs, is determined using the LIFO inventory valuation methodology and market is determined using current replacement costs. Under the LIFO method, the most recently incurred costs are charged to cost of sales and inventories are valued at the earliest acquisition costs. In periods of rapidly declining prices, LIFO inventories may have to be written down to market value due to the higher costs assigned to LIFO layers in prior periods. In addition, the use of the LIFO inventory method may result in increases or decreases to cost of sales in years that inventory volumes decline as the result of charging cost of sales with LIFO inventory costs generated in prior periods. An actual valuation of inventory under the LIFO method is made at the end of each year based on the inventory levels at that time. Accordingly, interim LIFO calculations are based on management's estimates of expected year-end inventory levels and are subject to the final year-end LIFO inventory valuation.

Inventories of our Petro-Canada Lubricants and Sonneborn businesses are stated at the lower of cost, using the first-in, first-out ("FIFO") method, or net realizable value.

Inventories consisting of process chemicals, materials and maintenance supplies and renewable identification numbers ("RINs") are stated at the lower of weighted-average cost or net realizable value.

Leases: Effective January 1, 2019, we adopted Accounting Standards Update ("ASU") 2016-02, "Leases" (Topic 842). At inception, we determine if an arrangement is or contains a lease. Right-of-use ("ROU") assets represent our right to use an underlying asset for the lease term and lease liabilities represent our payment obligation under the leasing arrangement. ROU assets and lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. We use our estimated incremental borrowing rate ("IBR") to determine the present value of lease payments as most of our leases do not contain an implicit rate. Our IBR represents the interest rate which we would pay to borrow, on a collateralized basis, an amount equal to the lease payments over a similar term in a similar economic environment. We use the implicit rate when readily determinable.

Operating leases are recorded in operating lease right-of-use assets and current and noncurrent operating lease liabilities on our consolidated balance sheet. Finance leases are included in properties, plants and equipment and accrued liabilities and other long-term liabilities on our consolidated balance sheet.

Our lease term includes an option to extend the lease when it is reasonably certain that we will exercise that option. Leases with a term of 12 months or less are not recorded on our balance sheet. For certain equipment leases, we apply a portfolio approach for the operating lease ROU assets and liabilities. Also, as a lessee, we separate non-lease components that are identifiable and exclude them from the

determination of net present value of lease payment obligations. In addition, HEP, as a lessor, does not separate the non-lease (service) component in contracts in which the lease component is the dominant component. HEP treats these combined components as an operating lease.

Derivative Instruments: All derivative instruments are recognized as either assets or liabilities in our consolidated balance sheets and are measured at fair value. Changes in the derivative instrument's fair value are recognized in earnings unless specific hedge accounting criteria are met. See Note 14 for additional information.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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Properties, Plants and Equipment: Properties, plants and equipment are stated at cost. Depreciation is provided by the straight-line method over the estimated useful lives of the assets, primarily 15 to 32 years for refining, pipeline and terminal facilities, 10 to 40 years for buildings and improvements, 5 to 30 years for other fixed assets and 5 years for vehicles.

Asset Retirement Obligations: We record legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development and / or the normal operation of long-lived assets. The fair value of the estimated cost to retire a tangible long-lived asset is recorded as a liability with the associated retirement costs capitalized as part of the asset's carrying amount in the period in which it is incurred and when a reasonable estimate of the fair value of the liability can be made. If a reasonable estimate cannot be made at the time the liability is incurred, we record the liability when sufficient information is available to estimate the liability's fair value. Certain of our refining assets have no recorded liability for asset retirement obligations since the timing of any retirement and related costs are currently indeterminable.

Our asset retirement obligations were \$42.6 million and \$35.9 million at December 31, 2020 and 2019, respectively, which are included in "Other long-term liabilities" in our consolidated balance sheets. Accretion expense was insignificant for the years ended December 31, 2020, 2019 and 2018.

Intangibles, Goodwill and Long-lived Assets: Intangible assets are assets (other than financial assets) that lack physical substance, and goodwill represents the excess of the cost of an acquired entity over the fair value of the assets acquired and liabilities assumed. Goodwill acquired in a business combination and intangibles with indefinite useful lives are not amortized, whereas intangible assets with finite useful lives are amortized on a straight-line basis. Goodwill and intangible assets that are not subject to amortization are tested for impairment annually or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Our goodwill impairment testing first entails either a quantitative assessment or an optional qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If we determine that based on the qualitative factors that it is more likely than not that the carrying amount of the reporting unit is greater than its fair value, a quantitative test is performed in which we estimate the fair value of the related reporting unit. If the carrying amount of a reporting unit exceeds its fair value, the goodwill of that reporting unit is impaired, and we measure goodwill impairment as the excess of the carrying amount of the reporting unit over the related fair value. The carrying amount of our intangible assets and goodwill may fluctuate from period to period due to the effects of foreign currency translation adjustments on goodwill and intangible assets assigned to our Lubricants and Specialty Products segment.

For purposes of long-lived asset impairment evaluation, we have grouped our long-lived assets as follows: (i) our refinery asset groups, which include certain HEP logistics assets, (ii) our Lubricants and Specialty Products asset groups and (iii) our HEP asset groups, which comprises HEP assets not included in our refinery asset groups. These asset groups represent the lowest level for which independent cash flows can be identified. Our long-lived assets are evaluated for impairment by identifying whether indicators of impairment exist and if so, assessing whether the long-lived assets are recoverable from estimated future undiscounted cash flows. The actual amount of impairment loss measured, if any, is equal to the amount by which the asset group's carrying value exceeds its fair value.

See Note 11 for additional information regarding our goodwill and long-lived assets including impairment charges recorded during the years ended December 31, 2020 and 2019.

Equity Method Investments: We account for investments in which we have a noncontrolling interest, yet have significant influence over the entity, using the equity method of accounting, whereby we record our pro-rata share of earnings and contributions to and distributions from joint ventures as adjustments to our investment balance. HEP has a 50% interest in Osage Pipe Line Company, LLC, the owner of a pipeline running from Cushing, Oklahoma to El Dorado, Kansas (the "Osage Pipeline") and a 50% interest in Cheyenne Pipeline, LLC,

the owner of a pipeline running from Fort Laramie, Wyoming to Cheyenne, Wyoming (the “Cheyenne Pipeline”). HEP also accounts for Cushing Connect Terminal, a subsidiary of the Cushing Connect Pipeline & Terminal LLC joint venture, using the equity method of accounting, as HEP does not have the ability to direct the activities that most significantly impact the entity. As of December 31, 2020, HEP's underlying equity and recorded investment balances in the joint ventures are \$93.2 million and \$120.5 million respectively. The differences are being amortized as adjustments to HEP's pro-rata share of earnings in the joint ventures.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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Revenue Recognition: Revenues on refined product and excess crude oil sales are recognized when delivered (via pipeline, in-tank or rack) and the customer obtains control of such inventory, which is typically when title passes and the customer is billed. All revenues are reported inclusive of shipping and handling costs billed and exclusive of any taxes billed to customers. Shipping and handling costs incurred are reported as cost of products sold.

Our lubricants and specialty products business has sales agreements with marketers and distributors that provide certain rights of return or provisions for the repurchase of products previously sold to them. Under these agreements, revenues and cost of revenues are deferred until the products have been sold to end customers. Our lubricants and specialty products business also has agreements that create an obligation to deliver products at a future date for which consideration has already been received and recorded as deferred revenue. This revenue is recognized when the products are delivered to the customer.

HEP recognizes revenues as products are shipped through its pipelines and terminals and as other services are rendered. Additionally, HEP has certain throughput agreements that specify minimum volume requirements, whereby HEP bills a customer for a minimum level of shipments in the event a customer ships below their contractual requirements. If there are no future performance obligations, HEP recognizes these deficiency payments as revenue. In certain of these throughput agreements, a customer may later utilize such shortfall billings as credit towards future volume shipments in excess of its minimum levels within its respective contractual shortfall make-up period. Such amounts represent an obligation to perform future services, which may be initially deferred and later recognized as revenue based on estimated future shipping levels, including the likelihood of a customer's ability to utilize such amounts prior to the end of the contractual shortfall make-up period. HEP recognizes the service portion of these deficiency payments as revenue when HEP does not expect it will be required to satisfy these performance obligations in the future based on the pattern of rights exercised by the customer. Payment terms under our contracts with customers are consistent with industry norms and are typically payable within 30 days of the date of invoice.

Cost Classifications: Costs of products sold include the cost of crude oil, other feedstocks, blendstocks and purchased finished products, inclusive of transportation costs. We purchase crude oil that at times exceeds the supply needs of our refineries. Quantities in excess of our needs are sold at market prices to purchasers of crude oil that are recorded on a gross basis with the sales price recorded as revenues and the corresponding acquisition cost as cost of products sold. Additionally, we enter into buy / sell exchanges of crude oil with certain parties to facilitate the delivery of quantities to certain locations that are netted at cost. Operating expenses include direct costs of labor, maintenance materials and services, utilities and other direct operating costs. Selling, general and administrative expenses include compensation, professional services and other support costs.

Deferred Maintenance Costs: Our refinery units require regular major maintenance and repairs which are commonly referred to as "turnarounds." Catalysts used in certain refinery processes also require regular "change-outs." The required frequency of the maintenance varies by unit and by catalyst, but generally is every two to five years. Turnaround costs are deferred and amortized over the period until the next scheduled turnaround. Other repairs and maintenance costs are expensed when incurred. Deferred turnaround and catalyst amortization expense was \$158.4 million, \$141.9 million and \$110.9 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Environmental Costs: Environmental costs are charged to operating expenses if they relate to an existing condition caused by past operations and do not contribute to current or future revenue generation. We have ongoing investigations of environmental matters at various locations and routinely assess our recorded environmental obligations, if any, with respect to such matters. Liabilities are recorded when site restoration and environmental remediation, cleanup and other obligations are either known or considered probable and can be reasonably estimated. Such estimates are undiscounted and require judgment with respect to costs, time frame and extent of required remedial and clean-up activities and are subject to periodic adjustments based on currently available information. Recoveries

of environmental costs through insurance, indemnification arrangements or other sources are included in other assets to the extent such recoveries are considered probable.

Contingencies: We are subject to proceedings, lawsuits and other claims related to environmental, labor, product and other matters. We are required to assess the likelihood of any adverse judgments or outcomes to these matters as well as potential ranges of probable losses. We accrue for contingencies when it is probable that a loss has occurred and when the amount of that loss is reasonably estimable. A determination of the amount of reserves required, if any, for these contingencies is made after careful analysis of each individual issue. The required reserves may change in the future due to new developments in each matter or changes in approach such as a change in settlement strategy in dealing with these matters.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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Foreign Currency Translation: Assets and liabilities recorded in foreign currencies are translated into U.S. dollars using exchange rates in effect as of the balance sheet date. Revenue and expense accounts are translated using the weighted-average exchange rates during the period presented. Foreign currency translation adjustments are recorded as a component of accumulated other comprehensive income.

In connection with our PCLI acquisition, we issued intercompany notes to initially fund certain of our foreign businesses. Remeasurement adjustments resulting from the conversion of such intercompany financing amounts to functional currencies are recorded as gains and losses as a component of other income (expense) in the income statement. Such adjustments are not recorded to the Lubricants and Specialty Products segment operations, but to Corporate and Other. See Note 20 for additional information on our segments.

Income Taxes: Provisions for income taxes include deferred taxes resulting from temporary differences in income for financial and tax purposes, using the liability method of accounting for income taxes. The liability method requires the effect of tax rate changes on deferred income taxes to be reflected in the period in which the rate change was enacted. The liability method also requires that deferred tax assets be reduced by a valuation allowance unless it is more likely than not that the assets will be realized.

Potential interest and penalties related to income tax matters are recognized in income tax expense. We believe we have appropriate support for the income tax positions taken and to be taken on our income tax returns and that our accruals for tax liabilities are adequate for all open years based on an assessment of many factors, including past experience and interpretations of tax law applied to the facts of each matter.

Inventory Repurchase Obligations: We periodically enter into same-party sell / buy transactions, whereby we sell certain refined product inventory and subsequently repurchase the inventory in order to facilitate delivery to certain locations. Such sell / buy transactions are accounted for as inventory repurchase obligations under which proceeds received under the initial sell is recognized as inventory repurchase obligations that are subsequently reversed when the inventories are repurchased. For the years ended December 31, 2020, 2019 and 2018, we received proceeds of \$44.9 million, \$52.1 million and \$51.2 million and subsequently repaid \$46.4 million, \$49.2 million and \$52.5 million, respectively, under these sell / buy transactions.

Accounting Pronouncements - Recently Adopted

Income Tax Accounting

In December 2019, ASU 2019-12, "Simplifying the Accounting for Income Taxes," was issued which eliminates some exceptions to the general approach in ASC Topic 740 "Income Taxes" and also provides clarification of other aspects of ASC 740. We adopted this standard effective January 1, 2020 on a prospective basis, and it did not have a material affect on our financial condition, results of operations or cash flows for the periods presented.

Fair Value Measurements

In August 2018, ASU 2018-13, "Changes to the Disclosure Requirements for Fair Value Measurement," was issued which removed, modified and added certain disclosures for fair value measurements. We adopted this standard effective January 1, 2020, and it did not affect our financial condition, results of operations or cash flows.

Defined Benefit Plans

In August 2018, ASU 2018-14, "Changes to the Disclosure Requirements for Defined Benefit Plans," was issued which removed disclosure requirements for (i) the amounts in accumulated other comprehensive income expected to be recognized as components of net periodic benefit cost over the next fiscal year and (ii) the effects of a one-percentage-point change in assumed health care cost trend rates on the aggregate of the service and interest cost components of net periodic benefit costs and the benefit obligation for postretirement

health care benefits. Additionally, a new disclosure required under this standard is an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. We adopted this standard effective December 31, 2020 with the updated disclosures in Note 18. The adoption of this standard had no impact on our financial condition, results of operations or cash flows.

HOLLYFRONTIER CORPORATION
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Credit Losses Measurement

In June 2016, ASU 2016-13, “Measurement of Credit Losses on Financial Instruments,” was issued requiring measurement of all expected credit losses for certain types of financial instruments, including trade receivables, held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. We adopted this standard effective January 1, 2020, at which time our review of historic and expected credit losses resulted in a decrease of \$3.2 million in our reserve for doubtful accounts. Based upon our assessment of the potential impact of current and forecasted conditions, we increased our reserve for doubtful accounts by \$2.1 million during the the year ended December 31, 2020. Assumptions about the potential effects of the COVID-19 pandemic on our estimate of expected credit losses are inherently subjective and difficult to forecast. However, we believe that our current estimate of allowance for doubtful accounts to be reasonable based upon current information and forecasts.

NOTE 2: Acquisitions

Sonneborn

On November 12, 2018, we entered into an equity purchase agreement to acquire 100% of the capital stock of Sonneborn. The acquisition closed on February 1, 2019. Aggregate consideration totaled \$701.6 million and consisted of \$662.7 million in cash paid at acquisition, net of cash acquired. Sonneborn is a producer of specialty hydrocarbon chemicals such as white oils, petrolatums and waxes with manufacturing facilities in the United States and Europe.

This transaction was accounted for as a business combination using the acquisition method of accounting, with the purchase price allocated to the fair value of the acquired Sonneborn assets and liabilities as of the February 1, 2019 acquisition date, with the excess purchase price recorded as goodwill. This goodwill was assigned to our Lubricants and Specialty Products segment and is not deductible for income tax purposes.

Fair values were as follows: cash and cash equivalents \$38.9 million, current assets \$139.4 million, properties, plants and equipment \$168.2 million, goodwill \$282.3 million, intangibles and other noncurrent assets \$231.5 million, current liabilities \$47.9 million and deferred income tax and other long-term liabilities \$110.8 million.

Intangibles included customer relationships, trademarks, patents and technical know-how totaling \$214.6 million that are being amortized on a straight-line basis over a 12-year period.

Our consolidated financial and operating results reflect the Sonneborn operations beginning February 1, 2019. Our results of operations include revenue and income before income taxes of \$340.3 million and \$5.1 million, respectively, for the period from February 1, 2019 through December 31, 2019 related to these operations.

The following unaudited pro forma information for the years ended December 31, 2019 and 2018 presents the revenues and operating income for our Lubricants and Specialty Products segment assuming the acquisition of Sonneborn had occurred as of January 1, 2018. The proforma effects on consolidated HFC revenue and operating income are not material.

	Years Ended December 31,	
	2019	2018
	(In thousands)	
Sales and other revenues	\$ 2,124,778	\$ 2,195,690
Operating income ⁽¹⁾	\$ (116,254)	\$ 99,371

(1) The year ended December 31, 2019, includes goodwill impairment of \$152.7 million from the PCLI reporting unit of our Lubricants and Specialty Products segment. See Note 11 for additional information on this goodwill impairment.

Red Giant Oil

On July 10, 2018, we entered into a definitive agreement to acquire Red Giant Oil, a privately-owned lubricants company. The acquisition closed on August 1, 2018. Cash consideration paid was \$54.2 million. Red Giant Oil is one of the largest suppliers of locomotive engine oil in North America and is headquartered in Council Bluffs, Iowa.

HOLLYFRONTIER CORPORATION
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This transaction was accounted for as a business combination using the acquisition method of accounting, with the purchase price allocated to the fair value of the acquired Red Giant Oil assets and liabilities as of the August 1 acquisition date, with the excess purchase price recorded as goodwill assigned to our Lubricants and Specialty Products segment. This goodwill is deductible for income tax purposes. Fair values were as follows: current assets \$14.4 million, properties and equipment \$21.3 million, intangible assets \$9.7 million, goodwill \$10.8 million and current liabilities \$2.0 million.

We incurred \$2.0 million, \$24.2 million and \$3.6 million, for the years ended December 31, 2020, 2019 and 2018, respectively, in incremental direct integration and regulatory costs that principally relate to legal, advisory, regulatory and other professional fees and are presented as selling, general and administrative expenses.

NOTE 3: Leases

Lessee

We have operating and finance leases for land, buildings, pipelines, storage tanks, transportation and other equipment for our operations. Our leases have remaining terms of one to 59 years, some of which include options to extend the leases for up to 10 years. Certain of our leases for pipeline assets include provisions for variable payments which are based on a measure of throughput and also contain a provision for the lessor to adjust the rate per barrel periodically over the life of the lease. These variable costs are not included in the initial measurement of ROU assets and lease liabilities.

The following table presents the amounts and balance sheet locations of our operating and financing leases recorded on our consolidated balance sheets.

	December 31,	
	2020	2019
(In thousands)		
Operating leases:		
Operating lease right-of-use assets	\$ 350,548	\$ 467,109
Operating lease liabilities	97,937	104,415
Noncurrent operating lease liabilities	285,785	364,420
Total operating lease liabilities	<u>\$ 383,722</u>	<u>\$ 468,835</u>
Finance leases:		
Properties, plants and equipment, at cost	\$ 24,321	\$ 13,406
Accumulated amortization	(5,713)	(6,233)
Properties, plants and equipment, net	<u>\$ 18,608</u>	<u>\$ 7,173</u>
Accrued liabilities	\$ 1,916	\$ 1,567
Other long-term liabilities	5,097	5,163
Total finance lease liabilities	<u>\$ 7,013</u>	<u>\$ 6,730</u>

HOLLYFRONTIER CORPORATION
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Supplemental balance sheet information related to our leases was as follows:

	December 31,	
	2020	2019
Weighted average remaining lease term (in years)		
Operating leases	7.2	7.2
Finance leases	3.3	8.1
Weighted average discount rate		
Operating leases	4.1 %	4.0 %
Finance leases	5.3 %	5.2 %

The components of lease expense were as follows:

	Years Ended December 31,	
	2020	2019
(In thousands)		
Operating lease expense	\$ 121,608	\$ 112,770
Finance lease expense:		
Amortization of right-of-use assets	4,400	1,543
Interest on lease liabilities	415	334
Variable lease cost	3,580	4,449
Total lease expense	\$ 130,003	\$ 119,096

Supplemental cash flow information related to leases was as follows:

	Years Ended December 31,	
	2020	2019
(In thousands)		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 126,313	\$ 116,980
Operating cash flows from finance leases	\$ 415	\$ 334
Financing cash flows from finance leases	\$ 2,995	\$ 1,551
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	\$ 18,823	\$ 121,750
Finance leases	\$ 4,085	\$ 2,096

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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As of December 31, 2020, minimum future lease payments of our operating and finance lease obligations were as follows:

	Operating	Finance
	(In thousands)	
2021	\$ 109,756	\$ 2,220
2022	91,172	1,651
2023	75,878	1,686
2024	51,859	1,209
2025	12,871	746
2025 and thereafter	116,502	349
Future minimum lease payments	458,038	7,861
Less: imputed interest	74,316	848
Total lease obligations	383,722	7,013
Less: current obligations	97,937	1,916
Long-term lease obligations	\$ 285,785	\$ 5,097

As of December 31, 2020, we have entered into certain leases that have not yet commenced. Such leases include a 2-year lease for petroleum tank storage, with estimated future lease payments of \$2.6 million, expected to commence in the first quarter of 2021.

Lessor

Our consolidated statements of income reflect lease revenue recognized by HEP for contracts with third parties in which HEP is the lessor.

Substantially all of the assets supporting contracts meeting the definition of a lease have long useful lives, and HEP believes these assets will continue to have value when the current agreements expire due to HEP's risk management strategy for protecting the residual fair value of the underlying assets by performing ongoing maintenance during the lease term.

One of HEP's throughput agreements with Delek US Holdings, Inc. ("Delek") was partially renewed during the year ended December 31, 2020. Certain components of this agreement met the criteria of sales-type leases since the underlying assets are not expected to have an alternative use at the end of the lease term to anyone other than Delek. Under sales-type lease accounting, at the commencement date, the lessor recognizes a net investment in the lease, based on the estimated fair value of the underlying leased assets at contract inception, and derecognizes the underlying assets with the difference recorded as selling profit or loss arising from the lease. Therefore, HEP recognized a gain on sales-type leases totaling \$33.8 million during the year ended December 31, 2020. This sales-type lease transaction, including the related gain, was a non-cash transaction.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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Lease income recognized was as follows:

	Years Ended December 31,	
	2020	2019
	(In thousands)	
Operating lease revenues	\$ 22,636	\$ 33,242
Gain on sales-type leases	\$ 33,834	\$ —
Sales-type lease interest income	\$ 1,928	\$ —
Lease revenues relating to variable lease payments not included in measurement of the sales-type lease receivable	\$ 1,690	\$ —

For HEP's sales-type leases, HEP included customer obligations related to minimum volume requirements in guaranteed minimum lease payments. Portions of HEP's minimum guaranteed pipeline tariffs for assets subject to sales-type lease accounting are recorded as interest income with the remaining amounts recorded as a reduction in net investment in leases. HEP recognized any billings for throughput volumes in excess of minimum volume requirements as variable lease payments, and these variable lease payments were recorded in lease revenues.

Annual minimum undiscounted lease payments in which HEP is a lessor to third-party contracts as of December 31, 2020 were as follows:

	Operating	Sales-type
	(In thousands)	
2021	\$ 11,586	\$ 2,955
2022	9,128	2,955
2023	9,000	2,955
2024	9,000	2,955
2025	2,512	2,955
Thereafter	—	27,335
Total lease payment receipts	<u>\$ 41,226</u>	42,110
Less: imputed interest		(32,262)
		9,848
Unguaranteed residual assets at end of leases		25,182
Net investment in leases		<u>\$ 35,030</u>

Net investment in sales-type leases recorded on our consolidated balance sheet was composed of the following:

	December 31, 2020	
	(In thousands)	
Lease receivables	\$	26,045
Unguaranteed residual assets		8,985
Net investment in leases	\$	35,030

NOTE 4: Holly Energy Partners

HEP is a publicly held master limited partnership that owns and operates logistic assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery processing units that principally support our refining and marketing operations, as well as other third-party refineries, in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. Additionally, as of December 31, 2020, HEP owned a 75% interest in UNEV Pipeline, LLC (“UNEV”), the owner of a pipeline running from Woods Cross, Utah to Las Vegas, Nevada (the “UNEV Pipeline”) and associated product terminals, and a 50% ownership interest in each of Osage Pipe Line Company, LLC, the owner of a pipeline running from Cushing, Oklahoma to El Dorado, Kansas (the “Osage Pipeline”); Cheyenne Pipeline, LLC, the owner of a pipeline running from Fort Laramie, Wyoming to Cheyenne, Wyoming (the “Cheyenne Pipeline”) and Cushing Connect Pipeline & Terminal LLC (“Cushing Connect”), the owner of a crude oil storage terminal in Cushing, Oklahoma and a pipeline under construction that will run from Cushing, Oklahoma to our Tulsa Refineries.

HOLLYFRONTIER CORPORATION
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At December 31, 2020, we owned a 57% limited partner interest and a non-economic general partner interest in HEP. As the general partner of HEP, we have the sole ability to direct the activities that most significantly impact HEP's financial performance, and therefore as HEP's primary beneficiary, we consolidate HEP.

HEP has two primary customers (including us) and generates revenues by charging tariffs for transporting petroleum products and crude oil through its pipelines, by charging fees for terminalling refined products and other hydrocarbons, and by storing and providing other services at its storage tanks and terminals. Under our long-term transportation agreements with HEP (discussed further below), we accounted for 80% of HEP's total revenues for the year ended December 31, 2020. We do not provide financial or equity support through any liquidity arrangements and / or debt guarantees to HEP.

HEP has outstanding debt under a senior secured revolving credit agreement and its senior notes. HEP's creditors have no recourse to our assets. Furthermore, our creditors have no recourse to the assets of HEP and its consolidated subsidiaries. See Note 13 for a description of HEP's debt obligations.

HEP has risk associated with its operations. If a major customer of HEP were to terminate its contracts or fail to meet desired shipping or throughput levels for an extended period of time, revenue would be reduced and HEP could suffer substantial losses to the extent that a new customer is not found. In the event that HEP incurs a loss, our operating results will reflect HEP's loss, net of intercompany eliminations, to the extent of our ownership interest in HEP at that point in time.

Cushing Connect Joint Venture

In October 2019, HEP Cushing LLC ("HEP Cushing"), a wholly-owned subsidiary of HEP, and Plains Marketing, L.P. ("PMLP"), a wholly-owned subsidiary of Plains All American Pipeline, L.P. ("Plains"), formed a 50/50 joint venture, Cushing Connect, for (i) the development, construction, ownership and operation of a new 160,000 barrel per day common carrier crude oil pipeline (the "Cushing Connect Pipeline") that will connect the Cushing, Oklahoma crude oil hub to our Tulsa Refineries and (ii) the ownership and operation of 1.5 million barrels of crude oil storage in Cushing, Oklahoma (the "Cushing Connect Terminal"). The Cushing Connect Terminal was fully in service beginning in April 2020, and the Cushing Connect Pipeline is expected to be placed in service during the second quarter of 2021. Long-term commercial agreements have been entered into to support the Cushing Connect assets.

Cushing Connect will contract with an affiliate of HEP to manage the construction and operation of the Cushing Connect Pipeline and with an affiliate of Plains to manage the operation of the Cushing Connect Terminal. The total investment in Cushing Connect will be shared proportionately among the partners, and HEP estimates its share of the cost of the Cushing Connect Terminal contributed by Plains and Cushing Connect Pipeline construction costs are approximately \$65.0 million. However, any Cushing Connect Pipeline construction costs exceeding 10% of the budget are borne solely by HEP.

Transportation Agreements

HEP serves our refineries under long-term pipeline, terminal and tankage throughput agreements and refinery processing tolling agreements expiring from 2021 through 2036. Under these agreements, we pay HEP fees to transport, store and process throughput volumes of refined products, crude oil and feedstocks on HEP's pipelines, terminals, tankage, loading rack facilities and refinery processing units that result in minimum annual payments to HEP including UNEV (a consolidated subsidiary of HEP). Under these agreements, the agreed upon tariff rates are subject to annual tariff rate adjustments on July 1 at a rate based upon the percentage change in Producer Price Index or Federal Energy Regulatory Commission index. As of December 31, 2020, these agreements required minimum annualized payments to HEP of \$351.1 million. However, subsequent to year end, these agreements were modified to account for the

conversion of our Cheyenne Refinery to renewable diesel production, and as of January 1, 2021, require minimum annualized payments to HEP of \$341.9 million.

Our transactions with HEP and fees paid under our transportation agreements with HEP and UNEV are eliminated and have no impact on our consolidated financial statements.

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Incentive Distribution Rights Simplification Agreement

On October 31, 2017, we closed on an equity restructuring transaction with HEP pursuant to which our incentive distribution rights were canceled and our 2% general partner interest in HEP was converted into a non-economic general partner interest in HEP. In consideration, we received 37,250,000 HEP common units. In addition, we agreed to waive \$2.5 million of limited partner cash distributions for each of twelve consecutive quarters beginning with the first quarter the units issued were eligible to receive distributions as consideration.

HEP Private Placement Agreements

On January 25, 2018, HEP entered into a common unit purchase agreement in which certain purchasers agreed to purchase in a private placement 3,700,000 HEP common units, representing limited partner interests, at a price of \$29.73 per common unit. The private placement closed on February 6, 2018, at which time HEP received proceeds of \$110.0 million, which were used to repay indebtedness under the HEP Credit Agreement.

HEP Common Unit Continuous Offering Program

In May 2016, HEP established a continuous offering program under which HEP may issue and sell common units from time to time, representing limited partner interests, up to an aggregate gross sales amount of \$200 million. During the year ended December 31, 2020, HEP did not issue any common units under this program. As of December 31, 2020, HEP has issued 2,413,153 common units under this program, providing \$82.3 million in gross proceeds.

As a result of these transactions and resulting HEP ownership changes, we adjusted additional capital and equity attributable to HEP's noncontrolling interest holders to reallocate HEP's equity among its unitholders.

NOTE 5: Revenues

Substantially all revenue-generating activities relate to sales of refined product and excess crude oil inventories sold at market prices (variable consideration) under contracts with customers. Additionally, we have revenues attributable to HEP logistics services provided under petroleum product and crude oil pipeline transportation, processing, storage and terminalling agreements with third parties.

Disaggregated revenues were as follows:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Revenues by type			
Refined product revenues			
Transportation fuels ⁽¹⁾	\$ 7,825,625	\$ 12,952,899	\$ 13,326,654
Specialty lubricant products ⁽²⁾	1,657,344	1,864,450	1,636,859
Asphalt, fuel oil and other products ⁽³⁾	672,371	1,025,663	985,234
Total refined product revenues	10,155,340	15,843,012	15,948,747
Excess crude oil revenues ⁽⁴⁾	884,248	1,470,148	1,597,321
Transportation and logistic services	98,039	121,027	108,412
Other revenues ⁽⁵⁾	46,016	52,391	60,186
Total sales and other revenues	<u>\$ 11,183,643</u>	<u>\$ 17,486,578</u>	<u>\$ 17,714,666</u>

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Refined product revenues by market			
United States			
Mid-Continent	\$ 5,096,268	\$ 8,424,191	\$ 8,427,200
Southwest	2,310,432	3,621,273	3,772,278
Rocky Mountains	1,311,416	2,208,541	2,476,044
Northeast	552,069	578,932	339,407
Canada	616,683	721,169	732,321
Europe, Asia and Latin America	268,472	288,906	201,497
Total refined product revenues	\$ 10,155,340	\$ 15,843,012	\$ 15,948,747

- (1) Transportation fuels consist of gasoline, diesel and jet fuel. For the year ended December 31, 2020, \$1.6 million is reported in our Corporate and Other segment.
- (2) Specialty lubricant products consist of base oil, waxes, finished lubricants and other specialty fluids.
- (3) Asphalt, fuel oil and other products revenue include revenues attributable to our Refining, Lubricants and Specialty Products and Corporate and Other segments of \$533.5 million, \$135.4 million and \$3.5 million respectively, for the year ended December 31, 2020. For the year ended December 31, 2019 such revenues attributable to our Refining and Lubricants and Specialty Products segments were \$808.9 million and \$216.8 million, respectively, and \$822.6 million and \$162.6 million, respectively, for the year ended December 31, 2018.
- (4) Excess crude oil revenues represent sales of purchased crude oil inventory that at times exceeds the supply needs of our refineries.
- (5) Other revenues are principally attributable to our Refining segment.

Our consolidated balance sheets reflect contract liabilities related to unearned revenues attributable to future service obligations under HEP's third-party transportation agreements and production agreements from the acquisition of Sonneborn on February 1, 2019. The following table presents changes to contract liabilities for the years ended December 31, 2020 and 2019:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Balance at January 1	\$ 4,652	\$ 132	\$ 179
Sonneborn acquisition	—	6,463	—
Increase	28,746	26,751	6,748
Recognized as revenue	(26,660)	(28,694)	(6,795)
Balance at December 31	\$ 6,738	\$ 4,652	\$ 132

As of December 31, 2020, we have long-term contracts with customers that specify minimum volumes of gasoline, diesel, lubricants and specialty products to be sold ratably at market prices through 2025. Such volumes are typically nominated in the month preceding delivery and delivered ratably throughout the following month. Future prices are subject to market fluctuations and therefore, we have elected the exemption to exclude variable consideration under these contracts under Accounting Standards Codification 606-10-50-14A. Aggregate minimum volumes expected to be sold (future performance obligations) under our long-term product sales contracts with customers are as follows:

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>Thereafter</u>	<u>Total</u>
	(In thousands)				
Refined product sales volumes (barrels)	19,318	13,771	12,795	11,698	57,582

Additionally, HEP has long-term contracts with third-party customers that specify minimum volumes of product to be transported through its pipelines and terminals that result in fixed-minimum annual revenues through 2025. Annual minimum revenues attributable to HEP's third-party contracts as of December 31, 2020 are presented below:

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	2021	2022	2023	Thereafter	Total
	(In thousands)				
HEP contractual minimum revenues	\$ 22,041	\$ 11,053	\$ 9,000	\$ 11,512	\$ 53,606

We have no customers which had accounted for over 10% of our annual revenues for the years ended December 31, 2020, 2019 or 2018.

NOTE 6: Fair Value Measurements

Our financial instruments measured at fair value on a recurring basis consist of derivative instruments.

Fair value measurements are derived using inputs (assumptions that market participants would use in pricing an asset or liability, including assumptions about risk). GAAP categorizes inputs used in fair value measurements into three broad levels as follows:

- (Level 1) Quoted prices in active markets for identical assets or liabilities.
- (Level 2) Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, similar assets and liabilities in markets that are not active or can be corroborated by observable market data.
- (Level 3) Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. This includes valuation techniques that involve significant unobservable inputs.

The carrying amounts of derivative instruments at December 31, 2020 and 2019 were as follows:

Financial Instrument	Carrying Amount	Fair Value by Input Level		
		Level 1	Level 2	Level 3
	(In thousands)			
December 31, 2020				
Assets:				
Commodity forward contracts	\$ 275	\$ —	\$ 275	\$ —
Total assets	\$ 275	\$ —	\$ 275	\$ —
Liabilities:				
NYMEX futures contracts	\$ 418	\$ 418	\$ —	\$ —
Commodity price swaps	359	—	359	—
Commodity forward contracts	196	—	196	—
Foreign currency forward contracts	23,005	—	23,005	—
Total liabilities	\$ 23,978	\$ 418	\$ 23,560	\$ —

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Financial Instrument	Carrying Amount	Fair Value by Input Level		
		Level 1	Level 2	Level 3
(In thousands)				
December 31, 2019				
Assets:				
Commodity price swaps	\$ 13,455	\$ —	\$ 13,455	\$ —
Commodity forward contracts	4,133	—	4,133	—
Total assets	\$ 17,588	\$ —	\$ 17,588	\$ —
Liabilities:				
NYMEX futures contracts	\$ 2,578	\$ 2,578	\$ —	\$ —
Commodity price swaps	1,230	—	1,230	—
Commodity forward contracts	3,685	—	3,685	—
Foreign currency forward contracts	6,722	—	6,722	—
Total liabilities	\$ 14,215	\$ 2,578	\$ 11,637	\$ —

Level 1 Financial Instruments

Our NYMEX futures contracts are exchange traded and are measured and recorded at fair value using quoted market prices, a Level 1 input.

Level 2 Financial Instruments

Derivative instruments consisting of foreign currency forward contracts, commodity price swaps and forward sales and purchase contracts are measured and recorded at fair value using Level 2 inputs. The fair value of the commodity price swap contracts is based on the net present value of expected future cash flows related to both variable and fixed rate legs of the respective swap agreements. The measurements are computed using market-based observable input and quoted forward commodity prices with respect to our commodity price swaps. The fair value of the forward sales and purchase contracts are computed using quoted forward commodity prices. The fair value of foreign currency forward contracts are based on values provided by a third party, which were derived using market quotes for similar type instruments, a Level 2 input.

Nonrecurring Fair Value Measurements

During the year ended December 31, 2020, we recognized goodwill and long-lived asset impairment charges based on fair value measurements utilized during our goodwill and long-lived asset impairment testing (see Note 11). The fair value measurements were based on a combination of valuation methods including discounted cash flows, the guideline public company and guideline transaction methods and obsolescence adjusted replacement costs, all of which are Level 3 inputs.

During the year ended December 31, 2020, HEP recognized a gain on sales-type leases (see Note 4). The estimated fair value of the underlying leased assets at contract inception and the present value of the estimated unguaranteed residual asset at the end of the lease term were used in determining the net investment in leases and related recognized gain on sales-type leases. The asset valuation estimates included Level 3 inputs based on a replacement cost valuation method.

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NOTE 7: Earnings Per Share

Basic earnings per share is calculated as net income (loss) attributable to HollyFrontier stockholders, adjusted for participating securities' share in earnings divided by the average number of shares of common stock outstanding. Diluted earnings per share includes the incremental shares resulting from our restricted stock units and performance share units if the effect is dilutive. The following is a reconciliation of the denominators of the basic and diluted per share computations for net income (loss) attributable to HollyFrontier stockholders:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands, except per share data)		
Net income (loss) attributable to HollyFrontier stockholders	\$ (601,448)	\$ 772,388	\$ 1,097,960
Participating securities' share in earnings	1,811	1,034	3,714
Net income (loss) attributable to common shares	\$ (603,259)	\$ 771,354	\$ 1,094,246
Average number of shares of common stock outstanding	161,983	166,287	175,009
Effect of dilutive variable restricted stock units and performance share units ⁽¹⁾	—	1,098	1,652
Average number of shares of common stock outstanding assuming dilution	161,983	167,385	176,661
Basic earnings (loss) per share	\$ (3.72)	\$ 4.64	\$ 6.25
Diluted earnings (loss) per share	\$ (3.72)	\$ 4.61	\$ 6.19
(1) Excludes anti-dilutive restricted and performance share units of:	1,082	302	238

NOTE 8: Stock-Based Compensation

We have a principal share-based compensation plan (the "2020 Long-Term Incentive Plan"), which allows us to grant new equity awards until February 12, 2030. We also have a long-term incentive compensation plan which expired pursuant to its terms on December 31, 2020, but it will continue to govern outstanding equity awards granted thereunder. The compensation cost charged against income for these plans was \$29.7 million, \$41.5 million and \$39.0 million for the years ended December 31, 2020, 2019 and 2018, respectively. Our accounting policy for the recognition of compensation expense for awards with pro-rata vesting is to expense the costs ratably over the vesting periods.

Additionally, HEP maintains a share-based compensation plan for Holly Logistic Services, L.L.C.'s non-employee directors and certain executives and employees. Compensation cost attributable to HEP's share-based compensation plan was \$2.2 million, \$2.5 million and \$3.2 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Restricted Stock Units

Under our long-term incentive plan, we grant certain officers and other key employees restricted stock unit awards, which are payable in stock or cash and generally vest over a period of three years. Restricted stock unit award recipients have the right to receive dividends,

however, restricted stock units do not have any other rights of absolute ownership. Upon vesting, restrictions on the restricted stock units lapse at which time they convert to common shares or cash. In addition, we grant non-employee directors restricted stock unit awards, which typically vest over a period of one year and are payable in stock. The fair value of each restricted stock unit award is measured based on the grant date market price of our common shares and is amortized over the respective vesting period. We account for forfeitures on an estimated basis.

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A summary of restricted stock unit activity during the year ended December 31, 2020 is presented below:

Restricted Stock Units	Grants	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value (\$000)
Outstanding at January 1, 2020	1,101,781	\$ 53.30	
Granted	1,574,929	\$ 22.20	
Vested	(549,144)	\$ 51.40	
Forfeited	(89,971)	\$ 53.66	
Converted from performance share units	19,450	\$ 38.13	
Outstanding at December 31, 2020	<u>2,057,045</u>	\$ 29.76	\$ 53,175

For the years ended December 31, 2020, 2019 and 2018, restricted stock and restricted stock units vested having a grant date fair value of \$28.2 million, \$30.9 million and \$30.0 million, respectively. For the years ended December 31, 2019 and 2018, we granted restricted stock units having a weighted average grant date fair value of \$52.62 and \$64.96, respectively. As of December 31, 2020, there was \$40.4 million of total unrecognized compensation cost related to non-vested restricted stock unit grants. That cost is expected to be recognized over a weighted-average period of 1.7 years. For the years ended December 31, 2020, 2019 and 2018, we paid \$1.3 million, \$1.7 million and \$0.1 million, respectively, in cash equal to the value of the stock award on the vest date to certain employees to settle 55,222, 32,648 and 2,481, respectively, restricted stock units.

Performance Share Units

Under our long-term incentive plan, we grant certain officers and other key employees performance share units, which are payable in stock or cash upon meeting certain criteria over the service period, and generally vest over a period of three years. Under the terms of our performance share unit grants, awards are subject to “financial performance” and “market performance” criteria. Financial performance is based on our financial performance compared to a peer group of independent refining companies, while market performance is based on the relative standing of total shareholder return achieved by HollyFrontier compared to peer group companies. The number of shares ultimately issued or cash paid under these awards can range from zero to 200% of target award amounts. Holders of performance share units have the right to receive dividend equivalents and other distributions with respect to such performance share units based on the target level of payout.

A summary of performance share unit activity and changes during the year ended December 31, 2020 is presented below:

Performance Share Units	Grants
Outstanding at January 1, 2020	375,588
Granted	434,378
Vested	(124,303)
Forfeited	(31,009)
Converted to restricted stock units	(19,450)
Outstanding at December 31, 2020	<u>635,204</u>

For the year ended December 31, 2020, we issued 296,801 shares of common stock, representing a 150% payout on vested performance share units having a grant date fair value of \$6.2 million. For the years ended December 31, 2019 and 2018, we issued common stock upon the vesting of the performance share units having a grant date fair value of \$7.3 million and \$8.8 million, respectively. As of December 31, 2020, there was \$14.5 million of total unrecognized compensation cost related to non-vested performance share units having a grant date fair value of \$35.45 per unit. That cost is expected to be recognized over a weighted-average period of 2.5 years.

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NOTE 9: Inventories

Inventory consists of the following components:

	December 31,	
	2020	2019
	(In thousands)	
Crude oil	\$ 451,967	\$ 489,169
Other raw materials and unfinished products ⁽¹⁾	260,495	394,045
Finished products ⁽²⁾	572,258	639,938
Lower of cost or market reserve	(318,862)	(240,363)
Process chemicals ⁽³⁾	35,006	36,786
Repairs and maintenance supplies and other ⁽⁴⁾	172,612	154,627
Total inventory	\$ 1,173,476	\$ 1,474,202

- (1) Other raw materials and unfinished products include feedstocks and blendstocks, other than crude.
- (2) Finished products include gasolines, jet fuels, diesels, lubricants, asphalts, LPG's and residual fuels.
- (3) Process chemicals include additives and other chemicals.
- (4) Includes RINs

Our inventories that are valued at the lower of LIFO cost or market reflect a valuation reserve of \$318.9 million and \$240.4 million at December 31, 2020 and 2019, respectively. The December 31, 2019 market reserve of \$240.4 million was reversed due to the sale of inventory quantities that gave rise to the 2019 reserve. A new market reserve of \$318.9 million was established as of December 31, 2020 based on market conditions and prices at that time. The effect of the change in the lower of cost or market reserve was an increase to cost of products sold totaling \$78.5 million for the year ended December 31, 2020, a decrease of \$119.8 million for the year ended December 31, 2019 and an increase of \$136.3 million for the year ended December 31, 2018.

At December 31, 2020, 2019 and 2018, the LIFO value of inventory, net of the lower of cost or market reserve, was equal to current costs. For the year ended December 31, 2020, we recognized a charge of \$36.9 million to cost of products sold as we liquidated certain quantities of LIFO inventory at our Cheyenne Refinery that were carried at historical acquisition costs above market prices at the time of liquidation

During the three months ended September 30, 2019, the EPA granted the Cheyenne Refinery and the Woods Cross Refinery each a one-year small refinery exemption from the Renewable Fuel Standard ("RFS") program requirements for the 2018 calendar year end. As a result, the Cheyenne Refinery's and the Woods Cross Refinery's gasoline and diesel production are not subject to the Renewable Volume Obligation ("RVO") for 2018. In the third quarter of 2019, we increased our inventory of RINs and reduced our cost of products sold by \$36.6 million representing the net cost of the RINs charge to cost of products sold in 2018, less the loss incurred for selling 2018 vintage RINs in excess of those which we can use subject to the 20% carryover limit.

During the three months ended June 30, 2018, the EPA granted the Woods Cross Refinery a one-year small refinery exemption from the RFS program requirements for the 2017 calendar year end. As a result, the Woods Cross Refinery's gasoline and diesel production are not subject to the RVO for 2017. In the second quarter of 2018, we increased our inventory of RINs and reduced our cost of products

sold by \$25.3 million, representing the net cost of the Woods Cross Refinery's RINs charge to cost of products sold in 2017, less the loss incurred for selling 2017 vintage RINs in excess of those which we can use subject to the 20% carryover limit.

During the three months ended March 31, 2018, the EPA granted the Cheyenne Refinery a one-year small refinery exemption from the RFS program requirements for the 2015 and 2017 calendar years end. As a result, the Cheyenne Refinery's gasoline and diesel production are not subject to the RVO for those years. At the date we received the 2017 Cheyenne Refinery exemption, we had not yet retired RINs to satisfy the 2017 RVO, which we intended to satisfy, in part, with 2016 vintage RINs subject to the 20% carryover limit. In the first quarter of 2018, we increased our inventory of RINs and reduced our cost of products sold by \$37.9 million, representing the net cost of the Cheyenne Refinery's RINs charged to cost of products sold in 2017, less the loss incurred from selling 2016 vintage RINs prior to their expiration in 2018.

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In the first quarter of 2018, the EPA provided us 2018 vintage RINs to replace the RINs previously retired to meet the Cheyenne Refinery's 2015 RVO. In the first quarter of 2018, we increased our inventory of RINs and reduced our cost of products sold by \$33.8 million representing the fair value of the 2018 replacement RINs obtained from the Cheyenne Refinery's exemption of its 2015 RVO.

NOTE 10: Properties, Plants and Equipment

The components of properties, plants and equipment are as follows:

	December 31,	
	2020	2019
	(In thousands)	
Land, buildings and improvements	\$ 517,829	\$ 447,547
Refining facilities	4,202,524	4,258,764
Pipelines and terminals	1,786,279	1,775,657
Transportation vehicles	26,715	27,214
Other fixed assets	400,159	540,953
Construction in progress	366,011	187,162
	7,299,517	7,237,297
Accumulated depreciation	(2,726,378)	(2,414,585)
	\$ 4,573,139	\$ 4,822,712

We capitalized interest attributable to construction projects of \$4.1 million, \$2.5 million and \$4.8 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Depreciation expense was \$333.0 million, \$334.2 million and \$309.0 million for the years ended December 31, 2020, 2019 and 2018, respectively.

NOTE 11: Goodwill, Long-lived Assets and Intangibles

Goodwill and long-lived assets

As of December 31, 2020, our goodwill balance was \$2.3 billion. The carrying amount of our goodwill may fluctuate from period to period due to the effects of foreign currency translation adjustments on goodwill assigned to our Lubricants and Specialty Products segment.

HOLLYFRONTIER CORPORATION
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The following is a summary of our goodwill by segment:

	Refining	Lubricants and Specialty Products	HEP	Total
	(In thousands)			
Balance at December 31, 2019				
Goodwill	\$ 2,042,790	\$ 480,274	\$ 312,873	\$ 2,835,937
Accumulated impairment losses	(309,318)	(152,712)	—	(462,030)
	<u>1,733,472</u>	<u>327,562</u>	<u>312,873</u>	<u>2,373,907</u>
Foreign currency translation adjustment	—	1,895	—	1,895
Current year impairment losses	—	(81,867)	—	(81,867)
Balance at December 31, 2020				
Goodwill	2,042,790	482,169	312,873	2,837,832
Accumulated impairment losses	(309,318)	(234,579)	—	(543,897)
	<u>\$ 1,733,472</u>	<u>\$ 247,590</u>	<u>\$ 312,873</u>	<u>\$ 2,293,935</u>

Goodwill and long-lived asset impairment testing

During the second quarter of 2020, we determined that indicators of potential goodwill and long-lived asset impairments were present and performed recoverability testing for long-lived assets and an interim test for goodwill impairment as of May 31, 2020. Impairment indicators included the recent economic slowdown caused by the COVID-19 pandemic, reductions in the prices of our finished goods and raw materials and the related decrease in our gross margins, as well as the recent decline in our market capitalization. Additionally, our second quarter announcement of the planned conversion of our Cheyenne Refinery to renewable diesel production was also considered a triggering event requiring assessment of potential impairments to the carrying value of our Cheyenne Refinery asset group. As a result of our long-lived asset recoverability testing, we determined that the carrying value of the long-lived assets of our Cheyenne Refinery and PCLI asset groups were not recoverable, and thus recorded long-lived asset impairment charges of \$232.2 million and \$204.7 million, respectively, in the second quarter of 2020. Our interim goodwill impairment testing indicated that there was no impairment of goodwill at our Refining and Lubricants and Specialty Products reporting units as of May 31, 2020. The estimated fair values of the Cheyenne Refinery and PCLI asset groups were determined using a combination of the income and cost approaches. The income approach was based on management's best estimates of the expected future cash flows over the remaining useful life of the asset group. The cost approach utilized assumptions for the current replacement costs of similar assets adjusted for estimated depreciation and economic obsolescence. These fair value measurements involve significant unobservable inputs (Level 3 inputs). See Note 6 for further discussion of Level 3 inputs.

As of July 1, 2020, we performed our annual goodwill impairment testing quantitatively and determined there was no impairment of goodwill attributable to our reporting units at that time.

During the fourth quarter of 2020, we incurred long-lived asset impairment charges of \$26.5 million for construction-in-progress, consisting primarily of engineering work for potential upgrades to certain processing units at our Tulsa and El Dorado Refineries. During the quarter, we concluded not to pursue these projects in light of recent economic and market conditions.

Additionally, in the fourth quarter of 2020, our annual budgeting process identified downward forecast revisions specific to the Sonneborn reporting unit within our Lubricants and Specialty Products segment; largely from declines in gross margin as compared to historic levels and an increase in forecasted capital expenditures. As such, we concluded it was more likely than not that the carrying value of the Sonneborn reporting unit exceeded its fair value, and we performed an interim quantitative test for goodwill impairment as of December 1, 2020. As a result of our impairment testing, we recognized a goodwill impairment charge of \$81.9 million during the fourth quarter for the Sonneborn reporting unit. No other reporting units required an interim impairment test during the fourth quarter.

HOLLYFRONTIER CORPORATION
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The estimated fair values of our reporting units tested quantitatively in the current year were derived using a combination of income and market approaches. The income approach reflects expected future cash flows based on estimated forecasted production levels, selling prices, gross margins, operating costs and capital expenditures. Our market approaches include both the guideline public company and guideline transaction methods. Both methods utilize pricing multiples derived from historical market transactions of other like kind assets. These fair value measurements involve significant unobservable inputs (Level 3 inputs). See Note 6 for further discussion of Level 3 inputs.

There was no impairment of long-lived assets during the years ended December 31, 2019 and 2018.

During the year ended December 31, 2019, we recorded a goodwill impairment charge of \$152.7 million to fully impair the goodwill of the PCLI reporting unit included in our Lubricants and Specialty Products segment. There was no impairment of goodwill during the year ended December 31, 2018.

A reasonable expectation exists that further deterioration in our operating results or overall economic conditions could result in an impairment of goodwill and / or additional long-lived assets impairments at some point in the future. Future impairment charges could be material to our results of operations and financial condition.

Intangibles

The carrying amounts of our intangible assets presented in “Intangibles and other” in our consolidated balance sheet are as follows:

	Useful Life	December 31	
		2020	2019
		(In thousands)	
Customer relationships	10 - 20 years	\$ 239,773	\$ 245,479
Transportation agreements	30 years	59,933	59,933
Trademarks, patents and other	10 - 20 years	157,120	154,863
		456,826	460,275
Accumulated amortization		(122,024)	(86,768)
Total intangibles, net		\$ 334,802	\$ 373,507

Amortization expense was \$34.1 million, \$33.8 million and \$16.6 million for the years ended December 31, 2020, 2019 and 2018, respectively and expected to approximate \$34.1 million for each of the next five years.

NOTE 12: Environmental

We expensed \$7.1 million, \$11.2 million and \$14.8 million for the years ended December 31, 2020, 2019 and 2018, respectively, for environmental remediation obligations. The accrued environmental liability reflected in our consolidated balance sheets was \$115.0 million and \$117.7 million at December 31, 2020 and 2019, respectively, of which \$94.0 million and \$95.6 million, respectively, were classified as other long-term liabilities. These accruals include remediation and monitoring costs expected to be incurred over an extended period of time (up to 30 years for certain projects). Estimated liabilities could increase in the future when the results of ongoing investigations become known, are considered probable and can be reasonably estimated.

NOTE 13: Debt

HollyFrontier Credit Agreement

We have a \$1.35 billion senior unsecured revolving credit facility maturing in February 2022 (the “HollyFrontier Credit Agreement”). The HollyFrontier Credit Agreement may be used for revolving credit loans and letters of credit from time to time and is available to fund general corporate purposes. At December 31, 2020, we were in compliance with all covenants, had no outstanding borrowings and had outstanding letters of credit totaling \$5.7 million under the HollyFrontier Credit Agreement.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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Indebtedness under the HollyFrontier Credit Agreement bears interest, at our option at either a) an alternate base rate (as defined in the credit agreement) plus an applicable margin of (ranging from 0.125% - 1.000%), b) LIBOR plus an applicable margin (ranging from 1.125% to 2.000%), or c) Canadian Dealer Offered Rate plus an applicable margin (ranging from 1.125% to 2.000%) for Canadian dollar denominated borrowings.

HEP Credit Agreement

HEP has a \$1.4 billion senior secured revolving credit facility maturing in July 2022 (the “HEP Credit Agreement”) and is available to fund capital expenditures, investments, acquisitions, distribution payments, working capital and for general partnership purposes. It is also available to fund letters of credit up to a \$50 million sub-limit and has a \$300 million accordion. During the year ended December 31, 2020, HEP received advances totaling \$258.5 million and repaid \$310.5 million under the HEP Credit Agreement. At December 31, 2020, HEP was in compliance with all of its covenants, had outstanding borrowings of \$913.5 million and no outstanding letters of credit under the HEP Credit Agreement.

Indebtedness under the HEP Credit Agreement bears interest, at HEP's option, at either a reference rate announced by the administrative agent plus an applicable margin or at a rate equal to LIBOR plus an applicable margin. In each case, the applicable margin is based upon the ratio of HEP's funded debt to earnings before interest, taxes, depreciation and amortization (as defined in the HEP Credit Agreement). The weighted average interest rates in effect on HEP's Credit Agreement borrowings was 2.58% and 4.24% for December 31, 2020 and 2019, respectively.

HEP's obligations under the HEP Credit Agreement are collateralized by substantially all of HEP's assets and are guaranteed by HEP's material wholly-owned subsidiaries. Any recourse to the general partner would be limited to the extent of HEP Logistics Holdings, L.P.'s assets, which other than its investment in HEP are not significant. HEP's creditors have no recourse to our other assets. Furthermore, our creditors have no recourse to the assets of HEP and its consolidated subsidiaries.

HollyFrontier Senior Notes

On September 28, 2020, we completed a public offering of \$350.0 million in aggregate principal amount of 2.625% senior notes maturing October 2023 (the “2.625% Senior Notes”) and \$400.0 million in aggregate principal amount of 4.500% senior notes maturing October 2030 (the “4.500% Senior Notes”). We intend to use the net proceeds for general corporate purposes, which may include capital expenditures.

As a result, as of December 31, 2020, our outstanding senior notes consist of \$1.0 billion in aggregate principal amount of 5.875% senior notes maturing April 2026 (the “5.875% Senior Notes”), the 2.625% Senior Notes and the 4.500% Senior Notes (collectively, the “HollyFrontier Senior Notes”). The HollyFrontier Senior Notes are unsecured and unsubordinated obligations of ours and rank equally with all our other existing and future unsecured and unsubordinated indebtedness.

HollyFrontier Financing Arrangements

In December 2018, certain of our wholly-owned subsidiaries entered into financing arrangements whereby such subsidiaries sold a portion of their precious metals catalyst to a financial institution and then leased back the precious metals catalyst in exchange for total cash received of \$32.5 million. The volume of the precious metals catalyst and the lease rate are fixed over the term of each lease, and the lease payments are recorded as interest expense. The leases mature on February 1, 2022. Upon maturity, we must either satisfy the obligation at fair market value or refinance to extend the maturity. These financing arrangements are recorded at a Level 2 fair value totaling \$43.9 million and \$40.0 million at December 31, 2020 and 2019, respectively, and are included in “Accrued liabilities” in our consolidated balance sheets. See Note 6 for additional information on Level 2 inputs.

HEP Senior Notes

On February 4, 2020, HEP closed a private placement of \$500.0 million in aggregate principal amount of 5.0% HEP senior unsecured notes maturing in February 2028 (the “HEP Senior Notes”). On February 5, 2020, HEP redeemed its existing \$500.0 million aggregate principal amount of 6.0% senior notes maturing August 2024 at a redemption cost of \$522.5 million. HEP recognized a \$25.9 million early extinguishment loss consisting of a \$22.5 million debt redemption premium and unamortized discount and financing costs of \$3.4 million. HEP funded the \$522.5 million redemption with proceeds from the issuance of its 5.0% senior notes and borrowing under the HEP Credit Agreement.

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The HEP Senior Notes are unsecured and impose certain restrictive covenants, including limitations on HEP's ability to incur additional indebtedness, make investments, sell assets, incur certain liens, pay distributions, enter into transactions with affiliates, and enter into mergers. HEP was in compliance with the restrictive covenants for the HEP Senior Notes as of December 31, 2020. At any time when the HEP Senior Notes are rated investment grade by either Moody's or Standard & Poor's and no default or event of default exists, HEP will not be subject to many of the foregoing covenants. Additionally, HEP has certain redemption rights under the HEP Senior Notes.

Indebtedness under the HEP Senior Notes is guaranteed by HEP's wholly-owned subsidiaries. HEP's creditors have no recourse to our assets. Furthermore, our creditors have no recourse to the assets of HEP and its consolidated subsidiaries.

The carrying amounts of long-term debt are as follows:

	December 31,	
	2020	2019
(In thousands)		
HollyFrontier		
2.625% Senior Notes	\$ 350,000	\$ —
5.875% Senior Notes	1,000,000	1,000,000
4.500% Senior Notes	400,000	—
	<u>1,750,000</u>	<u>1,000,000</u>
Unamortized discount and debt issuance costs	(12,885)	(6,391)
Total HollyFrontier long-term debt	<u>1,737,115</u>	<u>993,609</u>
HEP		
HEP Credit Agreement	913,500	965,500
5.00% Senior Notes	500,000	—
6.00% Senior Notes	—	500,000
	<u>500,000</u>	<u>500,000</u>
Unamortized discount and debt issuance costs	(7,897)	(3,469)
Total HEP long-term debt	<u>1,405,603</u>	<u>1,462,031</u>
Total long-term debt	<u>\$ 3,142,718</u>	<u>\$ 2,455,640</u>

The fair values of the senior notes are as follows:

	December 31,	
	2020	2019
	(In thousands)	
HollyFrontier Senior Notes	\$ 1,903,867	\$ 1,127,610
HEP Senior Notes	\$ 506,540	\$ 522,045

These fair values are based on a Level 2 input. See Note 6 for additional information on Level 2 inputs.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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Principal maturities of long-term debt as of December 31, 2020 are as follows:

Years Ending December 31,	(In thousands)
2021	\$ —
2022	913,500
2023	350,000
2024	—
2025	—
Thereafter	1,900,000
Total	\$ 3,163,500

NOTE 14: Derivative Instruments and Hedging Activities

Commodity Price Risk Management

Our primary market risk is commodity price risk. We are exposed to market risks related to the volatility in crude oil and refined products, as well as volatility in the price of natural gas used in our refining operations. We periodically enter into derivative contracts in the form of commodity price swaps, forward purchase and sales and futures contracts to mitigate price exposure with respect to our inventory positions, natural gas purchases, sales prices of refined products and crude oil costs.

Foreign Currency Risk Management

We are exposed to market risk related to the volatility in foreign currency exchange rates. We periodically enter into derivative contracts in the form of foreign exchange forward and foreign exchange swap contracts to mitigate the exposure associated with fluctuations on intercompany notes with our foreign subsidiaries that are not denominated in the U.S. dollar.

Accounting Hedges

We have swap contracts serving as cash flow hedges against price risk on forecasted purchases of natural gas. We also periodically have swap contracts to lock in basis spread differentials on forecasted purchases of crude oil and forward sales contracts that lock in the prices of future sales of crude oil and refined product. These contracts have been designated as accounting hedges and are measured at fair value with offsetting adjustments (gains/losses) recorded directly to other comprehensive income. These fair value adjustments are later reclassified to earnings as the hedging instruments mature.

The following table presents the pre-tax effect on other comprehensive income (“OCI”) and earnings due to fair value adjustments and maturities of hedging instruments under hedge accounting:

Derivatives Designated as Cash Flow Hedging Instruments	Net Unrealized Gain (Loss) Recognized in OCI			Gain (Loss) Reclassified into Earnings			
	Years Ended December 31,			Income Statement Location	Years Ended December 31,		
	2020	2019	2018		2020	2019	2018
	(In thousands)						
Commodity contracts	\$ (4,871)	\$ (5,349)	\$ 11,221	Sales and other revenues	\$ (5,168)	\$ (1,799)	\$ (5,093)
				Cost of products sold	4,281	22,876	—
				Operating expenses	(1,717)	(1,364)	(962)
Total	<u>\$ (4,871)</u>	<u>\$ (5,349)</u>	<u>\$ 11,221</u>		<u>\$ (2,604)</u>	<u>\$ 19,713</u>	<u>\$ (6,055)</u>

HOLLYFRONTIER CORPORATION
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Economic Hedges

We have commodity contracts including NYMEX futures contracts to lock in prices on forecasted purchases and sales of inventory and forward purchase and sell contracts, as well as periodically have contracts to lock in basis spread differentials on forecasted purchases of crude oil and swap contracts to lock in the crack spread of WTI and gasoline, that serve as economic hedges (derivatives used for risk management, but not designated as accounting hedges). We also have forward currency contracts to fix the rate of foreign currency. In addition, our catalyst financing arrangements discussed in Note 13 could require repayment under certain conditions based on the future pricing of platinum, which is an embedded derivative. These contracts are measured at fair value with offsetting adjustments (gains / losses) recorded directly to income.

The following table presents the pre-tax effect on income due to maturities and fair value adjustments of our economic hedges:

Derivatives Not Designated as Hedging Instruments	Income Statement Location	Gain (Loss) Recognized in Earnings		
		Years Ended December 31,		
		2020	2019	2018
		(In thousands)		
Commodity contracts	Cost of products sold	\$ 18,646	\$ (8,475)	\$ 16,655
	Interest expense	(4,250)	(6,427)	(198)
Foreign currency contracts	Gain on foreign currency transactions	(7,300)	(17,430)	41,834
	Total	<u>\$ 7,096</u>	<u>\$ (32,332)</u>	<u>\$ 58,291</u>

As of December 31, 2020, we have the following notional contract volumes related to outstanding derivative instruments (all maturing in 2021):

	Total Outstanding Notional	Unit of Measure
<i>Derivatives designated as hedging instruments:</i>		
Natural gas price swaps - long	1,800,000	MMBTU
<i>Derivatives not designated as hedging instruments:</i>		
NYMEX futures (WTI) - short	160,000	Barrels
Forward gasoline and diesel contracts - long	195,000	Barrels
Foreign currency forward contracts	418,192,532	U. S. Dollar
Forward commodity contracts (platinum)	40,867	Troy ounces

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The following table presents the fair value and balance sheet locations of our outstanding derivative instruments. These amounts are presented on a gross basis with offsetting balances that reconcile to a net asset or liability position in our consolidated balance sheets. We present on a net basis to reflect the net settlement of these positions in accordance with provisions of our master netting arrangements.

	Derivatives in Net Asset Position			Derivatives in Net Liability Position		
	Gross Assets	Gross Liabilities Offset in Balance Sheet	Net Assets Recognized in Balance Sheet	Gross Liabilities	Gross Assets Offset in Balance Sheet	Net Liabilities Recognized in Balance Sheet
(In thousands)						
December 31, 2020						
<i>Derivatives designated as cash flow hedging instruments:</i>						
Commodity price swap contracts	\$ —	\$ —	\$ —	\$ 359	\$ —	\$ 359
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 359</u>	<u>\$ —</u>	<u>\$ 359</u>
<i>Derivatives not designated as cash flow hedging instruments:</i>						
NYMEX futures contracts	\$ —	\$ —	\$ —	\$ 418	\$ —	\$ 418
Commodity forward contracts	275	—	275	196	—	196
Foreign currency forward contracts	—	—	—	23,005	—	23,005
	<u>\$ 275</u>	<u>\$ —</u>	<u>\$ 275</u>	<u>\$ 23,619</u>	<u>\$ —</u>	<u>\$ 23,619</u>
Total net balance			<u>\$ 275</u>			<u>\$ 23,978</u>
Balance sheet classification:	Prepayment and other		<u>\$ 275</u>	Accrued liabilities		<u>\$ 23,978</u>

	Derivatives in Net Asset Position			Derivatives in Net Liability Position		
		Gross Liabilities	Net Assets		Gross Assets	Net Liabilities
	Gross Assets	Offset in Balance Sheet	Recognized in Balance Sheet	Gross Liabilities	Offset in Balance Sheet	Recognized in Balance Sheet
(In thousands)						
December 31, 2019						
<i>Derivatives designated as cash flow hedging instruments:</i>						
Commodity price swap contracts	\$ 7,526	\$ (1,784)	\$ 5,742	\$ 1,230	\$ —	\$ 1,230
	<u>\$ 7,526</u>	<u>\$ (1,784)</u>	<u>\$ 5,742</u>	<u>\$ 1,230</u>	<u>\$ —</u>	<u>\$ 1,230</u>
<i>Derivatives not designated as cash flow hedging instruments:</i>						
NYMEX futures contracts	\$ —	\$ —	\$ —	\$ 2,578	\$ —	\$ 2,578
Commodity price swap contracts	7,713	—	7,713	—	—	—
Commodity forward contracts	4,133	—	4,133	3,685	—	3,685
Foreign currency forward contracts	—	—	—	6,722	—	6,722
	<u>\$ 11,846</u>	<u>\$ —</u>	<u>\$ 11,846</u>	<u>\$ 12,985</u>	<u>\$ —</u>	<u>\$ 12,985</u>
Total net balance			<u>\$ 17,588</u>			<u>\$ 14,215</u>
Balance sheet classification:	Prepayments and other		\$ 17,588	Accrued liabilities		\$ 12,985
				Other long-term liabilities		1,230
			<u>\$ 17,588</u>			<u>\$ 14,215</u>

At December 31, 2020, we had a pre-tax net unrealized loss of \$0.4 million classified in accumulated other comprehensive income that relates to all accounting hedges having contractual maturities through 2021, which assuming commodity prices remain unchanged will be effectively transferred from accumulated other comprehensive income into the statement of income as the hedging instruments contractually mature over the next twelve-month period.

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NOTE 15: Income Taxes

The provision for income taxes is comprised of the following:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Current			
Federal	\$ (59,452)	\$ 187,134	\$ 239,566
State	(5,391)	29,547	40,788
Foreign	9,423	3,805	(10,080)
Deferred			
Federal	(64,836)	77,916	46,434
State	(52,872)	26,073	27,845
Foreign	(59,019)	(25,323)	2,690
	\$ (232,147)	\$ 299,152	\$ 347,243

The statutory federal income tax rate applied to pre-tax book income reconciles to income tax expense (benefit) as follows:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Tax computed at statutory rate	\$ (156,880)	\$ 246,013	\$ 320,138
Effect of the Tax Cuts and Jobs Act	—	—	(7,800)
State income taxes, net of federal tax benefit	(41,566)	47,259	56,936
Noncontrolling interest in net income	(21,799)	(25,494)	(20,215)
CARES Act benefits	(19,837)	—	—
Foreign rate differential	(14,294)	—	—
Effect of nondeductible goodwill impairment charge	16,573	32,069	—
Other	5,656	(695)	(1,816)
	\$ (232,147)	\$ 299,152	\$ 347,243

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Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Our deferred income tax assets and liabilities as of December 31, 2020 and 2019 are as follows:

	December 31, 2020		
	Assets	Liabilities	Total
	(In thousands)		
Deferred income taxes			
Properties, plants and equipment (due primarily to tax in excess of book depreciation)	\$ —	\$ (712,339)	\$ (712,339)
Lease obligation	94,447	—	94,447
Accrued employee benefits	21,819	—	21,819
Accrued post-retirement benefits	11,646	—	11,646
Accrued environmental costs	27,200	—	27,200
Hedging instruments	—	(903)	(903)
Inventory differences	—	(24,271)	(24,271)
Deferred turnaround costs	—	(85,326)	(85,326)
Net operating loss and tax credit carryforwards	51,227	—	51,227
Investment in HEP	—	(94,982)	(94,982)
Valuation allowance	—	(8,577)	(8,577)
Other	6,356	—	6,356
Total	\$ 212,695	\$ (926,398)	\$ (713,703)

December 31, 2019

	Assets	Liabilities	Total
	(In thousands)		
Deferred income taxes			
Properties, plants and equipment (due primarily to tax in excess of book depreciation)	\$ —	\$ (809,966)	\$ (809,966)
Lease obligation	120,435	—	120,435
Accrued employee benefits	13,635	—	13,635
Accrued post-retirement benefits	11,027	—	11,027
Accrued environmental costs	28,708	—	28,708
Hedging instruments	—	(2,439)	(2,439)
Inventory differences	—	(43,500)	(43,500)
Deferred turnaround costs	—	(135,920)	(135,920)
Net operating loss and tax credit carryforwards	22,912	—	22,912
Investment in HEP	—	(95,037)	(95,037)
Valuation allowance	—	(4,600)	(4,600)
Other	5,475	—	5,475
Total	\$ 202,192	\$ (1,091,462)	\$ (889,270)

We have Kansas income tax credits of \$12.8 million and Oklahoma income tax credits of \$5.5 million that can be carried forward 16 and 19 tax years, respectively. We also have net operating losses of \$61.8 million in Luxembourg and \$27.6 million in Canada. We have reflected a valuation allowance of \$8.6 million in 2020 and \$4.6 million in 2019 with respect to these net operating carry forwards that primarily relate to the losses in Luxembourg.

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A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Balance at January 1	\$ 56,621	\$ 53,752	\$ 53,752
Additions for tax positions of prior years	6	2,893	—
Reductions for tax positions of prior years	(1,500)	(24)	—
Lapse of statute of limitations	(228)	—	—
Balance at December 31	\$ 54,899	\$ 56,621	\$ 53,752

At December 31, 2020, 2019 and 2018, there were \$54.9 million, \$56.6 million, and \$53.8 million, respectively, of unrecognized tax benefits that, if recognized, would affect our effective tax rate. Unrecognized tax benefits are adjusted in the period in which new information about a tax position becomes available or the final outcome differs from the amount recorded.

Approximately \$53.7 million of the unrecognized tax benefits relates to claims filed with the IRS on the federal income tax treatment of refundable biodiesel/ethanol blending tax credits for certain prior years. The issues related to the claims are complex and uncertain, and we cannot conclude that it is more likely than not that we will sustain the claims. Therefore, no tax benefit has been recognized for the filed claims. During the next 12 months, it is reasonably possible that an ultimate resolution regarding these claims could reduce unrecognized tax benefits (due to possible court rulings in favor of the IRS).

We recognize interest and penalties relating to liabilities for unrecognized tax benefits as an element of tax expense. We have not recorded any penalties related to our uncertain tax positions as we believe that it is more likely than not that there will not be any assessment of penalties.

We are subject to U.S. and Canadian federal income tax, Oklahoma, Kansas, New Mexico, Iowa, Arizona, Utah, Colorado and Nebraska income tax and to income tax of multiple other state jurisdictions. We have substantially concluded all state and local income tax matters for tax years through 2015. Other than the federal claim noted above, we have materially concluded all U.S. federal income tax matters for tax years through December 31, 2016.

NOTE 16: Stockholders' Equity

Shares of our common stock outstanding and activity for the years ended December 31, 2020, 2019 and 2018 are presented below:

	Years Ended December 31,		
	2020	2019	2018
Common shares outstanding at January 1	161,846,525	172,121,491	177,407,622
Vesting of performance units	296,801	592,602	115,596
Vesting of restricted stock with performance feature	553,381	412,465	543,396
Forfeitures of restricted stock	—	(13,807)	(58,497)
Purchase of treasury stock ⁽¹⁾	(283,047)	(11,266,226)	(5,886,626)
Common shares outstanding at December 31	<u>162,413,660</u>	<u>161,846,525</u>	<u>172,121,491</u>

(1) Includes 283,047, 415,466 and 369,255 shares, respectively, withheld under the terms of stock-based compensation agreements to provide funds for the payment of payroll and income taxes due at the vesting of share-based awards, as well as other stock repurchases under separate authority from our Board of Directors.

HOLLYFRONTIER CORPORATION
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In November 2019, our Board of Directors approved a \$1.0 billion share repurchase program, which replaced all existing share repurchase programs authorizing us to repurchase common stock in the open market or through privately negotiated transactions. The timing and amount of stock repurchases will depend on market conditions and corporate, regulatory and other relevant considerations. This program may be discontinued at any time by the Board of Directors. As of December 31, 2020, we had not repurchased common stock under this stock repurchase program. In addition, we are authorized by our Board of Directors to repurchase shares in an amount sufficient to offset shares issued under our compensation programs.

During the years ended December 31, 2020, 2019 and 2018, we withheld shares of our common stock from certain employees in the amounts of \$7.6 million, \$21.9 million and \$19.6 million, respectively. These withholdings were made under the terms of restricted stock unit and performance share unit agreements upon vesting, at which time, we concurrently made cash payments to fund payroll and income taxes on behalf of officers and employees who elected to have shares withheld from vested amounts to pay such taxes.

NOTE 17: Other Comprehensive Income (Loss)

The components and allocated tax effects of other comprehensive income are as follows:

	Before-Tax	Tax Expense (Benefit)	After-Tax
	(In thousands)		
Year Ended December 31, 2020			
Net change in foreign currency translation adjustment	\$ 6,226	\$ 1,357	\$ 4,869
Net unrealized loss on hedging instruments	(4,871)	(1,228)	(3,643)
Net change in pension and other post-retirement benefit obligations	(3,461)	(923)	(2,538)
Other comprehensive loss attributable to HollyFrontier stockholders	<u>\$ (2,106)</u>	<u>\$ (794)</u>	<u>\$ (1,312)</u>
Year Ended December 31, 2019			
Net change in foreign currency translation adjustment	\$ 13,337	\$ 2,848	\$ 10,489
Net unrealized loss on hedging instruments	(5,349)	(1,365)	(3,984)
Net change in pension and other post-retirement benefit obligations	(7,207)	(1,853)	(5,354)
Other comprehensive income attributable to HollyFrontier stockholders	<u>\$ 781</u>	<u>\$ (370)</u>	<u>\$ 1,151</u>
Year Ended December 31, 2018			
Net change in foreign currency translation adjustment	\$ (38,227)	\$ (8,064)	\$ (30,163)
Net unrealized gain on hedging instruments	11,221	2,857	8,364
Net change in pension and other post-retirement benefit obligations	(1,507)	(378)	(1,129)
Other comprehensive loss attributable to HollyFrontier stockholders	<u>\$ (28,513)</u>	<u>\$ (5,585)</u>	<u>\$ (22,928)</u>

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The following table presents the income statement line item effects for reclassifications out of accumulated other comprehensive income (“AOCI”):

AOCI Component	Gain (Loss) Reclassified From AOCI			Income Statement Line Item
	Years Ended December 31,			
	2020	2019	2018	
	(In thousands)			
Hedging instruments:				
Commodity price swaps	\$ (5,168)	\$ (1,799)	\$ (5,093)	Sales and other revenues
	4,281	22,876	—	Cost of products sold
	(1,717)	(1,364)	(962)	Operating expenses
	(2,604)	19,713	(6,055)	
	(664)	5,027	(1,544)	Income tax expense (benefit)
	(1,940)	14,686	(4,511)	Net of tax
Other post-retirement benefit obligations:				
Pension obligations	422	—	—	Other, net
	108	—	—	Income tax expense
	314	—	—	Net of tax
Post-retirement healthcare obligations	3,564	3,587	3,481	Other, net
	909	915	888	Income tax expense
	2,655	2,672	2,593	Net of tax
Retirement restoration plan	(22)	(6)	(27)	Other, net
	(6)	(2)	(7)	Income tax benefit
	(16)	(4)	(20)	Net of tax
Total reclassifications for the period	\$ 1,013	\$ 17,354	\$ (1,938)	

Accumulated other comprehensive income in the equity section of our consolidated balance sheets includes:

	Years Ended December 31,	
	2020	2019
	(In thousands)	
Foreign currency translation adjustment	\$ 2,682	\$ (2,187)
Unrealized loss on pension obligations	(248)	(1,733)
Unrealized gain on post-retirement benefit obligations	11,310	15,333
Unrealized gain (loss) on hedging instruments	(282)	3,361
Accumulated other comprehensive income	<u>\$ 13,462</u>	<u>\$ 14,774</u>

NOTE 18: Pension and Post-retirement Plans

Certain PCLI employees are participants in union and non-union pension plans which are closed to new entrants. It is our intention that, effective June 30, 2022, no additional benefits will be accrued under these plans, and the plans will become frozen and employees will be transitioned to a defined contribution plan. Accordingly, these changes have been accounted for as curtailments and contractual termination benefits. In addition, Sonneborn employees in the Netherlands have a defined benefit pension plan which was frozen and all plan participants became inactive in 2016. The plan assets are in the form of a third-party insurance contract that is valued based on the assets held by the insurer and insures a value which approximates the accrued benefits related to the plan's accumulated benefit obligation. At that time, a new plan was established to provide future indexation benefits to participants who had accrued benefits under the expiring arrangements.

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The following table sets forth the changes in the benefit obligation and plan assets of our PCLI pension plans for the years ended December 31, 2020 and 2019, and for our Sonneborn Netherlands plans for the period February 1, 2019 to December 31, 2019 and for the year ended December 31, 2020:

	Years Ended December 31,	
	2020	2019
(In thousands)		
Change in plans' benefit obligations		
Pension plans benefit obligation - beginning of period	\$ 110,410	\$ 64,435
Acquisition of Sonneborn	—	31,686
Service cost	3,929	4,135
Interest cost	2,772	3,026
Actuarial loss	8,391	5,161
Benefits paid	(1,558)	(1,132)
Curtailment	(4,078)	—
Contractual termination benefits	915	—
Transfer from other plans	479	330
Foreign currency exchange rate changes	5,360	2,769
Pension plans benefit obligation - end of year	<u>\$ 126,620</u>	<u>\$ 110,410</u>
Change in pension plans assets		
Fair value of plans assets - beginning of period	\$ 105,358	\$ 62,462
Acquisition of Sonneborn	—	29,376
Return on plans assets	10,936	7,947
Employer contributions	3,487	3,681
Benefits paid	(1,558)	(1,132)
Transfer payments	479	330
Foreign currency exchange rate changes	5,248	2,694
Fair value of plans assets - end of year	<u>\$ 123,950</u>	<u>\$ 105,358</u>
Funded status		
Under-funded balance	<u>\$ (2,670)</u>	<u>\$ (5,052)</u>
Amounts recognized in consolidated balance sheets		
Other long-term liabilities	<u>\$ (2,670)</u>	<u>\$ (5,052)</u>
Amounts recognized in accumulated other comprehensive income		
Cumulative actuarial loss	<u>\$ 1,658</u>	<u>\$ 3,155</u>

The accumulated benefit obligation was \$119.2 million and \$100.5 million at December 31, 2020 and 2019, respectively, which are also the measurement dates used for our pension plans.

The following tables provide information regarding pension plans with a projected benefit obligation and accumulated benefit obligation in excess of the fair value of plan assets:

	December 31,	
	2020	2019
	(In thousands)	
Projected benefit obligation	\$ 79,866	\$ 110,410
Fair value of plan assets	\$ 77,035	\$ 105,358

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	December 31,	
	2020	2019
	(In thousands)	
Accumulated benefit obligation	\$ 41,654	\$ 36,001
Fair value of plan assets	\$ 39,105	\$ 33,509

The weighted average assumptions used to determine end of period benefit obligations for the PCLI plans for the years ended December 31, 2020 and 2019 were discount rates of 2.60% and 3.10%, respectively, and rates of future compensation increases of 3.00% for each year. For the years ended December 31, 2020 and 2019, the weighted average assumption used to determine end of period benefit obligations for Sonneborn were discount rates of 1.10% and 1.50%, respectively.

Net periodic pension expense consisted of the following components:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Service cost - benefit earned during the period	\$ 3,929	\$ 4,135	\$ 4,420
Interest cost on projected benefit obligations	2,772	3,026	2,249
Expected return on plans assets	(4,578)	(3,840)	(3,464)
Amortization of gain	(422)	—	—
Curtailment	(137)	—	—
Contractual termination benefits	915	—	—
Net periodic pension expense	\$ 2,479	\$ 3,321	\$ 3,205

The components, other than service cost, of our net periodic pension expense are recorded in Other, net in our consolidated statements of income.

At December 31, 2020 and 2019, PCLI's pension plans assets were allocated as follows:

Asset Category	Percentage of Plan Assets at Year End	
	December 31, 2020	December 31, 2019
Canadian equities	42 %	47 %
Fixed income	57 %	29 %
Real estate and infrastructure	— %	14 %
Other	1 %	9 %
Cash	— %	1 %
Total	100 %	100 %

At December 31, 2020, these fair values are based on Level 2 inputs. See Note 6 for additional information on Level 2 inputs.

The expected long-term rate of return on plan assets is 3.00% for the PCLI pension plans, and is based on a target investment mix of 16% Canadian equities, 75% fixed income, 5% real estate and infrastructure and 4% other.

We expect to contribute \$3.5 million to the PCLI and Sonneborn pensions plans in 2021. Benefit payments, which reflect expected future service, are expected to be paid as follows: \$2.1 million in 2021, \$2.5 million in 2022, \$3.0 million in 2023, \$3.3 million in 2024, \$3.8 million in 2025 and \$24.5 million in 2026 to 2030.

Post-retirement Healthcare Plans

We have post-retirement healthcare and other benefits plans that are available to certain of our employees who satisfy certain age and service requirements. These plans are unfunded and provide differing levels of healthcare benefits dependent upon hire date and work location. Not all of our employees are covered by this plan at December 31, 2020.

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The following table sets forth the changes in the benefit obligation and plan assets of our post-retirement healthcare plans for the years ended December 31, 2020 and 2019:

	Years Ended December 31,	
	2020	2019
(In thousands)		
Change in plans' benefit obligation		
Post-retirement plans' benefit obligation - beginning of year	\$ 31,273	\$ 26,880
Sonneborn acquisition	—	877
Service cost	1,616	1,582
Interest cost	870	1,029
Benefits paid	(1,766)	(2,028)
Actuarial loss	1,131	2,412
Foreign currency exchange rate changes	354	521
Post-retirement plans' benefit obligation - end of year	<u>\$ 33,478</u>	<u>\$ 31,273</u>
Change in plan assets		
Fair value of plan assets - beginning of year	\$ —	\$ —
Employer contributions	1,742	2,003
Participant contributions	24	25
Benefits paid	(1,766)	(2,028)
Fair value of plan assets - end of year	<u>\$ —</u>	<u>\$ —</u>
Funded status		
Under-funded balance	<u>\$ (33,478)</u>	<u>\$ (31,273)</u>
Amounts recognized in consolidated balance sheets		
Accrued liabilities	\$ (1,946)	\$ (1,817)
Other long-term liabilities	(31,532)	(29,456)
	<u>\$ (33,478)</u>	<u>\$ (31,273)</u>
Amounts recognized in accumulated other comprehensive income		
Cumulative actuarial loss	\$ (1,523)	\$ (197)
Prior service credit	18,511	21,992
Total	<u>\$ 16,988</u>	<u>\$ 21,795</u>

Benefit payments, which reflect expected future service, are expected to be paid as follows: \$1.9 million in 2021; \$1.9 million in 2022; \$1.9 million in 2023; \$1.9 million in 2024; \$1.9 million in 2025; and \$9.2 million in 2026 through 2030.

The weighted average assumptions used to determine end of period benefit obligations:

	December 31,	
	2020	2019
Discount rate	1.88%-2.60%	2.94% - 3.20%
Current health care trend rate	5.50%-6.00%	6.00% - 6.50%
Ultimate health care trend rate	4.50%-5.00%	4.50% - 5.00%
Year rate reaches ultimate trend rate	2022-2023	2022 - 2023

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Net periodic post-retirement credit consisted of the following components:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Service cost – benefit earned during the year	\$ 1,616	\$ 1,582	\$ 1,648
Interest cost on projected benefit obligations	870	1,029	938
Amortization of prior service credit	(3,481)	(3,481)	(3,481)
Amortization of gain	(83)	(106)	—
Net periodic post-retirement credit	\$ (1,078)	\$ (976)	\$ (895)

The components, other than service cost, of our net periodic post-retirement credit are recorded in Other, net in our consolidated statements of income. Prior service credits are amortized over the average remaining effective period to obtain full benefit eligibility for participants.

Retirement Restoration Plan

We have an unfunded retirement restoration plan that provides for additional payments from us so that total retirement plan benefits for certain executives will be maintained at the levels provided in the retirement plan before the application of Internal Revenue Code limitations. We expensed \$0.1 million for each of the years ended December 31, 2020, 2019 and 2018 in connection with this plan. The accrued liability reflected in the consolidated balance sheets was \$2.5 million and \$2.4 million at December 31, 2020 and 2019, respectively. As of December 31, 2020, the projected benefit obligation under this plan was \$2.5 million. Annual benefit payments of \$0.2 million are expected to be paid through 2030, which reflect expected future service.

Defined Contribution Plans

We have defined contribution plans that cover substantially all qualified employees in the U.S, Canada and the Netherlands. Our contributions are based on an employee's eligible compensation and years of service. We also partially match our employees' contributions. We expensed \$43.3 million, \$30.3 million and \$19.1 million for the years ended December 31, 2020, 2019 and 2018, respectively, in connection with these plans.

NOTE 19: Contingencies and Contractual Commitments

We are a party to various litigation and legal proceedings which we believe, based on advice of counsel, will not either individually or in the aggregate have a materially adverse effect on our financial condition, results of operations or cash flows.

We filed a business interruption claim with our insurance carriers related to a loss at our Woods Cross Refinery that occurred in the first quarter 2018. During the year ended December 31, 2020, we reached a final settlement agreement regarding the amounts owed to us pursuant to our business interruption coverage, and we recognized a gain of \$81.0 million, which is reflected in our Corporate and Other segment.

During 2017, 2018 and 2019, the EPA granted the Cheyenne Refinery and Woods Cross Refinery each a one-year small refinery exemption from the RFS program requirements for the 2016, 2017 and 2018, respectively, calendar years. As a result, the Cheyenne

Refinery's and Woods Cross Refinery's gasoline and diesel production are not subject to the RVO for the respective years. Upon each exemption granted, we increased our inventory of RINs and reduced our cost of products sold.

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Various subsidiaries of HollyFrontier are currently intervenors in three lawsuits brought by renewable fuel interest groups against the EPA in federal courts alleging violations of the RFS under the Clean Air Act and challenging the EPA's handling of small refinery exemptions. We intervened to vigorously defend the EPA's position on small refinery exemptions because we believe the EPA correctly applied applicable law to the matters at issue. On January 24, 2020, in the first of these lawsuits, the U.S. Court of Appeals for the Tenth Circuit vacated the small refinery exemptions granted to two of our refineries for 2016 and remanded the case to the EPA for further proceedings. On April 15, 2020, the Tenth Circuit entered its mandate, remanding the matter back to the EPA. On September 4, 2020, various subsidiaries of HollyFrontier filed a Petition for a Writ of Certiorari with the U.S. Supreme Court appealing the Tenth Circuit decision. On January 8, 2021, the U.S. Supreme Court granted HollyFrontier's petition. We anticipate a decision from the Supreme Court in June 2021. We expect that we will not know what steps the EPA will take with respect to our 2016 small refinery exemptions, or how the case will impact future small refinery exemptions until after the Supreme Court's decision in this matter. The second lawsuit is before the Tenth Circuit. The matter is fully briefed and remains pending before that court. The third lawsuit is before the DC Circuit. Briefing of the issues before the court commenced on December 7, 2020; however, in light of the Supreme Court's decision to hear HollyFrontier's appeal of the Tenth Circuit decision, this case was stayed pending a decision from the Supreme Court. In December 2020, various subsidiaries of HollyFrontier also filed a petition for review in the DC Circuit challenging the EPA's denial of small refinery exemption petitions for years prior to 2016. The petition was consolidated with petitions from eight other refining companies challenging the same decision. In light of the Supreme Court's decision to hear HollyFrontier's appeal of the Tenth Circuit decision, this case was stayed pending a decision from the Supreme Court. We are unable to estimate the costs we may incur, if any, at this time. It is too early to assess how the matter currently on appeal to the U.S. Supreme Court will impact future small refinery exemptions or whether the remaining cases are expected to have any impact on us.

We have been party to multiple proceedings before the Federal Energy Regulatory Commission ("FERC") challenging the rates charged by SFPP, L.P. ("SFPP") on its East Line pipeline facilities from El Paso, Texas to Phoenix, Arizona. In March 2018, FERC ruled that SFPP, as a master limited partnership, was prohibited from including an allowance for investor income taxes in the cost of service underlying its East Line rates. We reached a negotiated settlement with SFPP that provides for a payment to us of \$51.5 million. FERC approved the settlement on December 31, 2020 subject to a rehearing period that resulted in a settlement effective date of February 2, 2021. Under the terms of the settlement agreement, SFPP made the \$51.5 million payment to us on February 10, 2021. As of December 31, 2020, we had no enforceable right to collect any of the settlement. Accordingly, recognition of a gain occurred when the uncertainties were resolved, and we held an enforceable right to collect on February 2, 2021.

Contractual Commitments

We have various long-term agreements (entered in the normal course of business) to purchase crude oil, natural gas, feedstocks and other resources to ensure we have adequate supplies to operate our refineries. The substantial majority of our purchase obligations are based on market prices or rates. These contracts expire in 2021 through 2025.

We also have long-term agreements with third parties for the transportation and storage of crude oil, natural gas and feedstocks to our refineries and for terminal and storage services that expire in 2021 through 2039. At December 31, 2020, the minimum future transportation and storage fees under transportation agreements having terms in excess of one year are as follows:

(In thousands)

2021	\$	129,661
2022		113,288
2023		113,360
2024		112,884
2025		113,669
Thereafter		580,889
Total	\$	<u>1,163,751</u>

Transportation and storage costs incurred under these agreements totaled \$139.0 million, \$144.8 million and \$143.3 million for the years ended December 31, 2020, 2019 and 2018, respectively. These amounts do not include contractual commitments under our long-term transportation agreements with HEP, as all transactions with HEP are eliminated in these consolidated financial statements.

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NOTE 20: 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 the Corporate, Other and Eliminations column.

The Refining segment represents the operations of the El Dorado, Tulsa, Navajo 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 geographic regions of the United States. HFC Asphalt operates various asphalt terminals in Arizona, New Mexico and Oklahoma. The Refining segment also included the operations of the Cheyenne Refinery until it permanently ceased petroleum refining operations during the third quarter of 2020.

The Lubricants and Specialty Products segment involves PCLI's production operations, located in Mississauga, Ontario, that includes 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 Red Giant Oil, one of the largest suppliers of locomotive engine oil in North America. Also, effective with our acquisition that closed February 1, 2019, the Lubricants and Specialty Products segment includes Sonneborn, a producer of specialty hydrocarbon chemicals such as white oils, petrolatums and waxes with manufacturing facilities in the United States and Europe..

The HEP segment includes all of the operations of HEP, which owns and operates logistics and refinery assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery processing units in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. The HEP segment also includes a 75% ownership interest in UNEV (a consolidated subsidiary of HEP) and 50% ownership interest in each of the Osage Pipeline, the Cheyenne Pipeline and Cushing Connect. 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.

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The accounting policies for our segments are the same as those described in the summary of significant accounting policies (see Note 1).

	Refining	Lubricants and Specialty Products	HEP	Corporate, Other and Eliminations ⁽²⁾	Consolidated Total
(In thousands)					
Year Ended December 31, 2020					
Sales and other revenues:					
Revenues from external customers	\$ 9,286,658	\$ 1,792,745	\$ 98,039	\$ 6,201	\$ 11,183,643
Intersegment revenues	252,531	10,465	399,809	(662,805)	—
	\$ 9,539,189	\$ 1,803,210	\$ 497,848	\$ (656,604)	\$ 11,183,643
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 8,439,680	\$ 1,271,287	\$ —	\$ (552,162)	\$ 9,158,805
Lower of cost or market inventory valuation adjustment	\$ 82,214	\$ —	\$ —	\$ (3,715)	\$ 78,499
Operating expenses	\$ 988,045	\$ 216,068	\$ 147,692	\$ (51,528)	\$ 1,300,277
Selling, general and administrative expenses	\$ 127,298	\$ 157,816	\$ 9,989	\$ 18,497	\$ 313,600
Depreciation and amortization	\$ 324,617	\$ 80,656	\$ 95,445	\$ 20,194	\$ 520,912
Goodwill and long-lived asset impairments ⁽¹⁾	\$ 241,760	\$ 286,575	\$ 16,958	\$ —	\$ 545,293
Income (loss) from operations	\$ (664,425)	\$ (209,192)	\$ 227,764	\$ (87,890)	\$ (733,743)
Earnings of equity method investments	\$ —	\$ —	\$ 6,647	\$ —	\$ 6,647
Capital expenditures	\$ 152,726	\$ 32,473	\$ 59,283	\$ 85,678	\$ 330,160
Total assets	\$ 6,203,847	\$ 1,864,313	\$ 2,198,478	\$ 1,240,226	\$ 11,506,864

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	Lubricants and Specialty Products			HEP		Corporate, Other and Eliminations	Consolidated Total
	Refining						
(In thousands)							
Year Ended December 31, 2019							
Sales and other revenues:							
Revenues from external customers	\$ 15,284,110	\$ 2,081,221	\$ 121,027	\$ 220	\$ 17,486,578		
Intersegment revenues	312,678	11,307	411,750	(735,735)	—		
	<u>\$ 15,596,788</u>	<u>\$ 2,092,528</u>	<u>\$ 532,777</u>	<u>\$ (735,515)</u>	<u>\$ 17,486,578</u>		
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 12,980,506	\$ 1,580,036	\$ —	\$ (642,158)	\$ 13,918,384		
Lower of cost or market inventory valuation adjustment	\$ (119,775)	\$ —	\$ —	\$ —	\$ (119,775)		
Operating expenses	\$ 1,095,488	\$ 231,523	\$ 161,996	\$ (94,955)	\$ 1,394,052		
Selling, general and administrative expenses	\$ 120,518	\$ 168,595	\$ 10,251	\$ 54,872	\$ 354,236		
Depreciation and amortization	\$ 309,932	\$ 88,781	\$ 96,706	\$ 14,506	\$ 509,925		
Goodwill impairment	\$ —	\$ 152,712	\$ —	\$ —	\$ 152,712		
Income (loss) from operations	\$ 1,210,119	\$ (129,119)	\$ 263,824	\$ (67,780)	\$ 1,277,044		
Earnings of equity method investments	\$ —	\$ —	\$ 5,180	\$ —	\$ 5,180		
Capital expenditures	\$ 199,002	\$ 40,997	\$ 30,112	\$ 23,652	\$ 293,763		
Total assets	\$ 7,189,094	\$ 2,223,418	\$ 2,205,437	\$ 546,892	\$ 12,164,841		
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)	—		
	<u>\$ 16,176,563</u>	<u>\$ 1,812,703</u>	<u>\$ 506,220</u>	<u>\$ (780,820)</u>	<u>\$ 17,714,666</u>		
Cost of products sold (exclusive of lower of cost or market inventory valuation 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		
Total assets	\$ 6,465,155	\$ 1,506,209	\$ 2,142,027	\$ 881,210	\$ 10,994,601		

(1) The results of our HEP reportable segment for the year ended December 31, 2020 include a long-lived asset impairment charge attributed to HEP's logistics assets at our Cheyenne Refinery.

(2) For the year ended December 31, 2020, Corporate and Other includes \$3.9 million of operating expenses and \$65.1 million of capital expenditures related to the construction of our renewable diesel units. Also, for the year ended December 31, 2020, Corporate and Other includes \$14.0 million of decommissioning and other shutdown costs related to our Cheyenne Refinery. In addition, for the year ended December 31, 2020, Corporate and Other includes \$11.4 million in other operating costs related to our Cheyenne facility.

HOLLYFRONTIER CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Continued

NOTE 21: Quarterly Information (Unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
(In thousands, except per share data)					
Year Ended December 31, 2020					
Sales and other revenues	\$ 3,400,545	\$ 2,062,930	\$ 2,819,400	\$ 2,900,768	\$ 11,183,643
Operating costs and expenses	\$ 3,810,847	\$ 2,252,906	\$ 2,846,618	\$ 3,007,015	\$ 11,917,386
Loss from operations ⁽¹⁾⁽²⁾	\$ (410,302)	\$ (189,976)	\$ (27,218)	\$ (106,247)	\$ (733,743)
Income (loss) before income taxes	\$ (455,452)	\$ (181,318)	\$ 27,918	\$ (138,194)	\$ (747,046)
Net loss attributable to HollyFrontier stockholders	\$ (304,623)	\$ (176,677)	\$ (2,401)	\$ (117,747)	\$ (601,448)
Net loss per share - basic	\$ (1.88)	\$ (1.09)	\$ (0.01)	\$ (0.73)	\$ (3.72)
Net loss per share - diluted	\$ (1.88)	\$ (1.09)	\$ (0.01)	\$ (0.73)	\$ (3.72)
Dividends per common share	\$ 0.35	\$ 0.35	\$ 0.35	\$ 0.35	\$ 1.40
Average number of shares of common stock outstanding:					
Basic	161,873	161,889	162,015	162,151	161,983
Diluted	161,873	161,889	162,015	162,151	161,983
Year Ended December 31, 2019					
Sales and other revenues	\$ 3,897,247	\$ 4,782,615	\$ 4,424,828	\$ 4,381,888	\$ 17,486,578
Operating costs and expenses	\$ 3,507,906	\$ 4,450,874	\$ 3,998,049	\$ 4,252,705	\$ 16,209,534
Income from operations ⁽³⁾⁽⁴⁾	\$ 389,341	\$ 331,741	\$ 426,779	\$ 129,183	\$ 1,277,044
Income before income taxes	\$ 363,991	\$ 306,153	\$ 401,001	\$ 100,359	\$ 1,171,504
Net income attributable to HollyFrontier stockholders	\$ 253,055	\$ 196,915	\$ 261,813	\$ 60,605	\$ 772,388
Net income per share - basic	\$ 1.48	\$ 1.16	\$ 1.60	\$ 0.38	\$ 4.64
Net income per share - diluted	\$ 1.47	\$ 1.15	\$ 1.58	\$ 0.37	\$ 4.61
Dividends per common share	\$ 0.33	\$ 0.33	\$ 0.33	\$ 0.35	\$ 1.34
Average number of shares of common stock outstanding:					
Basic	170,851	169,356	163,676	161,398	166,287
Diluted	172,239	170,547	165,011	162,898	167,385

(1) For 2020, loss from operations reflects non-cash lower of cost or market inventory valuation charges of \$560.5 million for the first quarter, and benefits of \$269.9 million, \$62.8 million and \$149.2 million for the second, third and fourth quarters, respectively.

(2) For 2020, loss from operations reflects non-cash long-lived asset impairment charges of \$436.9 million in the second quarter and goodwill and long-lived asset impairment charges of \$108.4 million in the fourth quarter.

(3) For 2019, income from operations reflects non-cash lower of cost or market inventory valuation benefits of \$232.3 million for the first quarter, and charges of \$47.8 million, \$34.1 million and \$30.7 million for the second, third and fourth quarters, respectively.

(4) For 2019, income from operations reflects goodwill impairment charges of \$152.7 million in the second quarter.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

We have had no change in, or disagreement with, our independent registered public accountants on matters involving accounting and financial disclosure.

Item 9A. Controls and Procedures

Evaluation of disclosure controls and procedures. Our principal executive officer and principal financial officer have evaluated, as required by Rule 13a-15(b) under the Securities Exchange Act of 1934 (the “Exchange Act”), our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e)) under the Exchange Act as of the end of the period covered by this annual report on Form 10-K. Our disclosure controls and procedures are designed to provide reasonable assurance that the information we are required to disclose in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure and is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. Based upon the evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2020.

Changes in internal control over financial reporting. There have been no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that occurred during our last fiscal quarter that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

See Item 8 for “Management's Report on its Assessment of the Company's Internal Control Over Financial Reporting” and “Report of the Independent Registered Public Accounting Firm.”

Item 9B. Other Information

There have been no events that occurred in the fourth quarter of 2020 that would need to be reported on Form 8-K that have not previously been reported.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by Items 401, 405, 406 and 407(c)(3), (d)(4) and (d)(5) of Regulation S-K in response to this item will be set forth in our definitive proxy statement for the annual meeting of stockholders to be held on May 12, 2021 and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by Items 402 and 407(e)(4) and (e)(5) of Regulation S-K in response to this item will be set forth in our definitive proxy statement for the annual meeting of stockholders to be held on May 12, 2021 and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The equity compensation plan information required by Item 201(d) and the information required by Item 403 of Regulation S-K in response to this item will be set forth in our definitive proxy statement for the annual meeting of stockholders to be held on May 12, 2021 and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by Items 404 and 407(a) of Regulation S-K in response to this item will be set forth in our definitive proxy statement for the annual meeting of stockholders to be held on May 12, 2021 and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by Item 9(e) of Schedule 14A in response to this item will be set forth in our definitive proxy statement for the annual meeting of stockholders to be held on May 12, 2021 and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this report

(1) Index to Consolidated Financial Statements

	Page in Form 10-K
Report of Independent Registered Public Accounting Firm	66
Consolidated Balance Sheets at December 31, 2020 and 2019	69
Consolidated Statements of Income for the years ended December 31, 2020, 2019 and 2018	70
Consolidated Statements of Comprehensive Income for the years ended December 31, 2020, 2019 and 2018	71
Consolidated Statements of Cash Flows for the years ended December 31, 2020, 2019 and 2018	72
Consolidated Statements of Equity for the years ended December 31, 2020, 2019 and 2018	73
Notes to Consolidated Financial Statements	74

(2) Index to Consolidated Financial Statement Schedules

All schedules are omitted since the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements or notes thereto.

(3) Exhibits

Filed or furnished, as applicable, as part of this Form 10-K are the following exhibits:

Exhibit Number	Description
2.1†	Asset Sale and Purchase Agreement, dated October 19, 2009, between Holly Refining & Marketing-Tulsa LLC, HEP Tulsa LLC and Sinclair Tulsa Refining Company (incorporated by reference to Exhibit 2.1 of Registrant's Current Report on Form 8-K filed October 21, 2009, File No. 1-03876).
2.2†	Amendment No. 1 to Asset Sale and Purchase Agreement, dated December 1, 2009, between Holly Refining & Marketing-Tulsa LLC, HEP Tulsa LLC and Sinclair Tulsa Refining Company (incorporated by reference to Exhibit 2.1 of Registrant's Current Report on Form 8-K filed December 7, 2009, File No. 1-03876).
2.3†	Asset Sale and Purchase Agreement, dated April 15, 2009, between Holly Refining & Marketing-Midcon, L.L.C. and Sunoco, Inc. (incorporated by reference to Exhibit 2.1 of Registrant's Current Report on Form 8-K filed April 16, 2009, File No. 1-03876).
2.4†	Share Purchase Agreement, dated October 29, 2016, by and between Suncor Energy Inc. and 9952110 Canada Inc. (incorporated by reference to Exhibit 2.1 of Registrant's Current Report on Form 8-K filed October 31, 2016, File No. 1-03876).
2.5†	Equity Purchase Agreement, dated November 12, 2018, by and between Sonneborn Holdings, L.P., Sonneborn Co-Op LLC, Sonneborn Coöperatief U.A. and HollyFrontier LSP Holdings LLC (incorporated by reference to Exhibit 2.1 of Registrant's Current Report on Form 8-K filed November 13, 2018, File No. 1-03846).
2.6	Waiver and Amendment to Equity Purchase Agreement, dated January 31, 2019, by and between Sonneborn Holdings, L.P., Sonneborn Co-Op LLC, Sonneborn Coöperatief U.A. and HollyFrontier LSP Holdings LLC (incorporated by reference to Exhibit 2.7 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2018. File No. 1-03876).
3.1	Amended and Restated Certificate of Incorporation of HollyFrontier Corporation (incorporated by reference to Exhibit 3.1 of Registrant's Current Report on Form 8-K filed July 8, 2011, File No. 1-03876).
3.2*	Amended and Restated Bylaws of HollyFrontier Corporation.
4.1	Indenture, dated March 22, 2016, between HollyFrontier Corporation and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.1 of Registrant's Current Report on Form 8-K filed March 22, 2016, File No. 1-03876).
4.2	Supplemental Indenture, dated March 22, 2016, between HollyFrontier Corporation and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.2 of Registrant's Current Report on Form 8-K filed March 22, 2016, File No. 1-03876).
4.3	Second Supplemental Indenture, dated as of September 28, 2020, between HollyFrontier Corporation and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.2 of Registrant's Current Report on Form 8-K dated September 28, 2020, File No. 1-03876).
4.4	Indenture, dated February 4, 2020, by and among Holly Energy Partners, L.P., Holly Energy Finance Corp., each of the Guarantors party thereto and U.S. Bank National Association (incorporated by reference to Exhibit 4.1 of Holly Energy Partners, L.P.'s Current Report on Form 8-K filed February 4, 2020, File No. 1-32225).
4.5*	Description of Capital Stock pursuant to Item 601(b)(4) of Reg. S-K.
10.1	Amended and Restated Intermediate Pipelines Agreement, dated June 1, 2009, among Holly Corporation, Navajo Refining Company, L.L.C, Holly Energy Partners, L.P., Holly Energy Partners – Operating, L.P., HEP Pipeline, L.L.C., Lovington-Artesia, L.L.C., HEP Logistics Holdings, L.P., Holly Logistics Services, L.L.C. and HEP Logistics GP, L.L.C. (incorporated by reference to Exhibit 10.2 of Holly Energy Partners, L.P.'s Current Report on Form 8-K filed June 5, 2009, File No. 1-32225).

Exhibit Number	Description
10.2	Amendment to Amended and Restated Intermediate Pipelines Agreement, dated December 9, 2010, among Navajo Refining Company, L.L.C, Holly Energy Partners, L.P., Holly Energy Partners – Operating, L.P., HEP Pipeline, L.L.C., Lovington-Artesia, L.L.C., HEP Logistics Holdings, L.P., Holly Logistics Services, L.L.C. and HEP Logistics GP, L.L.C. (incorporated by reference to Exhibit 10.4 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2010, File No. 1-03876).
10.4	Tulsa Purchase Option Agreement, dated August 1, 2009, between Holly Refining & Marketing - Tulsa LLC and HEP Tulsa LLC (incorporated by reference to Exhibit 10.4 of Holly Energy Partners L.P.'s Current Report on Form 8-K filed August 6, 2009, File No. 1-32225).
10.5	Third Amended and Restated Crude Pipelines and Tankage Agreement, dated March 12, 2015, by and among Navajo Refining Company, L.L.C., Holly Refining & Marketing Company - Woods Cross LLC, HollyFrontier Refining & Marketing LLC, Holly Energy Partners-Operating, L.P., HEP Pipeline, L.L.C. and HEP Woods Cross L.L.C. (incorporated by reference to Exhibit 10.2 of Registrant's Current Report on Form 8-K filed March 16, 2015, File No. 1-03876).
10.6	First Amendment to Third Amended and Restated Crude Pipelines and Tankage Agreement, dated April 22, 2019, by and among HollyFrontier Navajo Refining LLC, HollyFrontier Woods Cross Refining LLC, HollyFrontier Refining & Marketing LLC, Holly Energy Partners - Operating, L.P., HEP Pipeline, L.L.C. and HEP Woods Cross, L.L.C. (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 10-Q for the quarterly period ended March 31, 2019, File No. 1-03876).
10.7	Second Amendment to Third Amended and Restated Crude Pipelines and Tankage Agreement dated as of May 26, 2020, by and among HollyFrontier Navajo Refining LLC, HollyFrontier Woods Cross Refining LLC, HollyFrontier Refining & Marketing LLC, Holly Energy Partners - Operating, L.P., HEP Pipeline, L.L.C. and HEP Woods Cross, L.L.C. (incorporated by reference to Exhibit 10.4 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020, File No. 1-03876).
10.8	Third Amendment to Third Amended and Restated Crude Pipelines and Tankage Agreement entered into as of February 8, 2021, effective as of January 1, 2021, by and among HollyFrontier Navajo Refining LLC, HollyFrontier Woods Cross Refining LLC, HollyFrontier Refining & Marketing LLC, Holly Energy Partners - Operating, L.P., HEP Pipeline, L.L.C. and HEP Woods Cross, L.L.C. (incorporated by reference to Exhibit 10.8 of Registrant's Current Report on Form 8-K dated February 11, 2021, File No. 1-03876).
10.9	Twenty-First Amended and Restated Omnibus Agreement, entered into as of February 8, 2020, effective as of January 1, 2021, by and between HollyFrontier Corporation, Holly Energy Partners, L.P. and certain of their respective subsidiaries (incorporated by reference to Exhibit 10.5 of Registrant's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).
10.10	Senior Unsecured 5-Year Revolving Credit Agreement, dated July 1, 2014, among HollyFrontier Corporation, as borrower, Union Bank, N. A. as administrative agent, and each of the financial institutions party thereto as lenders (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed July 8, 2014, File No. 1-03876).

- 10.11 First Amendment to Senior Unsecured 5-Year Revolving Credit Agreement, dated as of February 16, 2017, among HollyFrontier Corporation, as borrower, The Bank of Tokyo-Mitsubishi UFJ, Ltd., as administrative agent, and the lenders party thereto (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed February 21, 2017, File No. 1-03876).
- 10.12 Release of Subsidiary Guarantee, dated December 29, 2015, by and among HollyFrontier Corporation and Union Bank, N.A. (incorporated by reference to Exhibit 10.40 of Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2015, File No. 1-03876).
- 10.13 Amended and Restated Limited Liability Company Agreement of HEP UNEV Holdings LLC, dated July 12, 2012, among HEP UNEV Holdings LLC, HollyFrontier Holdings LLC and Holly Energy Partners, L.P. (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2012, File No. 1-03876).
- 10.14 Amended and Restated Unloading and Blending Services Agreement, dated January 18, 2017, effective September 16, 2016, by and between HollyFrontier Refining & Marketing LLC, Holly Energy Partners - Operating, L.P. and HEP Refining L.L.C. (incorporated by reference to Exhibit 10.26 of Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, File No. 1-03876).

Exhibit	
Number	Description
10.15	Seventh Amended and Restated Master Throughput Agreement, entered into as of February 8, 2021, effective as of January 1, 2021, by and between HollyFrontier Refining & Marketing LLC and Holly Energy Partners - Operating, L.P. (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).
10.16	Construction Payment Agreement, dated as of October 16, 2015, by and between HEP Refining, L.L.C. and HollyFrontier Refining & Marketing LLC (incorporated by reference to Exhibit 10.3 of Registrant's Current Report on Form 8-K filed October 21, 2015, File No. 1-03876).
10.17	Fourth Amended and Restated Services and Secondment Agreement, entered into as of February 8, 2021, effective as of January 1, 2021, by and among Holly Logistic Services, L.L.C., certain subsidiaries of Holly Energy Partners, L.P. and certain subsidiaries of HollyFrontier Corporation (incorporated by reference to Exhibit 10.7 to Registrant's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).
10.18	Sixth Amended and Restated Master Lease and Access Agreement, dated as of February 8, 2021, effective as of January 1, 2021, by and among certain subsidiaries of Holly Energy Partners, L.P. and certain subsidiaries of HollyFrontier Corporation (incorporated by reference to Exhibit 10.6 of Registrant's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).
10.19	Master Tolling Agreement (Refinery Assets), dated as of November 2, 2015, by and between Frontier El Dorado Refining LLC and Holly Energy Partners-Operating L.P. (incorporated by reference to Exhibit 10.2 of Registrant's Current Report on Form 8-K filed November 3, 2015, File No. 1-03876).
10.20	Amendment to Master Tolling Agreement (Refinery Assets), dated effective January 1, 2017, by and among HollyFrontier El Dorado Refining LLC, HollyFrontier Woods Cross Refining LLC, and Holly Energy Partners-Operating, L.P. (incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017, File No. 1-03876).
10.21	Amended and Restated Master Tolling Agreement (Operating Assets), dated October 3, 2016, by and between HollyFrontier El Dorado Refining LLC, HollyFrontier Woods Cross Refining LLC, Holly Energy Partners - Operating L.P., HollyFrontier Corporation and Holly Energy Partners, L.P. (incorporated by reference to Exhibit 10.2 to Registrant's Current Report on Form 8-K filed October 4, 2016, File No. 1-03876).
10.22	Amendment to Amended and Restated Master Tolling Agreement (Operating Assets), dated effective January 1, 2017, by and among HollyFrontier El Dorado Refining LLC, HollyFrontier Woods Cross Refining LLC, and Holly Energy Partners-Operating, L.P. (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017, File No. 1-03876).
10.23	Second Amendment to Amended and Restated Master Tolling Agreement (Operating Assets), dated effective October 29, 2018, by and between HollyFrontier El Dorado Refining LLC, HollyFrontier Woods Cross Refining LLC and Holly Energy Partners - Operating L.P. (incorporated by reference to Exhibit 10.7 of Registrant's Current Report on Form 8-K filed November 1, 2018, File No. 1-03846).
10.24	Pipeline Deficiency Agreement, dated August 8, 2016, by and between HollyFrontier Refining & Marketing LLC and Holly Energy Partners - Operating, L.P. (incorporated by reference to Exhibit 10.5 to Registrant's Current Report on Form 8-K filed August 10, 2016, File No. 1-03876).
10.25	Construction Payment Agreement, dated October 29, 2018, effective December 13, 2017, by and among HEP Tulsa, LLC and HollyFrontier Refining & Marketing LLC (incorporated by reference to Exhibit 10.3 of Registrant's Current Report on Form 8-K filed November 1, 2018, File No. 1-03876).
10.26	Services Agreement, entered into as of February 8, 2021, effective as of January 1, 2021, by and between HollyFrontier Refining & Marketing LLC and Holly Energy Partners – Operating, L.P. (incorporated by reference to Exhibit 10.3 of Registrant's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).

Exhibit**Number Description**

- 10.28+ HollyFrontier Corporation Long-Term Incentive Compensation Plan (formerly the Holly Corporation Long-Term Incentive Compensation Plan), as amended and restated on May 24, 2007 as approved at the Annual Meeting of Stockholders of Holly Corporation on May 24, 2007 (incorporated by reference to Exhibit 10.4 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2008, File No. 1-03876).
- 10.29+ First Amendment to the HollyFrontier Corporation Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.5 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2008, File No. 1-03876).
- 10.30+ Second Amendment to the HollyFrontier Corporation Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed May 18, 2011, File No. 1-03876).
- 10.31+ Third Amendment to the HollyFrontier Corporation Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 4.6 of the Registrant's Registration Statement on Form S-8 filed November 9, 2012, File No. 333-184877).
- 10.32+ Fourth Amendment to the HollyFrontier Corporation Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.2 of Registrant's Current Report on Form 8-K filed May 15, 2015, File No. 1-03876).
- 10.33+ Fifth Amendment to the HollyFrontier Corporation Long-Term Incentive Plan, effective May 11, 2016 (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed May 16, 2016, File No. 1-03876).
- 10.34+ HollyFrontier Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K for filed May 15, 2020, File No. 1-03876).
- 10.35+ HollyFrontier Corporation Long-Term Incentive Plan UK Sub-Plan, effective February 14, 2017 (incorporated by reference to Exhibit 10.43 of Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, File No. 1-03876).
- 10.36+ HollyFrontier Corporation 2020 Long-Term Incentive Plan Sub-Plan for UK Employees (incorporated by reference to Exhibit 4.4 of Registrant's Registration Statement on Form S-8 filed June 1, 2020, File No. 333-238835).
- 10.37+ HollyFrontier Corporation Employee Form of Change in Control Agreement (incorporated by reference to Exhibit 10.46 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2016, File No. 1-03876).
- 10.38+ Form of Performance Share Unit Agreement (incorporated by reference to Exhibit 10.54 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2018, File No. 1-03876).
- 10.39+ Form of Performance Share Unit Agreement (incorporated by reference to Exhibit 10.42 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2019, File No. 1-03876).
- 10.40+ Form of Performance Share Unit Agreement (incorporated by reference to Exhibit 10.3 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020, File No. 1-03876).

- 10.41+* Form of Performance Share Unit Agreement.

Exhibit Number	Description
10.47+	Form of Restricted Stock Unit Agreement (for employees) (incorporated by reference to Exhibit 10.2 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020, File No. 1-03876).
10.48+	Form of Notice of Grant of Restricted Stock Units (for employees) (incorporated by reference to Exhibit 10.50 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2019, File No. 1-03876).
10.49+*	Form of Restricted Stock Unit Agreement (for employees).
10.50+*	Form of Notice of Grant of Restricted Stock Units (for employees).
10.51+	HollyFrontier Corporation Executive Nonqualified Deferred Compensation Plan (formerly the Frontier Deferred Compensation Plan) (incorporated by reference to Exhibit 10.73 of Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2012, File No. 1-03876).
10.52+	Form of HollyFrontier Corporation Indemnification Agreement to be entered into with officers and directors of HollyFrontier Corporation and its subsidiaries (incorporated by reference to Exhibit 10.2 of registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2019, File no. 1-03876).
10.53+	Amended and Restated Consulting Agreement and Release, dated June 30, 2020, by and between HollyFrontier Corporation, HollyFrontier Payroll Services, Inc. and James Stump (incorporated by reference to Exhibit 10.1 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020, File No. 1-03876).
21.1*	Subsidiaries of Registrant
23.1*	Consent of Independent Registered Public Accounting Firm
31.1*	Certification of Chief Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Chief Executive Officer under Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Chief Financial Officer under Section 906 of the Sarbanes-Oxley Act of 2002.
101++	The following financial information from Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2020, formatted as inline XBRL (Inline Extensible Business Reporting Language): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Income, (iii) Consolidated Statements of Comprehensive Income, (iv) Consolidated Statements of Cash Flows, (v) Consolidated Statements of Equity, and (vi) Notes to the Consolidated Financial Statements. The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
104++	Cover page Interactive Data File (formatted as inline XBRL and contained in exhibit 101).

* Filed herewith.

** Furnished herewith.

+ Constitutes management contracts or compensatory plans or arrangements.

++ Filed electronically herewith.

† Schedules and certain exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The registrant agrees to furnish supplementally a copy of the omitted schedules and exhibits to the SEC upon request.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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

(Registrant)

Date: February 24, 2021

/s/ Michael C. Jennings

Michael C. Jennings

Chief Executive Officer and President

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and as of the date indicated.

<u>Signature</u>	<u>Capacity</u>	<u>Date</u>
<u>/s/ Michael C. Jennings</u> Michael C. Jennings	Chief Executive Officer, President and Director	February 24, 2021
<u>/s/ Richard L. Voliva III</u> Richard L. Voliva III	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 24, 2021
<u>/s/ Indira Agarwal</u> Indira Agarwal	Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 24, 2021
<u>/s/ Franklin Myers</u> Franklin Myers	Chairman of the Board	February 24, 2021
<u>/s/ Anne-Marie N. Ainsworth</u> Anne-Marie N. Ainsworth	Director	February 24, 2021
<u>/s/ Douglas Y. Bech</u> Douglas Y. Bech	Director	February 24, 2021
<u>/s/ Anna C. Catalano</u> Anna C. Catalano	Director	February 24, 2021
<u>/s/ Leldon Echols</u> Leldon Echols	Director	February 24, 2021
<u>/s/ Manuel J. Fernandez</u> Manuel J. Fernandez	Director	February 24, 2021
<u>/s/ R. Craig Knocke</u> R. Craig Knocke	Director	February 24, 2021
<u>/s/ Robert J. Kostelnik</u> Robert J. Kostelnik	Director	February 24, 2021
<u>/s/ James H. Lee</u> James H. Lee	Director	February 24, 2021
<u>/s/ Michael E. Rose</u> Michael E. Rose	Director	February 24, 2021

**AMENDED AND RESTATED BY-LAWS OF
HOLLYFRONTIER CORPORATION
EFFECTIVE AS OF DECEMBER 23, 2020**

ARTICLE I

OFFICES

The principal office of HollyFrontier Corporation (the “Corporation”) in the State of Delaware shall be in the City of Wilmington, County of New Castle, and the name of the resident agent in charge thereof is The Corporation Trust Company.

The Corporation may, in addition to its principal office in the State of Delaware, establish and maintain an office or offices at such other places as the Board of Directors of the Corporation (the “Board”) may from time to time deem necessary or desirable.

ARTICLE II

STOCKHOLDERS MEETINGS

Section 1. *Place of Meetings.* The annual meeting of the stockholders for the election of directors and any special meetings of stockholders shall be held at such time and place as shall be stated in the notice of such meeting.

Section 2. *Annual Meetings.*

(a) The annual meeting of the stockholders for the election of directors and for the transaction of any other business properly presented for action at such meeting shall be held on the second Thursday in May of each year or on such other day as may be fixed by resolution of the Board; provided, however, that if the Board deems it impracticable to hold the meeting on the date originally determined, such annual meeting of the stockholders shall be held as soon as practicable after such date on a date to be specified in a resolution of the Board.

(b) An annual meeting of the stockholders may be adjourned by the Chairman (or other presiding officer at an annual meeting of the stockholders) for any reason (including, if the Chairman or other presiding officer determines that it would be in the best interests of the Corporation to extend the period of time for the solicitation of proxies) from time to time and place to place until the Chairman or other presiding officer shall determine that the business to be conducted at the meeting is completed, which determination shall be conclusive.

(c) At an annual meeting of the stockholders, only such business shall be conducted, and only such proposals shall be acted upon, as shall have been brought before the annual meeting of the stockholders (i) by, or at the direction of, the Board or (ii) by any stockholder of the Corporation who complies with the notice procedures set forth in this Section 2 or, with respect to the election

of directors, Article III, Section 12 of these By-Laws (and, as applicable with respect to a Proxy Access Notice, Section 2(d) of these By-Laws). For a proposal to be properly brought before an annual meeting of the stockholders by a stockholder, the stockholder must have given timely notice thereof in writing to the Secretary of the Corporation. To be timely, a stockholder's notice for a stockholder proposal (other than a director nomination) must be delivered to, or mailed and received at, the principal executive offices of the Corporation not less than 90 days nor more than 120 days prior to the anniversary date of the immediately preceding annual meeting of stockholders of the Corporation; provided, however, if no annual meeting of the stockholders was held in the previous year, or if the date of the applicable annual meeting of the stockholders has been changed by more than 30 days from the date contemplated at the time of the previous year's proxy statement, a stockholder's notice for a stockholder proposal (other than a director nomination) must be received by the Secretary not less than 90 days nor more than 120 days prior to such annual meeting of the stockholders date or, if the public disclosure of such annual meeting is less than 100 days prior to the date of such annual meeting of the stockholders, a stockholder's notice for a stockholder proposal (other than a director nomination) must be received by the Secretary no later than the seventh day following the day on which the public disclosure of the date of such meeting was made. In no event shall any adjournment or postponement of an annual meeting of the stockholders, or the public announcement thereof, commence a new time period for the giving of a stockholder's notice as described above. For purposes of these bylaws, "public disclosure" means the disclosure in a press release reported by the Business Wire, Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Securities Exchange Act of 1934 (such act, as amended, or any successor provision thereto, and the rules and regulations promulgated thereunder, the "Exchange Act"). In addition, in order to be considered timely, any information required by this Section 2(c) to be provided to the Corporation must be supplemented (by delivery to the Secretary): (1) no later than ten (10) days following the record date for the applicable meeting or any adjournment or postponement thereof, to disclose the foregoing information as of such record date; and (2) no later than eight (8) days before the meeting or any adjournment or postponement thereof, to disclose the foregoing information as of the date that is no earlier than ten (10) days prior to such meeting. For the avoidance of doubt, the requirement to update and supplement such information shall not permit any stockholder or other person to amend or update any proposal or to submit any new proposal, including by changing or adding matters, business and or resolutions proposed or be deemed to cure any defects or limit the remedies (including, without limitation, under these By-Laws) available to the Corporation relating to any defect. The obligation to update and supplement as set forth in this paragraph or any other Section of these By-Laws shall not limit the Corporation's rights with respect to any deficiencies in any notice provided by a stockholder or extend any applicable deadlines hereunder or under any other provision of these By-Laws. A stockholder's notice to the Secretary shall set forth as to each matter the stockholder proposes to bring before the annual meeting of the stockholders:

- (i) a brief description of the proposal desired to be brought before the annual meeting of the stockholders, including the complete text of any resolutions intended to be submitted at the annual meeting of the stockholders and the reasons for conducting such business at the annual meeting of the stockholders;
- (ii) the name and address, as they appear on the Corporation's books, of the stockholder proposing such matter and any Stockholder Associated Person;

- (iii) the class and number of shares of the Corporation's stock which are, directly or indirectly, held of record or beneficially owned by the stockholder on the date of such stockholder's notice and by any Stockholder Associated Person on the date of such stockholder's notice, the dates on which such stockholder or Stockholder Associated Person acquired such securities and documentary evidence of such record or beneficial ownership;
- (iv) any interest of the stockholder or any Stockholder Associated Person in such proposal;
- (v) a list of all of the derivative securities (as defined under Rule 16a-1 under the Exchange Act) and other derivatives or similar agreements or arrangements with an exercise or conversion privilege or a periodic or settlement payment or payments or mechanism at a price or in an amount or amounts related to any security of the Corporation or with a value derived or calculated in whole or in part from the value of the Corporation or any security of the Corporation, in each case, directly or indirectly held of record or beneficially owned by such stockholder or any Stockholder Associated Person and each other direct or indirect opportunity of such stockholder or any Stockholder Associated Person to profit or share in any profit derived from any increase or decrease in the value of any security of the Corporation, in each case, regardless of whether (a) such interest conveys any voting rights in such security to such stockholder or Stockholder Associated Person, (b) such interest is required to be, or is capable of being, settled through delivery of such security or (c) such person may have entered into other transactions that hedge the economic effect of such interest (any such interest described in this clause (v) being a "Derivative Interest");
- (vi) the name of each person with whom such stockholder or Stockholder Associated Person has any agreement, arrangement or understanding (whether written or oral) (a) for the purposes of acquiring, holding, voting (except pursuant to a revocable proxy given to such person in response to a public proxy or consent solicitation made generally by such person to all holders of shares of the Corporation) or disposing of any shares of capital stock of the Corporation, (b) to cooperate in obtaining, changing or influencing the control of the Corporation (except independent financial, legal and other advisors acting in the ordinary course of their respective businesses), (c) with the effect or intent of increasing or decreasing the voting power of, or that contemplates any person voting together with, any such stockholder or Stockholder Associated Person with respect to any shares of the capital stock of the Corporation or any business proposed by the stockholder or (d) otherwise in connection with any business proposed by a stockholder and a description of each such agreement, arrangement or understanding (any agreement, arrangement or understanding described in this clause (vi) being a "Voting Agreement");
- (vii) any agreement, arrangement, understanding, relationship or otherwise, including any repurchase or similar so-called "stock borrowing" agreement or arrangement, involving such stockholder or Stockholder Associated Person, directly or indirectly, the purpose or effect of which is to mitigate loss to, reduce the economic risk (of ownership or otherwise) of any class or series of the shares of the Corporation by, manage the risk of

share price changes for, or increase or decrease the voting power of, such stockholder, such beneficial owner or any of their respective affiliates or associates or others acting in concert therewith with respect to any class or series of the shares of the Corporation, or which provides, directly or indirectly, the opportunity to profit or share in any profit derived from any decrease in the price or value of any class or series of the shares of the corporation (any of the foregoing, a “Short Interest”);

- (viii) any equity interests, Derivative Interests, Short Interests and in any principal competitor of the Corporation held by such stockholder or Stockholder Associated Person and any direct or indirect interest of such stockholder or Stockholder Associated Person in any contract with the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement);
- (ix) details of all other material interests of each stockholder or any Stockholder Associated Person in such proposal or any security of the Corporation (including, without limitation, any rights to dividends or performance related fees based on any increase or decrease in the value of such security or Derivative Interests) (collectively, “Other Interests”);
- (x) a description of all economic terms of all such Derivative Interests, Voting Agreements, Short Interests or Other Interests and copies of all agreements and other documents (including, without limitation, master agreements, confirmations and all ancillary documents and the names and details of counterparties to, and brokers involved in, all such transactions) relating to each such Derivative Interest, Voting Agreement, Short Interest or Other Interest;
- (xi) a list of all transactions by such stockholder and any Stockholder Associated Person involving any securities of the Corporation or any Derivative Interests, Voting Agreements or Other Interests within the six month period prior to the date of the notice;
- (xii) all information that would be required to be set forth in a Schedule 13D filed pursuant to Rule 13d-1(a) or an amendment pursuant to Rule 13d-2(a) if such a statement were required to be filed under the Exchange Act and the rules and regulations promulgated thereunder by such stockholder or Stockholder Associated Person;
- (xiii) any other information relating to such stockholder and any Stockholder Associated Person that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for the proposal pursuant to Regulation 14A of the Exchange Act; and
- (xiv) a representation that the stockholder is a holder of record of capital stock of the Corporation entitled to vote at such annual meeting of the stockholders and intends to appear in person or by proxy at the annual meeting of the stockholders to propose such business.

In addition, a stockholder seeking to submit such proposal at the meeting shall promptly provide any other information reasonably requested by the Corporation.

“Stockholder Associated Person” of any stockholder means:

- (i) any beneficial owner of shares of stock of the Corporation on whose behalf any proposal or nomination is made by such stockholder;
- (ii) any affiliates or associates of such stockholder or any beneficial owner described in clause (i); and
- (iii) each other person with whom any of the persons described in the foregoing clauses (i) and (ii) either is acting in concert with respect to the Corporation or has any agreement, arrangement or understanding (whether written or oral) for the purpose of acquiring, holding, voting (except pursuant to a revocable proxy given to such person in response to a public proxy solicitation made generally by such person to all stockholders entitled to vote at any meeting) or disposing of any capital stock of the Corporation or to cooperate in obtaining, changing or influencing the control of the Corporation (except independent financial, legal and other advisors acting in the ordinary course of their respective businesses).

(d)

(i) Subject to the terms and conditions set forth in these By-Laws, the Corporation shall include in its proxy statement for an annual meeting of the stockholders held after the 2021 annual meeting of the stockholders the name, together with the Required Information (as defined below), of qualifying person(s) nominated for election (the “Stockholder Nominee”) to the Board by an eligible stockholder or eligible group of stockholders that satisfy the requirements of this Section 2(d), including qualifying as an Eligible Stockholder (as defined in subsection (v) below) and that expressly elects at the time of providing the written notice required by this Section 2(d) (a “Proxy Access Notice”) to have its nominee included in the Corporation’s proxy materials pursuant to this Section 2(d). For the purposes of this Section 2(d):

- (A) “Constituent Holder” shall mean any stockholder, fund included within a Qualifying Fund (as defined in subsection (v) below) or beneficial holder whose stock ownership is counted for the purpose of qualifying as holding the Proxy Access Request Required Shares (as defined in subsection (v) below) or qualifying as an Eligible Stockholder (as defined in subsection (v) below); and
- (B) a stockholder (including any Constituent Holder) shall be deemed to “own” only those outstanding shares of voting stock as to which the stockholder (or such Constituent Holder) itself possesses both (a) the full voting and investment rights pertaining to the shares and (b) the full economic interest in (including the opportunity for profit and risk of loss on) such shares. The number of shares calculated in accordance with the foregoing clauses (a) and (b) shall be deemed not to include (and to the extent any of the following arrangements have been

entered into by affiliates of the stockholder (or of any Constituent Holder), shall be reduced by) any shares (x) sold by such stockholder or Constituent Holder (or any of either's affiliates) in any transaction that has not been settled or closed, including any short sale, (y) borrowed by such stockholder or Constituent Holder (or any of either's affiliates) for any purposes or purchased by such stockholder or Constituent Holder (or any of either's affiliates) pursuant to an agreement to resell, or (z) subject to any option, warrant, forward contract, swap, contract of sale, other derivative or similar agreement entered into by such stockholder or Constituent Holder (or any of either's affiliates), whether any such instrument or agreement is to be settled with shares, cash or other consideration, in any such case which instrument or agreement has, or is intended to have, or if exercised by either party thereto would have, the purpose or effect of (i) reducing in any manner, to any extent or at any time in the future, such stockholder's or Constituent Holder's (or either's affiliates') full right to vote or direct the voting of any such shares, and/or (ii) hedging, offsetting or altering to any degree gain or loss arising from the full economic ownership of such shares by such stockholder or Constituent Holder (or either's affiliates). For purposes of this Section 2(d), a stockholder (including any Constituent Holder) shall "own" shares held in the name of a nominee or other intermediary so long as the stockholder itself (or such Constituent Holder itself) retains the right to instruct how the shares are voted with respect to the election of directors and the right to direct the disposition thereof and possesses the full economic interest in the shares. For purposes of this Section 2(d), a stockholder's (including any Constituent Holder's) ownership of shares shall be deemed to continue during any period in which the stockholder has loaned such shares so long as such stockholder retains the power to recall such shares on no greater than five (5) business days' notice or has delegated any voting power over such shares by means of a proxy, power of attorney or other instrument or arrangement so long as such delegation is revocable at any time by the stockholder; provided that in the case of loaned shares, such shares are recalled either (i) no later than the final date when a Proxy Access Notice pursuant to this Section 2(d) may be timely delivered to the Secretary or (ii) upon the request of the Corporation following the Corporation's indication to the Eligible Stockholder that its nominee(s) will be included in the Corporation's proxy statement subject to the terms herein; provided that, in either such case where the shares are recalled in accordance with the foregoing, such shares remain recalled (and otherwise "owned" as defined herein) through the annual meeting of the stockholders. The terms "owned," "owning" and other variations of the word "own" shall have correlative meanings.

- (ii) For purposes of this Section 2, the "Required Information" that the Corporation will include in its proxy statement is: (i) the information concerning the Stockholder Nominee and the Eligible Stockholder that the Corporation determines is required to be disclosed in the Corporation's proxy statement by the regulations promulgated under Regulation 14A under the Exchange Act; and (ii) if the Eligible Stockholder so elects, a Statement (as defined in Section 2(d)(vii) below). The Corporation shall also include the name of the Stockholder Nominee in its proxy card. For the avoidance of doubt, and any other provision of these By-Laws

notwithstanding, the Corporation may in its sole discretion solicit against, and include in the proxy statement (and other proxy materials) its own statements or other information relating to, any Eligible Stockholder and/or Stockholder Nominee, including any information provided to the Corporation with respect to the foregoing.

(iii) To be timely, a stockholder's Proxy Access Notice must be delivered to the Secretary at the principal executive offices of the Corporation not less than one hundred twenty (120) calendar days in advance of the first anniversary of the date the Corporation's proxy statement was released to stockholders for the preceding year's annual meeting of the stockholders. In no event shall the public announcement of an adjournment or postponement of a stockholders' meeting (or such adjournment or postponement) commence a new time period for the giving of a Proxy Access Notice.

(iv) The number of Stockholder Nominees (including Stockholder Nominees that were submitted by an Eligible Stockholder for inclusion in the Corporation's proxy materials pursuant to this Section 2(d) but either are subsequently withdrawn or that the board of directors decides to nominate as board of directors' nominees) appearing in the Corporation's proxy materials with respect to an annual meeting of the stockholders shall not exceed the greater of (x) two (2) and (y) the largest whole number that does not exceed twenty percent (20%) of the number of directors in office as of the last day on which a Proxy Access Notice may be delivered in accordance with the procedures set forth in this Section 2(d) (such greater number, the "Permitted Number"); provided, however, that the Permitted Number available for proxy access candidates shall be reduced by:

- (A) the number of such director candidates for which the Corporation shall have received one or more valid stockholder notices nominating director candidates pursuant to Article III, Section 12 of these By-laws;
- (B) the number of directors in office or director candidates that in either case will be included in the Corporation's proxy materials with respect to such annual meeting of the stockholders as an unopposed (by the Corporation) nominee pursuant to an agreement, arrangement or other understanding with a stockholder or group of stockholders (other than any such agreement, arrangement or understanding entered into in connection with an acquisition of voting stock, by such stockholder or group of stockholders, from the Corporation), other than any such director referred to in this clause (B) who at the time of such annual meeting of the stockholders will have served as a director continuously, as a nominee of the Board, for at least two (2) terms; and
- (C) the number of directors in office that will be included in the Corporation's proxy materials with respect to such annual meeting of the stockholders for whom access to the Corporation's proxy materials was previously provided pursuant to this Section 2(d), other than any such director referred to in this clause (C) who at the time of such annual meeting of the stockholders will have served as a director continuously, as a nominee of the Board, for at least two (2) terms;

provided, further, that in no circumstance shall the Permitted Number exceed the number of directors to be elected at the applicable annual meeting of the stockholders as noticed by the Corporation and in the event the Board resolves to reduce the size of the Board effective on or prior to the date of the annual meeting of the stockholders, the Permitted Number shall be calculated based on the number of directors in office as so reduced. An Eligible Stockholder submitting more than one Stockholder Nominee for inclusion in the Corporation's proxy statement pursuant to this Section 2(d) shall rank such Stockholder Nominees based on the order that the Eligible Stockholder desires such Stockholder Nominees to be selected for inclusion in the Corporation's proxy statement and include such specified rank in its Proxy Access Notice. If the number of Stockholder Nominees pursuant to this Section 2(d) for an annual meeting of the stockholders exceeds the Permitted Number, then the highest ranking qualifying Stockholder Nominee from each Eligible Stockholder will be selected by the Corporation for inclusion in the proxy statement until the Permitted Number is reached, going in order of the amount (largest to smallest) of the ownership position as disclosed in each Eligible Stockholder's Proxy Access Notice. If the Permitted Number is not reached after the highest ranking Stockholder Nominee from each Eligible Stockholder has been selected, this selection process will continue as many times as necessary, following the same order each time, until the Permitted Number is reached.

(v) An "Eligible Stockholder" is one or more stockholders of record who own and have owned, or are acting on behalf of one or more beneficial owners who own and have owned (in each case as defined above), in each case continuously for at least three (3) years as of both the date that the Proxy Access Notice is received by the Corporation pursuant to this Section 2(d), and as of the record date for determining stockholders eligible to vote at the annual meeting of the stockholders, at least three percent (3%) of the aggregate voting power of the voting stock (the "Proxy Access Request Required Shares"), and who continue to own the Proxy Access Request Required Shares at all times between the date such Proxy Access Notice is received by the Corporation and the date of the applicable annual meeting of the stockholders; provided that the aggregate number of stockholders, and, if and to the extent that a stockholder is acting on behalf of one or more beneficial owners, of such beneficial owners, whose stock ownership is counted for the purpose of satisfying the foregoing ownership requirement shall not exceed twenty (20). Two or more collective investment funds that are part of the same family of funds by virtue of being under common management and investment control, under common management and sponsored primarily by the same employer or a "group of investment companies" (as such term is defined in Section 12(d)(1)(G)(ii) of the Investment Company Act of 1940, as amended) (a "Qualifying Fund") shall be treated as one stockholder for the purpose of determining the aggregate number of stockholders in this Section 2(d); provided that each fund included within a Qualifying Fund otherwise meets the requirements set forth in this Section 2(d). No shares may be attributed to more than one group constituting an Eligible Stockholder under this Section 2(d)(v) (and, for the avoidance of doubt, no stockholder may be a member of more than one group constituting an Eligible Stockholder). A record holder acting on behalf of one or more beneficial owners will not be counted separately as a stockholder with respect to the shares owned by beneficial owners on whose behalf such record holder has been directed in writing to act, but each such beneficial owner will be counted separately, subject to the other provisions of this Section 2(d)(v), for purposes of determining the number of

stockholders whose holdings may be considered as part of an Eligible Stockholder's holdings. For the avoidance of doubt, Proxy Access Request Required Shares will qualify as such if, and only if, the beneficial owner of such shares as of the date of the Proxy Access Notice has itself individually beneficially owned such shares continuously for the three-year (3-year) period ending on that date and through the other applicable dates referred to above (in addition to the other applicable requirements being met).

(vi) No later than the final date when a Proxy Access Notice pursuant to this Section 2(d) may be timely delivered to the Secretary, an Eligible Stockholder (including each Constituent Holder) must provide the following information in writing to the Secretary:

- (A) with respect to each Constituent Holder, the name and address of, and number of shares of voting stock owned by, such person;
- (B) one or more written statements from the record holder of the shares (and from each intermediary through which the shares are or have been held during the requisite three-year (3-year) holding period) verifying that, as of a date within seven (7) days prior to the date the Proxy Access Notice is delivered to the Corporation, such person owns, and has owned continuously for the preceding three (3) years, the Proxy Access Request Required Shares, and such person's agreement to provide:
 - (1) within ten (10) days after the record date for the annual meeting of the stockholders, written statements from the record holder and intermediaries verifying such person's continuous ownership of the Proxy Access Request Required Shares through the record date, together with any additional information reasonably requested to verify such person's ownership of the Proxy Access Request Required Shares; and
 - (2) immediate notice if the Eligible Stockholder ceases to own any of the Proxy Access Request Required Shares prior to the date of the applicable annual meeting of the stockholders;
- (C) the information contemplated by Article III, Section 12 of these Bylaws (with references to a "stockholder" therein to include such Eligible Stockholder (including each Constituent Holder));
- (D) a representation that such person:
 - (1) acquired the Proxy Access Request Required Shares in the ordinary course of business and not with the intent to change or influence control of the Corporation, and does not have any such intent;
 - (2) has not nominated and will not nominate for election to the Board at the annual meeting of the stockholders any person other than the Stockholder Nominee(s) being nominated pursuant to this Section 2(d);

- (3) has not engaged and will not engage in, and has not been and will not be a “participant” in another person’s, “solicitation” within the meaning of Rule 14a-1(l) under the Exchange Act in support of the election of any individual as a director at the annual meeting of the stockholders other than its Stockholder Nominee(s) or a nominee of the Board;
 - (4) will not distribute to any stockholder any form of proxy for the annual meeting of the stockholders other than the form distributed by the Corporation; and
 - (5) will provide facts, statements and other information in all communications with the Corporation and its stockholders that are and will be true and correct in all material respects and do not and will not omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading, and will otherwise comply with all applicable laws, rules and regulations in connection with any actions taken pursuant to this Section 2(d);
- (E) in the case of a nomination by a group of stockholders that together is such an Eligible Stockholder, the designation by all group members of one group member that is authorized to act on behalf of all members of the nominating stockholder group with respect to the nomination and matters related thereto, including withdrawal of the nomination; and
- (F) an undertaking that such person agrees to:
- (1) assume all liability stemming from, and indemnify and hold harmless the Corporation and each of its directors, officers and employees individually against any liability, loss or damages in connection with any threatened or pending action, suit or proceeding, whether legal, administrative or investigative, against the Corporation or any of its directors, officers or employees arising out of any legal or regulatory violation arising out of the Eligible Stockholder’s communications with the stockholders of the Corporation or out of the information that the Eligible Stockholder (including such person) provided to the Corporation;
 - (2) promptly provide to the Corporation such other information as the Corporation may reasonably request; and
 - (3) file with the Securities and Exchange Commission any solicitation by the Eligible Stockholder of stockholders of the Corporation relating to the annual meeting of the stockholders at which the Stockholder Nominee will be nominated.

In addition, no later than the final date when a nomination pursuant to this Section 2(d) may be delivered to the Corporation, a Qualifying Fund whose share ownership is counted for purposes of qualifying as an Eligible Stockholder must provide to the

Secretary documentation reasonably satisfactory to the Board that demonstrates that the funds included within the Qualifying Fund satisfy the definition thereof. In order to be considered timely, any information required by this Section 2(d) to be provided to the Corporation must be supplemented (by delivery to the Secretary): (1) no later than ten (10) days following the record date for the applicable annual meeting of the stockholders or any adjournment or postponement thereof, to disclose the foregoing information as of such record date; and (2) no later than eight (8) days before the annual meeting of the stockholders or any adjournment or postponement thereof, to disclose the foregoing information as of the date that is no earlier than ten (10) days prior to such annual meeting of the stockholders. For the avoidance of doubt, the requirement to update and supplement such information shall not permit any Eligible Stockholder or other person to change or add any proposed Stockholder Nominee or be deemed to cure any defects or limit the remedies (including, without limitation, under these By-Laws) available to the Corporation relating to any defect. The obligation to update and supplement as set forth in this paragraph or any other Section of these By-Laws shall not limit the Corporation's rights with respect to any deficiencies in any notice provided by a stockholder or extend any applicable deadlines hereunder or under any other provision of these By-Laws.

(vii) The Eligible Stockholder may provide to the Secretary, at the time the information required by this Section 2(d) is originally provided, a written statement for inclusion in the Corporation's proxy statement for the annual meeting of the stockholders, not to exceed five hundred (500) words, in support of the candidacy of such Eligible Stockholder's Stockholder Nominee (the "Statement"). Notwithstanding anything to the contrary contained in this Section 2(d), the Corporation may omit from its proxy materials any information or Statement that it, in good faith, believes is materially false or misleading, omits to state any material fact, directly or indirectly without factual foundation impugns the character, integrity or personal reputation of or makes charges concerning improper, illegal or immoral conduct or associations with respect to any person or would violate any applicable law or regulation.

(viii) No later than the final date when a nomination pursuant to this Section 2(d) may be delivered to the Corporation, each Stockholder Nominee must:

- (A) provide the completed and signed questionnaire, representation and agreement required by Article III, Section 12 of these By-Laws;
- (B) provide an executed agreement, in a form deemed satisfactory by the board of directors or its designee (which form shall be provided by the Corporation reasonably promptly upon written request of a stockholder), that such Stockholder Nominee consents to being named in the Corporation's proxy statement and form of proxy card (and will not agree to be named in any other person's proxy statement or form of proxy card with respect to the Corporation) as a nominee and intends to serve as a director of the Corporation for the entire term if elected;
- (C) complete, sign and submit all questionnaires, representations and agreements required by these By-Laws or of the Corporation's directors generally; and

- (D) provide such additional information as necessary to permit the Board to determine: (a) if any of the matters referred to in Section 2(d)(x) below apply; (b) if such Stockholder Nominee has any direct or indirect relationship with the Corporation other than those relationships that have been deemed categorically immaterial pursuant to any publicly disclosed corporate governance guideline or committee charter of the Corporation; or (c) if such Stockholder Nominee is or has been subject to any event specified in Rule 506(d)(1) of Regulation D (or any successor rule) under the Securities Act of 1933, as amended (the “Securities Act”) or Item 401(f) of Regulation S-K (or any successor rule) under the Exchange Act, without reference to whether the event is material to an evaluation of the ability or integrity of such Stockholder Nominee.

In the event that any information or communications provided by the Eligible Stockholder (or any Constituent Holder) or the Stockholder Nominee to the Corporation or its stockholders ceases to be true and correct in all material respects or omits a material fact necessary to make the statements made, in light of the circumstances under which they were made, not misleading, each Eligible Stockholder or Stockholder Nominee, as the case may be, shall promptly notify the Secretary of any defect in such previously provided information and of the information that is required to correct any such defect; it being understood for the avoidance of doubt that providing any such notification shall not be deemed to cure any such defect or limit the remedies (including, without limitation, under these Bylaws) available to the Corporation relating to any such defect.

(ix) Any Stockholder Nominee who is included in the Corporation’s proxy materials for a particular annual meeting of the stockholders but either (1) withdraws from or becomes ineligible or unavailable for election at that annual meeting of the stockholders or (2) does not receive votes cast in favor of the Stockholder Nominee’s election of at least twenty (20) percent of the shares represented in person or by proxy at the annual meeting of the stockholders will be ineligible to be a Stockholder Nominee pursuant to this Section 2(d) for the next two (2) annual meetings of the stockholders. Any Stockholder Nominee who is included in the Corporation’s proxy statement for a particular annual meeting of the stockholders, but subsequently is determined not to satisfy the eligibility requirements of this Section 2(d) or any other provision of these By-Laws, the Certificate of Incorporation or any applicable regulation any time before the annual meeting of the stockholders, will not be eligible for election at the relevant annual meeting of the stockholders.

(x) The Corporation shall not be required to include, pursuant to this Section 2(d), a Stockholder Nominee in its proxy materials for any annual meeting of the stockholders, or, if the proxy statement already has been filed, to allow the nomination of (or vote with respect to) a Stockholder Nominee (and may declare such nomination ineligible), notwithstanding that proxies in respect of such vote may have been received by the Corporation:

- (A) who is not independent under the listing standards of the principal U.S. exchange upon which the common stock of the Corporation is listed, any applicable rules of the Securities and Exchange Commission and any publicly disclosed standards or policies used or adopted by the Board in determining and disclosing independence of the Corporation’s directors;

- (B) whose service as a member of the Board would violate or cause the Corporation to be in violation of these By-Laws, the Certificate of Incorporation, the rules and listing standards of the principal U.S. exchange upon which the common stock of the Corporation is traded, or any applicable law, rule or regulation;
- (C) who is or has been, within the past three (3) years, an officer or director of a competitor, as defined in Section 8 of the Clayton Antitrust Act of 1914, as amended, or who is a subject of a pending criminal proceeding, has been convicted in a criminal proceeding within the past ten (10) years or is subject to an order of the type specified in Rule 506(d) of Regulation D promulgated under the Securities Act;
- (D) if the Eligible Stockholder (or any Constituent Holder) or applicable Stockholder Nominee otherwise breaches or fails to comply in any material respect with its obligations pursuant to this Section 2(d) or any agreement, representation or undertaking required by this Section 2(d) or Article III, Section 12 of these By-Laws; or
- (E) if the Eligible Stockholder ceases to be an Eligible Stockholder for any reason, including, but not limited to, not owning the Proxy Access Request Required Shares through the date of the applicable annual meeting of the stockholders.

Clauses (A), (B), and (C) and, to the extent related to a breach or failure by the Stockholder Nominee, clause (D), will result in the exclusion from the proxy materials pursuant to this Section 2(d) of the specific Stockholder Nominee to whom the ineligibility applies, or, if the proxy statement already has been filed, the ineligibility of such Stockholder Nominee to be nominated; provided, however, that clause (E) and, to the extent related to a breach or failure by an Eligible Stockholder (or any Constituent Holder), clause (D) will result in the voting stock owned by such Eligible Stockholder (or Constituent Holder) being excluded from the Proxy Access Request Required Shares (and, if as a result the Proxy Access Notice shall no longer have been filed by an Eligible Stockholder, the exclusion from the proxy materials pursuant to this Section 2(d) of all of the applicable stockholder's Stockholder Nominees from the applicable annual meeting of the stockholders or, if the proxy statement has already been filed, the ineligibility of all of such stockholder's Stockholder Nominees to be nominated).

e. Except as otherwise provided by law, at any time following the Corporation's receipt of a proposal, the Chairman (or other presiding officer at an annual meeting of the stockholders) shall have the power to determine whether any matter proposed to be brought before the annual meeting of the stockholders was proposed in accordance with the notice procedures set forth in this Section 2 and if any proposal is not in compliance with this Section 2, the Chairman (or such other presiding officer) may exclude such proposal from the annual meeting of the stockholders.

f. Notwithstanding the foregoing provisions of this Section 2, a stockholder who seeks to have any proposal included in the Corporation's proxy materials shall comply with the requirements of Rule 14a-8 of Regulation 14A under the Exchange Act.

g. In the event a proposal is presented for action at such annual meeting of the stockholders which, in the opinion of the ranking executive officer of the Corporation attending such meeting, requires the giving of prior notice of such business to stockholders, no action shall be taken on such proposal at such meeting unless and until proof of timely and adequate notice of such proposal shall have been filed with and accepted by the ranking executive officer of the Corporation attending such meeting.

Section 3. *Special Meetings.* Special meetings of the stockholders may be called by the Chief Executive Officer, and shall be called by the Chairman, the Chief Executive Officer, the President, a Vice President, the Secretary or an Assistant Secretary, at the request in writing of a majority of the Board, or of a majority of the Executive Committee, or of stockholders owning a majority of the outstanding shares having voting power. Such request shall state the purpose or purposes of the proposed meeting. At any special meeting of the stockholders, only such nominations or business shall be conducted or considered as shall have been properly brought before the meeting pursuant to the Corporation's notice of meeting.

Section 4. *Notice.* Notice of all stockholders' meetings stating the time and place, and, in the case of special meetings, the purpose or purposes for which the meeting is called, shall be delivered to each stockholder entitled to vote at such meeting not less than 30 nor more than 60 days before the meeting of stockholders is to be held, unless the stockholder's meeting is called by the Chairman, the Chief Executive Officer, the President, a Vice President, the Secretary or an Assistant Secretary of the Corporation, at the request in writing of a majority of the Board, in which case such notice shall be delivered not less than 10 nor more than 60 days before the meeting of stockholders is to be held. If mailed, notice shall be directed to the stockholder at his last known post office address as the same appears on the stock records of the Corporation.

Section 5. *Proxies.* At any meeting of the stockholders, each stockholder entitled to vote may vote either in person or by proxy, but no proxy shall be voted on after three years from its date, unless such proxy shall, on its face, name a longer period for which it is to remain in force. Each proxy either (a) shall be authorized in writing, subscribed by the stockholder or his duly authorized attorney, but need not be sealed, witnessed or acknowledged, and shall be filed with the Secretary at or before the meeting, or (b) shall be authorized by means of an electronic transmission as permitted by law and shall be filed in accordance with the procedure established for the meeting.

Section 6. *Quorum.* At any annual or special meeting of stockholders a majority in interest of the stockholders entitled to vote thereat, present in person or by proxy, shall constitute a quorum, except as otherwise provided by law, but if at any meeting of the stockholders there be less than a quorum present, the stockholders present at such meeting may, without further notice, adjourn the same from time to time until a quorum shall attend, but no business shall be transacted at any such adjourned meeting except such as might have been lawfully transacted had the meeting not been adjourned.

Section 7. *Voting.* Except as otherwise expressly required by statute, the Certificate of Incorporation or these By-Laws, each stockholder shall at each meeting of the stockholders be entitled to one vote in person or by proxy for each share of stock of the Corporation entitled to be voted thereat held by him and registered in his name on the books of the Corporation

(a) on such date as may be fixed pursuant to Article VIII of these By-Laws as the record date for the determination of stockholders entitled to notice of and to vote at such meeting; or

(b) in the event that no record date shall have been so fixed, on the date of such meeting; provided, however, that, except where a record date shall have been so fixed, no share of stock of the Corporation shall be voted at any election of directors which shall have been transferred on the books of the Corporation within 20 days prior to such election of directors.

The vote for directors and, upon the demand of any stockholder, the vote upon any question before the meeting shall be by ballot. Except as otherwise provided by law or the Certificate of Incorporation or these By-Laws, and except for the election of directors (which shall be governed by Article III, Section 7 of these By-Laws), each question properly presented to any meeting of stockholders shall be decided by a majority of the votes cast on the question entitled to vote thereon. The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at any meeting of stockholders shall be announced at the meeting by the Chairman (or other presiding officer of the Corporation).

Section 8. *List of Stockholders.* A complete list of the stockholders entitled to vote at the ensuing election, arranged in alphabetical order, with the residence of each, and the number of voting shares held by each, shall be prepared and filed in the office where the election is to be held at least 10 days before every election, and shall at all times during the usual hours for business during the said 10 days and during the whole time of said election be open to the examination of any stockholder.

Section 9. *Judges of Election.* Whenever a vote at a meeting of stockholders shall be by ballot, the polls shall be opened and closed, the proxies and ballots shall be received, and all questions pertaining to the qualification of voters and the validity of proxies and the acceptance or rejection of votes shall be decided by one or more Judges of Election. Such Judge(s) of Election shall be appointed by the Board before or at the meeting, or in default thereof, by the officer presiding at the meeting, and shall be sworn to the faithful performance of their duties. If any Judge of Election previously appointed shall fail to attend or refuse or be unable to serve, a substitute shall be appointed by the presiding officer.

Section 10. *Consent Notice.* In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board may fix a record date, which record date shall not precede the date on which the resolution fixing the record date is adopted by the Board, and which date shall not be more than 10 days after the date on which the resolution fixing the record date is adopted by the Board. Any stockholder of record seeking to have the stockholders authorize or take corporate action by written consent shall, by written notice to the Secretary of the Corporation, request the Board to fix a record date. Such notice shall include the items required to be included in a stockholder notice delivered pursuant to the Article II, Section 2(c) or Article III, Section 12, as applicable (including, in the case of a proposed action by written consent to elect directors, the written questionnaire and representation and agreement required pursuant to Article III, Section 12). The Board shall promptly, but in all events within 10 days after the date on which such a request is received, adopt a resolution fixing the record date. If no record date has been fixed by the Board within 10 days of the date on which such a request is received, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board

is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or any officer or agent of the Corporation having custody of the book in which proceedings for stockholder meetings are recorded, to the attention of the Secretary of the Corporation. Delivery shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board and prior action by the Board is required by applicable law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the date on which the Board adopts a resolution taking such prior action.

ARTICLE III

DIRECTORS

Section 1. *Powers.* Except as otherwise provided by law, by the Certificate of Incorporation or by these By-Laws, the property, business and affairs of the Corporation shall be managed by the Board.

Section 2. *Number and Tenure.* The Board shall consist of no less than 3 nor more than 14 members as the Board may determine from time to time by Resolution of the Board. Directors shall hold office until the next annual election and until their successors shall be duly elected and qualified. The Board shall keep full and fair records and accounts of its proceedings and transactions. Directors need not be stockholders.

Section 3. *Regular Meetings.* The Board shall meet for the election of officers and for the transaction of any other business as soon as practicable after the annual meeting of stockholders. Other regular meetings of the Board may be held at such times and places as the Board may from time to time determine. No notice of any such annual or regular meeting of the Board need be given.

Section 4. *Special Meetings.* Special meetings of the Board shall be called by the Secretary or any Assistant Secretary at the request of the Chairman, the Chief Executive Officer, the President or of any two directors. Notice of the time and place of any special meeting of the Board shall be mailed, postage prepaid, to each director at least 48 hours before the time at which the meeting is to be held, or shall be sent by confirmed facsimile transmission or other form of electronic communication, or be delivered personally or by telephone, at least 24 hours before the time at which such meeting is to be held. Notice of any special meeting need not be given to any director who shall waive notice thereof. Any meeting of the Board shall be a legal meeting without notice thereof having been given, if all the directors of the Corporation then holding office shall be present thereat.

Section 5. *Place of Meetings.* Meetings of the Board may be held at such places in or out of the State of Delaware as may be fixed by the Board or designated in the notice of the meeting, except that the annual meeting of the Board, if held without notice, shall be held at the principal executive office of the Corporation.

Section 6. *Quorum.* A majority of the Board, but not less than two directors, shall constitute a quorum for the transaction of business, but if, at any meeting of the Board, there be less

than a quorum present, a majority of the directors present may, without further notice, adjourn the same from time to time until a quorum shall attend. A majority of such quorum shall decide any questions that may come before the meeting.

Section 7. *Required Vote for Directors.* (a) Each director to be elected by stockholders shall be elected as such by the vote of the majority of the votes cast by stockholders at a meeting for the election of directors at which a quorum is present, except that if the number of nominees exceeds the number of directors to be elected, the directors shall be elected by the vote of a plurality of the shares represented in person or by proxy at any such meeting. For purposes of this Article III, Section 7 a majority of votes cast shall mean that the number of shares voted “for” a director’s election exceeds 50% of the number of votes cast with respect to that director’s election. “Votes cast” includes votes “for” that director’s election plus votes to withhold authority with respect to that director’s election and excludes abstentions and broker non-votes with respect to that director’s election.

(b) If a nominee for director who is an incumbent director is not reelected and no successor has been elected at such meeting, the director must promptly tender his or her resignation to the Chairman of the Board or the Secretary following the certification of the stockholder vote. The Nominating and Governance Committee shall consider the tendered resignation and recommend to the Board of Directors whether to accept or reject it. The Board of Directors shall act on the tendered resignation, taking into account the Nominating and Governance Committee’s recommendation, within 90 days following the certification of the stockholder vote. The Nominating and Governance Committee in making its recommendation, and the Board in making its decision, may consider any factors or other information that it considers appropriate and relevant. The director who failed to be elected as such by the vote of the majority of the votes cast by stockholders at a meeting for the election of directors at which a quorum is present shall not vote with respect to the recommendation of the Nominating and Governance Committee or the decision of the Board with respect to whether or not to accept his or her resignation.

Section 8. *Resignations.* A director may resign at any time from the Board. A resignation from the Board must be delivered in writing to the Secretary and shall be deemed to take effect only upon its receipt by the Secretary of the Corporation unless otherwise specified therein.

Section 9. *Vacancies.* Vacancies in the Board created on account of death, resignation, removal, disqualification or other causes, or resulting from an increase in the authorized number of directors, shall be filled by a majority of the directors then in office, although less than a quorum, and the directors so chosen shall hold office until the next annual election and until their successors shall be duly elected and qualified or until their earlier death, resignation or removal; provided, however, that if the remaining directors shall constitute less than a majority of the whole Board, the Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the total number of shares of the capital stock of the Corporation at the time outstanding having the right to vote for directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by Section 211 of the General Corporation Law of the State of Delaware (the “DGCL”).

Section 10. *Removal.* At any meeting of the stockholders called for the purpose any director may, by vote of stockholders entitled to cast a majority of the votes then entitled to vote in the election of directors, be removed from office with or without cause.

Section 11. *Compensation.* Directors shall receive such compensation for their services as shall be fixed from time to time by resolution of the Board. Nothing in this Section shall be construed to preclude a director from serving the Corporation in any other capacity and receiving compensation therefore.

Section 12. *Nominees for Director.* Nominations by stockholders of persons to be elected to the Board shall be made pursuant to timely notice in writing to the Secretary of the Corporation. To be timely, a stockholder's notice for a director nomination (other than with respect to a Proxy Access Notice, which nomination must comply with Article II, Section 2(d) of these By-Laws) must be delivered to, or mailed and received at, the principal executive offices of the Corporation (a) with respect to an election to be held at the annual meeting of the stockholders of the Corporation, not less than 90 days nor more than 120 days prior to the anniversary date of the immediately preceding annual meeting of the stockholders of the Corporation; provided, however, if no annual meeting of the stockholders was held in the previous year, or if the date of the applicable annual meeting of the stockholders has been changed by more than 30 days from the date contemplated at the time of the previous year's proxy statement, a stockholder's notice for a director nomination (other than with respect to a Proxy Access Notice) must be received by the Secretary not less than 90 days nor more than 120 days prior to such annual meeting of the stockholders date or, if the public disclosure of such annual meeting of the stockholders is less than 100 days prior to the date of such annual meeting of the stockholders, a stockholder's notice for a director nomination (other than with respect to a Proxy Access Notice) must be received by the Secretary no later than the seventh day following the day on which the public disclosure of the date of such meeting was made and (b) with respect to an election to be held at a special meeting of stockholders of the Corporation for the election of directors, not later than the close of business on the seventh day following the date on which notice of the date of the special meeting was mailed to stockholders of the Corporation or public disclosure of the date of the special meeting was made, whichever first occurs. In no event shall any adjournment or postponement of an annual meeting of the stockholders, or the public announcement thereof, commence a new time period for the giving of a stockholder's notice for a director nomination as described above. A stockholder's notice for a director nomination (including with respect to a Proxy Access Notice) to the Secretary of the Corporation shall set forth:

- (i) as to each person whom the stockholder proposes to nominate for election or re- election as a director all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors, or is otherwise required, pursuant to Regulation 14A under the Exchange Act (including such person's written consent to being named in the proxy statement as a nominee and to serve as a director if elected), and
- (ii) as to the stockholder giving the notice and, where referred to in subsections (i)-(xiv) of Article II, Section 2(c) or noted below, each Stockholder Associated Person:

(A) the information that would have been required by subsections (i)-(xiv) of Article II, Section 2(c) if Article II, Section 2(c) were applicable to nominations of persons for election to the Board;

(B) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three (3) years, and any other material relationships, between or among such stockholder and Stockholder Associated Person, on the one hand, and each proposed nominee, and his or her respective affiliates and associates, or others acting in concert therewith, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Rule 404 promulgated under Regulation S-K if the stockholder making the nomination and any Stockholder Associated Person were the “registrant” for purposes of such rule, and the nominee were a director or executive officer of such registrant;

(C) any other information relating to such stockholder and any Stockholder Associated Person that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for the election of directors in a contested election (even if a contested election is not involved) pursuant to Regulation 14A of the Exchange Act;

(D) a representation that the stockholder is a holder of record of capital stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such nomination; and

(E) a representation as to whether the stockholder or any Stockholder Associated Person intends, or is part of a group that intends, to (1) deliver a proxy statement and/or form of proxy to holders of at least the percentage of the outstanding capital stock of the Corporation required to elect the nominee or (2) otherwise solicit proxies or votes from stockholders in support of such nomination.

To be eligible to be a nominee for election or reelection as a director of the Corporation, a person must deliver (in accordance with the time periods prescribed for delivery of notice under this Section 12) to the Secretary at the principal executive offices of the Corporation a written questionnaire (in the form provided by the Secretary upon written request) with respect to the background and qualification of such person and the background of any other person or entity on whose behalf the nomination is being made and a written representation and agreement (in the form provided by the Secretary upon written request) that such person (x) is not and will not become a party to (i) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such person, if elected as a director of the Corporation, will act or vote on any issue or question (a “Voting Commitment”) that has not been disclosed to the Corporation, (ii) any Voting Commitment that could limit or interfere with such person’s ability to comply, if elected as a director of the Corporation, with such person’s fiduciary duties under applicable law or (iii) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity other than the Corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director that has not been

disclosed therein, and (y) in such person's individual capacity and on behalf of any person or entity on whose behalf the nomination is being made, would be in compliance, if elected as a director of the Corporation, and will comply with all applicable publicly disclosed corporate governance, conflict of interest, confidentiality and stock ownership and trading policies and guidelines of the Corporation. The Corporation may also require any proposed nominee to furnish such other information as may reasonably be required by the Corporation (i) to determine the eligibility of such proposed nominee to serve as a director of the Corporation, including with respect to qualifications established by any committee of the Board, (ii) to determine whether such nominee qualifies as an "independent director" or "audit committee financial expert" under applicable law, securities exchange rule or regulation, or any publicly-disclosed corporate governance guideline or committee charter of the Corporation, and (iii) that could be material to a reasonable stockholder's understanding of the independence and qualifications of such nominee.

In the event that a person is validly designated as a nominee to be elected to the Board in accordance with the procedures set forth in this Section 12 and thereafter becomes unable or unwilling to stand for election to the Board, the stockholder who proposed such nominee may designate a substitute nominee, if such substitute nominee is designated within and in accordance with the time limitations set forth in this Section 12 (or, as applicable with respect to a Proxy Access Notice, Article II, Section 2(d) of these By-Laws), upon providing the information specified in clause (a) above with respect to such substitute nominee (and, as applicable with respect to a Proxy Access Notice, Article II, Section 2(d) of these By-Laws). Except as otherwise provided by law, at any time following the Corporation's receipt of a nomination for director of the Corporation by a stockholder, the Chairman (or other presiding officer at an annual meeting of the stockholders) shall have the power to determine whether the proposed nomination was made in accordance with the notice procedures set forth in this Section 12 (and, as applicable with respect to a Proxy Access Notice, Article II, Section 2(d) of these By-Laws), and if any nomination is not in compliance with this Section 12 (and, as applicable with respect to a Proxy Access Notice, Article II, Section 2(d) of these By-Laws), the Chairman (or such other presiding officer) may refuse to acknowledge the nomination of any such person at the annual meeting of the stockholders. Notwithstanding the foregoing provisions of this Section 12, a stockholder shall also comply with all applicable requirements of the Exchange Act, with respect to the matters set forth in this Section 12.

In addition to the foregoing, in order to be considered timely, any information required by this Section 12 to be provided to the Corporation must be supplemented (by delivery to the Secretary): (1) no later than ten (10) days following the record date for the applicable annual meeting of the stockholders or any adjournment or postponement thereof, to disclose the foregoing information as of such record date; and (2) no later than eight (8) days before the annual meeting of the stockholders or any adjournment or postponement thereof, to disclose the foregoing information as of the date that is no earlier than ten (10) days prior to such annual meeting of the stockholders. For the avoidance of doubt, the requirement to update and supplement such information shall not permit any stockholder or other person to amend or update any proposal or to submit any new proposal, including by changing or adding nominees or resolutions proposed or be deemed to cure any defects or limit the remedies (including, without limitation, under these By-Laws) available to the Corporation relating to any defect. The obligation to update and supplement as set forth in this paragraph or any other Section of these By-Laws shall not limit the Corporation's rights with respect to any deficiencies in any notice provided by a

stockholder or extend any applicable deadlines hereunder or under any other provision of these By-Laws.

Only persons who are nominated in accordance with the procedures set forth in this Section 12 (and, as applicable with respect to a Proxy Access Notice, Article II, Section 2(d) of these By-Laws) shall be eligible for election as directors. Subject to Rule 14a-8 under the Exchange Act and Article II, Section 2(d) of these By-Laws, nothing in these Bylaws shall be construed to permit any stockholder, or give any stockholder the right, to include or have disseminated or described in the Corporation's proxy statement any nomination of a director or directors or any other business proposal, statement or communication.

Section 13. *Board Action By Written Consent In Lieu of Meeting.* Action required or permitted by applicable law, the Certificate of Incorporation or these By-Laws to be taken at a meeting of the Board may be taken without a meeting if the action is taken by all members of the Board. The action shall be evidenced by one or more written consents describing the action taken, signed, either manually, in facsimile or electronically, by each director, and included in the minutes or filed with the corporate records reflecting the action taken. Action taken under this Section 13 is effective when the last director signs the consent, unless the consent specifies a different effective date.

Section 14. *Chairman; Vice Chairman.* The Board may designate from among its members a Chairman, which person may be an Executive Chairman (as described in Article V, Section 2 of these By-Laws), and may also designate a Vice Chairman. The Chairman shall preside at all meetings of stockholders and of the Board, and shall advise and counsel the officers of the Corporation and shall have and perform such duties as usually devolve upon his role and such other duties as are prescribed by these By-Laws and by the Board. The Vice Chairman shall, in the absence of the Chairman, preside at all meetings of stockholders and of the Board, and exercise and discharge the responsibilities and duties of the Chairman. He or she shall have and perform such other duties as may be prescribed or assigned by the Board or the Chairman.

ARTICLE IV

COMMITTEES

Section 1. *Committees.* The Board, by resolution passed by a majority of the Board, may designate one or more committees. Each such committee will consist of one or more directors and will have such lawfully delegable powers and duties as the Board may confer, except (1) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval or (2) adopting, amending or repealing any provision in these By-Laws or (3) such powers or duties the exercise of which, pursuant to the Certificate of Incorporation or these By-Laws, requires action by a majority of the Board. Any such committee designated by the Board will have such name as may be determined from time to time by resolution adopted by the Board.

Section 2. *Appointments of Committee Members.* The members of each committee of the Board will serve in such capacity at the pleasure of the Board or as may be specified in any resolution from time to time adopted by the Board.

Section 3. *Quorum.* Unless otherwise prescribed by the Board, a majority of the members of any committee of the Board will constitute a quorum for the transaction of business, and the act of a majority of the members present at a meeting at which there is a quorum will be the act of such committee.

Section 4. *Committee Meetings.* Regular meetings of any committee may be held at such times and places as such committee may from time to time determine. No notice of any such regular meeting need be given. Special meetings of a committee shall be called by the Secretary or any Assistant Secretary at the request of the Chairman, the Chief Executive Officer, the chairman of the committee or of any two members of the committee. Notice of the time and place of any special meeting of a committee shall be mailed, postage prepaid, to each director at least 48 hours before the time at which the meeting is to be held, or shall be sent by confirmed facsimile transmission or other form of electronic communication, or be delivered personally or by telephone, at least 24 hours before the time at which such meeting is to be held. Notice of any special meeting need not be given to any committee member who shall waive notice thereof. Any meeting of a committee shall be a legal meeting without notice thereof having been given, if all committee members shall be present thereat. Each committee of the Board may prescribe such other rules and its method of procedure, subject to these By-Laws and any rules prescribed by the Board, and will keep a written record of all actions taken by the committee.

Section 5. *Compensation.* The Board may establish the compensation for, and reimbursement of the expenses of, directors for membership on the board and on committees of the Board, attendance at meetings of the Board or committees of the Board, and for other services by directors to the Corporation or any of its subsidiaries.

ARTICLE V

OFFICERS

Section 1. *General.* The officers of the Corporation may consist of an Executive Chairman, a Chief Executive Officer, a President, a Chief Operating Officer, a Chief Financial Officer, one or more Executive Vice Presidents, Senior Vice Presidents and/or Vice Presidents (some of whom may have particular authority and responsibilities as designated in their titles by the Board), a Secretary, a Controller, a Treasurer and such Assistant Vice Presidents, Assistant Secretaries, Assistant Treasurers or other subordinate officers as may from time to time be designated by the Board. One person may hold more than one office, and no officer (other than an Executive Chairman) need be a director. These said officers shall have all the usual powers and shall perform all of the usual duties incident to their respective offices and shall, in addition, perform such other duties as shall be assigned to them from time to time by the Board. In its discretion, the Board may leave unfilled any office, except that there shall always be either a Chief Executive Officer or a President of the Corporation.

Section 2. *Executive Chairman.* If the Board designates the Chairman as the Executive Chairman, he or she shall be an officer of the Corporation. The Executive Chairman: (i) shall provide advice and counsel to the Chief Executive Officer, the President and other members of senior management in areas such as corporate and strategic planning and policy, acquisitions, major capital

expenditures and other areas requested by the Board; (ii) may sign and execute any document, deed, paper, mortgage, bond, stock certificate, contract or other instrument or obligation in the name and on behalf of the Corporation, except in cases where the execution thereof shall be expressly delegated by the Board or by these By-Laws to some other officer or agent of the Corporation or shall be required by law to be otherwise executed; and (iii) shall, in general, perform all duties as may be prescribed by these By-Laws or assigned to him or her by the Board from time to time.

Section 3. *Chief Executive Officer.* Subject to the control of the Board, the Chief Executive Officer shall be responsible for the general management of the business of the Corporation and shall have supervisory authority over the general policies and business of the Corporation, and may sign and execute any document, deed, paper, mortgage, bond, stock certificate, contract or other instrument or obligation in the name and on behalf of the Corporation, except in cases where the execution thereof shall be expressly delegated by the Board or by these By-Laws to some other officer or agent of the Corporation or shall be required by law to be otherwise executed, and shall exercise such other powers as the Board may from time to time direct. In the event that the positions of Chairman and Vice Chairman are unfilled, the Chief Executive Officer shall in addition have the authority and responsibilities of the Chairman.

Section 4. *President.* The President shall, subject to the powers of supervision and control conferred upon the Chief Executive Officer, have all necessary powers to discharge such responsibility including the powers to sign and execute any document, deed, paper, mortgage, bond, stock certificate, contract or other instrument or obligation in the name and on behalf of the Corporation, except in cases where the execution thereof shall be expressly delegated by the Board or by these By-Laws to some other officer or agent of the Corporation or shall be required by law to be otherwise executed, and such other powers as the Board may from time to time direct. In the event that the office of Chief Executive Officer is unfilled, the President shall in addition have the authority and responsibilities of the Chief Executive Officer as specified in Section 3 of this Article.

Section 5. *Chief Operating Officer.* The Chief Operating Officer shall perform such duties as are customary for a chief operating officer to perform, including the powers to sign and execute any document, deed, paper, mortgage, bond, stock certificate, contract or other instrument or obligation in the name and on behalf of the Corporation, except in cases where the execution thereof shall be expressly delegated by the Board or by these By-Laws to some other officer or agent of the Corporation or shall be required by law to be otherwise executed, and shall perform such other duties as from time to time may be assigned to him or her by the Board of Directors, the Chief Executive Officer or the President.

Section 6. *Chief Financial Officer.* The Chief Financial Officer shall perform such duties as are customary for a chief financial officer to perform, including the powers to sign and execute any document, deed, paper, mortgage, bond, stock certificate, contract or other instrument or obligation in the name and on behalf of the Corporation, except in cases where the execution thereof shall be expressly delegated by the Board or by these By-Laws to some other officer or agent of the Corporation or shall be required by law to be otherwise executed, and shall perform such other duties as from time to time may be assigned to him or her by the Board of Directors, the Chief Executive Officer or the President.

Section 7. *Executive and Senior Vice Presidents and Vice Presidents.* Each Executive Vice President, Senior Vice President and Vice President shall exercise general supervision and have executive control of such departments of the Corporation's business, or perform such other executive duties as shall from time to time be assigned to him or her by the Board, the Chief Executive Officer or by the President. The Board shall have the power to designate particular areas of authority and responsibility of an Executive Vice President, Senior Vice President or Vice President and to indicate such designation in such officer's title. In case of the absence or disability of the Chief Executive Officer and the President, each Executive Vice President and Senior Vice President (without regard to whether his or her title specifies particular areas of authority and responsibility) and each Vice President whose title does not designate specific areas of authority and responsibility shall be vested with all the powers of the Chief Executive Officer and the President in respect of the powers to sign and execute any document, deed, paper, mortgage, bond, stock certificate, contract or other instrument or obligation in the name and on behalf of the Corporation, except in cases where the execution thereof shall be expressly delegated by the Board or by these By-Laws to some other officer or agent of the Corporation or shall be required by law to be otherwise executed. In the case of each Vice President whose title indicates one or more specific areas of authority and responsibility, such Vice President's authority and responsibilities shall be limited to the area or areas designated in such Vice President's title as specified by the Board.

Section 8. *Secretary.* The Secretary shall keep the minutes of the meetings of the stockholders and of the Board and of the Executive Committee, in books provided for the purpose; he or she shall see that all notices are duly given in accordance with the provisions of these By-Laws, or as required by law; he or she shall be custodian of the records and of the corporate seals of the Corporation; he or she shall see that the corporate seal is affixed to all documents, the execution of which, on behalf of the Corporation, under its seal, is duly authorized, and when so affixed may attest the same; and, in general, he or she shall perform all duties incident to the office of a secretary of a corporation, and such other duties as from time to time may be assigned by the Board. The Secretary may sign, with the Chief Executive Officer, the President, the Chief Financial Officer or a Vice President, certificates of the stock of the Corporation. The Secretary shall be sworn to the faithful discharge of his duties.

Section 9. *Controller.* The Controller shall report directly to the Chief Financial Officer, and shall have charge of the supervision of the accounting system of the Corporation, including the preparation and filing of all reports required by law to be made to any public authorities and officials. He or she shall perform such other duties as are usually associated with his office or as shall be assigned to him by the Board, the President or the Chief Financial Officer.

Section 10. *Treasurer.* The Treasurer shall report directly to the Chief Financial Officer, and shall have charge of and be responsible for all funds, securities, receipts and disbursements of the Corporation, and shall deposit, or cause to be deposited, in the name of the Corporation, all moneys or other valuable effects in such banks, trust companies or other depositories as shall, from time to time, be selected by the Board; he shall render to the Chief Executive Officer, the Chief Financial Officer and to the Board, whenever requested, an account of the financial condition of the Corporation; he or she may sign, with the Chief Executive Officer, the President, the Chief Financial Officer or a Vice President, certificates of stock of the Corporation; and, in general, shall perform all the duties incident to the office of a treasurer of a corporation, and such other duties as may be assigned by the Board.

Section 11. *Assistant Officers.* Each assistant officer shall perform such duties and have such responsibilities as may be delegated to him or her by the superior officer to whom he is made responsible, by designation of the Chief Executive Officer, or as the Board may prescribe. The Board may, from time to time, authorize any executive officer to appoint and remove assistant officers and prescribe the powers and duties thereof.

Section 12. *Officers Holding Two or More Offices.* Any person may hold two or more offices except that the person holding the office of Secretary may not also hold the office of Chairman, Vice Chairman, Chief Executive Officer or President and no officer shall execute, acknowledge or verify any instrument in more than one capacity, if such instrument be required by law, by the Certificate of Incorporation, or by these By-Laws, to be executed, acknowledged or verified by any two or more officers.

Section 13. *Voting of Other Stock.* Unless specifically directed otherwise by resolution of the Board, each of the Chief Executive Officer and the President shall have full power and authority on behalf of the Corporation to vote the stock of any other corporation owned or held by the Corporation at any meeting of the stockholders of such other corporation, or to execute the written consent of this Corporation to any action that may be taken by the stockholders of such other corporation without a meeting.

Section 14. *Compensation.* The Board shall have power to fix the compensation of all officers of the Corporation. It may authorize any officer, upon whom the power of appointing subordinate officers may have been conferred, to fix the compensation of such subordinate officers.

Section 15. *Removal.* Any officer of the Corporation may be removed, with or without cause, by the Board at a meeting called for that purpose, or (except in case of an officer elected by the Board) by an officer upon whom such power of removal may have been conferred.

Section 16. *Indemnification.* The Corporation shall indemnify any person (including the heirs, executors or administrators of such a person) who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, in accordance with and to the fullest extent permitted by the DGCL as same may be amended from time to time, including the advancement of expenses incurred by the indemnified person in defending any such threatened, pending or completed action, suit or proceeding. To the extent the present or former spouse(s) of any party indemnified hereunder is made a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding solely by virtue of his or her marital relationship to such indemnified party, such spouse shall be indemnified hereunder to the fullest extent permitted by the DGCL as same may be amended from time to time. Except as the Board of the Corporation in its discretion (but subject to applicable law) may otherwise determine, such indemnification shall be afforded only if such person within 5 business days after his becoming aware of the institution of such action, suit or proceeding, shall have notified in writing by registered or certified mail, the Chief Executive Officer, President or Secretary of the Corporation of the institution of such action, suit or proceeding, and shall have furnished such Chief Executive Officer,

President or Secretary with true copies of all papers served upon or otherwise received by such person relating to such action, suit or proceeding, and shall make available to officers or counsel of the Corporation all information necessary to keep the Corporation currently advised as to the status of such action, suit, or proceeding, and permit the Corporation, at its option and expense, at any time during the course of such action, suit or proceeding, through counsel of the Corporation's choosing, to participate in or direct the defense thereof in good faith, and in case of any proposed settlement of any action, suit or proceeding the defense of which is not directed by the Corporation, to submit the proposed terms and conditions thereof to the Board of the Corporation for their approval, failing which no indemnification hereunder shall be afforded for any such settlement. Such indemnification as hereinabove provided shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any agreement, vote of stockholders or disinterested directors, or otherwise.

ARTICLE VI

FISCAL YEAR

The fiscal year of the Corporation shall end on the thirty-first day of December in each year, or on such other day as may be fixed from time to time by the Board.

ARTICLE VII

SEAL

The Board shall provide a suitable seal, having inscribed thereon the name of the Corporation; the year of its incorporation and such other appropriate legend as may from time to time be determined by the Board. If deemed advisable by the Board, a duplicate seal or duplicate seals may be provided and kept for the necessary purposes of the Corporation.

ARTICLE VIII

STOCK

Section 1. *Certificates.* Certificates of stock shall be issued in such form as may be approved by the Board and shall be signed by the Chief Executive Officer, the President, the Chief Financial Officer or a Vice President, and by the Treasurer, an Assistant Treasurer, the Secretary or an Assistant Secretary, and sealed with the seal of the Corporation; provided, however, that where any such certificate is signed by a Transfer Agent and by a Registrar, the signature of any such Chief Executive Officer, President, Chief Financial Officer, Vice President, Treasurer, Assistant Treasurer, Secretary or Assistant Secretary and the seal of the Corporation upon such certificates may be facsimiles engraved or printed thereon. The shares of the Corporation's capital stock may be certificated or uncertificated in accordance with the laws of the State of Delaware.

Section 2. *Transfer Agents and Registrars.* The Board shall have power and authority to make all such rules and regulations as it may deem expedient concerning the issue, registration, and transfer of certificates of stock, and may appoint Transfer Agents and Registrars thereof.

Section 3. *Closing of Books.* The Board shall have power to close the stock transfer books of the Corporation for a period not exceeding 60 days preceding the date of any meeting of

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stockholders or the date for payment of any dividend or the date for the allotment of rights or the date when any change or conversion or exchange of capital stock shall go into effect; provided, however, that in lieu of closing the stock transfer books as aforesaid, the Board may fix in advance a date, not exceeding 60 days preceding the date of any meeting of stockholders or the date for the payment of any dividend, or the date for the allotment of rights, or the date when any change or conversion or exchange of capital stock shall go into effect, as a record date for the determination of the stockholders entitled to notice of, and to vote at, any such meeting, or entitled to receive payment of any such dividend, or to any such allotment of rights, or to exercise the rights in respect of any such change, conversion or exchange of capital stock, and in such case only such stockholders as shall be stockholders of record on the date so fixed shall be entitled to such notice of, and to vote at, such meeting, or to receive payment of such dividend, or to receive such allotment of rights, or to exercise such rights, as the case may be, notwithstanding any transfer of any stock on the books of the Corporation after any such record date fixed as aforesaid.

Section 4. *Lost, Mutilated, or Destroyed Certificates.* In case any certificate of stock is lost, mutilated or destroyed, the Board may authorize the issue of a new certificate in place thereof upon such terms and conditions, as it may deem advisable.

ARTICLE IX

SIGNATURES

Section 1. *Checks.* All checks, drafts, notes or other obligations of the Corporation shall be signed by the Chief Executive Officer, the President, the Chief Financial Officer and/or a Vice President, and/or the Treasurer, Assistant Treasurer, Controller or by any person or persons thereunto authorized by the Board or the Executive Committee.

Section 2. *Endorsements.* All endorsements, assignments, transfers, stock powers or other instruments of transfer of securities standing in the name of the Corporation shall be executed for and in the name of the Corporation by the Chief Executive Officer, the President or a Vice President, and the Secretary or an Assistant Secretary, or by any person or persons thereunto authorized by the Board or the Executive Committee.

Section 3. *Proxies.* Except as otherwise authorized or directed from time to time by the Board or the Executive Committee, the Chief Executive Officer of the Corporation, or in his absence or disability, the President or an Executive or Senior Vice President of the Corporation, may authorize from time to time the signature and issuance of proxies to vote upon, and/or of consents or waivers in respect of, shares of stock of other corporations standing in the name of the Corporation. All such proxies, consents or waivers shall be signed in the name of the Corporation by the Chief Executive Officer, the President or an Executive or Senior Vice President and the Secretary or an Assistant Secretary.

ARTICLE X

NOTICE OF MEETINGS

Whenever by law or by the Certificate of Incorporation or by these By-Laws notice is required to be given to any stockholder, such notice shall be delivered by first-class mail, postage prepaid, and the time when the same shall be mailed shall be deemed to be the time of the giving of such notice.

ARTICLE XI

AMENDMENTS

These By-Laws may be amended or repealed or new By-Laws may be adopted only by the affirmative vote of the holders of not less than 67% of the stock issued and outstanding and entitled to vote thereon at any regular or special meeting of the stockholders, if notice of the proposed alteration or amendment be contained in the notice of meeting, or by the affirmative vote of a majority of the Board.

DESCRIPTION OF COMMON STOCK**General**

HollyFrontier Corporation (“HollyFrontier,” “we,” or “our”) is incorporated in the state of Delaware. The rights of our stockholders are generally covered by Delaware law and our certificate of incorporation (“Certificate”) and by-laws (“By-Laws”) (each as amended and restated and in effect as of the date hereof). The terms of our common stock are therefore subject to Delaware law, including the Delaware General Corporation Law (the “DGCL”), and the common and constitutional law of Delaware.

This exhibit describes the general terms of our common stock. This is a summary and does not purport to be complete. Our Certificate and By-Laws as they exist on the date of this Annual Report on Form 10-K are incorporated by reference or filed as an exhibit to the Annual Report on Form 10-K of which this exhibit is a part, and amendments or restatements of each will be filed with the Securities and Exchange Commission (the “Commission”) in future periodic or current reports in accordance with the rules of the SEC. You are encouraged to read those documents.

For more detailed information about the rights of our common stock, you should refer to our Certificate, By-Laws and the applicable provisions of Delaware law, including the DGCL, for additional information.

Common Stock

Our authorized common stock consists of 320,000,000 shares, par value \$0.01 per share.

Dividend Rights

Each share of our common stock is entitled to participate equally in dividends as and when declared by our Board of Directors. The payment of dividends on our common stock may be limited by obligations we may have to holders of any preferred stock.

Voting Rights

Holders of our common stock are entitled to one vote for each share held on all matters submitted to them. Holders of our common stock do not have cumulative voting rights, meaning that holders of a majority of the shares of common stock voting for the election of directors can elect all the directors if they choose to do so.

Liquidation Rights

If we liquidate or dissolve our business, whether voluntarily or involuntarily, the holders of common stock will share ratably in the distribution of assets available for distribution to stockholders after creditors are paid and preferred stockholders, if any, receive their distributions.

Other Matters

The shares of common stock have no preemptive rights and are not convertible, redeemable or assessable or entitled to the benefits of any sinking fund.

Anti-Takeover Provisions

Certain provisions of the DGCL, our Certificate and our By-Laws summarized below may have an anti-takeover effect and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider in his or her best interest, including those attempts that might result in a premium over the market price for our common stock.

Preferred Stock

Our authorized preferred stock consists of 5,000,000 shares, par value \$1.00 per share, issuable in series. Our Board of Directors can, without action by stockholders, issue one or more series of preferred stock. Our Board of Directors can determine for each series the number of shares, designation, relative voting rights, dividend rates, liquidation and other rights, preferences and limitations. In some cases, the issuance of preferred stock could delay or discourage a change in control of us.

The issuance of preferred stock, while providing desired flexibility in connection with possible acquisitions and other corporate purposes, could adversely affect the voting power of holders of our common stock. It could also affect the likelihood that holders of our common stock will receive dividend payments and payments upon liquidation.

Stockholder Proposals and Director Nominations

Our stockholders can submit stockholder proposals and nominate candidates for our Board of Directors if the stockholders follow advance notice procedures described in our By-Laws. Generally, stockholders must submit a written notice between 90 and 120 days before the first anniversary of the date of our previous year's annual stockholders' meeting.

The notice must set forth specific information regarding the stockholder and the proposal or director nominee, as described in our By-Laws. These requirements are in addition to those set forth in the regulations adopted by the SEC under the Securities Exchange Act of 1934.

Proxy Access

Our By-Laws permit a stockholder, or a group of up to 20 stockholders (with funds having specified relationships constituting a single stockholder), owning 3% or more of our outstanding common stock continuously for at least three years, to nominate and include in our proxy materials director nominees constituting up to the greater of two individuals or 20% of our Board of Directors (rounded down to the nearest whole number), provided that the stockholder(s) and the nominee(s) satisfy the requirements specified in our By-Laws and subject to the other terms and conditions set forth in our By-Laws. A stockholder's Proxy Access Notice must be submitted

not less than 120 calendar days before the first anniversary of the date our proxy statement was released to stockholders for the previous year's annual stockholders' meeting.

Stockholder Meetings; Action by Written Consent

Pursuant to our By-Laws, special meetings of stockholders may be called by the Chief Executive Officer or at the request in writing of a majority of our Board of Directors, a majority of the Executive Committee of HollyFrontier, or of stockholders owning a majority of the outstanding shares of our common stock. At any special meeting of the stockholders, only such nominations or business may be conducted or considered as shall have been properly brought before the meeting pursuant to the notice of meeting.

Our stockholders may act by written consent without a meeting, subject to the requirements in our By-Laws for setting a record date for the written consent. Any stockholder seeking to have the stockholders authorize or take corporate action must request that our Board of Directors fix a record date. Such notice must include the same information required for a stockholder proposal and be submitted to our Board of Directors as described in our By-Laws.

Size of Board and Vacancies; Removal

Our By-Laws provide that our Board of Directors will consist of between three and fourteen directors, as determined by resolution of the Board. Directors are elected to hold office until the next annual meeting. Vacancies on our Board of Directors shall be filled by a majority of the directors then in office.

Our By-Laws provide that at any meeting of the stockholders called for the purpose any director may, by vote of stockholders entitled to cast a majority of the votes then entitled to vote in the election of directors, be removed from office with or without cause.

Delaware Anti-takeover Statute

We are a Delaware corporation and are subject to Section 203 of the DGCL. In general, Section 203 prevents us from engaging in a business combination with an "interested stockholder" (generally, a person owning 15% or more of our outstanding voting stock) for three years following the time that person becomes a 15% stockholder unless one of the following is satisfied:

- before that person became a 15% stockholder, our Board of Directors approved the transaction in which the stockholder became a 15% stockholder or approved the business combination;
- upon completion of the transaction that resulted in the stockholder becoming a 15% stockholder, the stockholder owned at least 85% of our voting stock outstanding at the time the transaction began (excluding stock held by directors who are also officers and by employee stock plans that do not provide employees

with the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer); and

- after the transaction in which that person became a 15% stockholder, the business combination is approved by our Board of Directors and authorized at a stockholders' meeting by at least two-thirds of the outstanding voting stock not owned by the 15% stockholder.

Under Section 203, these restrictions also do not apply to certain business combinations proposed by a 15% stockholder following the disclosure of an extraordinary transaction with a person who was not a 15% stockholder during the previous three years or who became a 15% stockholder with the approval of a majority of our directors. This exception applies only if the extraordinary transaction is approved or not opposed by a majority of our directors who were directors before any person became a 15% stockholder in the previous three years, or the successors of these directors.

Other Provisions

Our By-Laws provide that our By-Laws may be amended or repealed, or new by-laws may be adopted, only by the affirmative vote of the holders of not less than 67% of the stock issued and outstanding and entitled to vote at any regular or special meeting of the stockholders, if notice of the proposed alteration or amendment be contained in the notice of meeting, or by the affirmative vote of a majority of our Board of Directors. Our Certificate also provides that our Board of Directors is expressly authorized to amend or repeal our By-Laws.

Listing

Our common stock is listed on the New York Stock Exchange and trades under the symbol "HFC."

Transfer Agent and Registrar

EQ Shareowner Services is our transfer agent and registrar.

HOLLYFRONTIER CORPORATION**PERFORMANCE SHARE UNIT AGREEMENT**

This Performance Share Unit Agreement (the “*Agreement*”) is made and entered into by and between HollyFrontier Corporation, a Delaware corporation (the “*Company*”), and you. This Agreement is entered into as of the ____ day of _____, 2020 (the “*Date of Grant*”).

WITNESSETH:

WHEREAS, the Company has adopted the Plan (as defined below) to attract, retain and motivate employees, directors and consultants;

WHEREAS, the Compensation Committee (the “*Committee*”) believes that entering into this Agreement with you is consistent with the stated purposes for which the Plan was adopted; and

WHEREAS, a copy of the Plan has been furnished to you and shall be deemed a part of this Agreement as if fully set forth herein and the terms capitalized but not defined herein or on Appendix A attached hereto shall have the meanings set forth in the Plan.

NOW, THEREFORE, in consideration of the services rendered by you, the parties agree as follows:

1. Grant. The Company hereby grants to you as of the Date of Grant a Performance Award of ____ shares of Phantom Stock consisting of performance share units (the “*Performance Share Units*”), subject to the terms and conditions set forth in this Agreement. Depending on the Company’s performance, you may earn from zero percent (0%) to two hundred percent (200%) of the Performance Share Units, based on the Company’s performance on two measures set forth in Section 3 over a designated performance period compared to the performance of a group of peer companies selected by the Committee.

2. The Plan. The Performance Share Units granted to you by this Agreement shall be granted under HollyFrontier Corporation Long-Term Incentive Compensation Plan (the “*Plan*”), and this Agreement is subject to all the terms, conditions, limitations and restrictions contained in the Plan.

3. Performance Period and Measures. This Section 3 sets forth the details of the Performance Award for the “*Performance Period*,” which begins on October 1 of the calendar year of the Date of Grant (“*Year One*”) and ends on September 30 of the third calendar year following Year One (“*Year Three*”). If you are employed by the Company or its Subsidiaries on December 1 of Year Three you will be entitled to a payment in Shares in the amount determined under Section 3(b) or pursuant to Section 5, as applicable, and payable at the time indicated in this Section 3. The period of time beginning on the Date of Grant and ending on December 1 of Year Three is referred to herein as the “*Service Period*.”



(a) Performance Measures. The number of Performance Share Units earned for the Performance Period is determined by comparing the Company's performance on the two measures listed below over the Performance Period to the performance of the Peer Group over the Performance Period on the same two measures. The two performance measures are Return on Capital Employed and Total Shareholder Return.

(b) Shares Payable. The number of Shares payable is equal to the result of multiplying the total number of Performance Share Units awarded by the Performance Unit Payout Percentage ("*Earned PSUs*"). The number of Shares payable hereunder shall be paid as soon as reasonably practicable after December 1 of Year Three but in no event later than two and one-half months following the end of Year Three; provided, however, that in the event of your termination of employment with the Company or its Subsidiaries pursuant to Section 5(a) or (b) the Shares shall be paid within thirty (30) days following such termination of employment. Such payment will be subject to withholding for taxes and other applicable payroll adjustments. The Committee's determination of the amount payable shall be binding upon you and your beneficiary or estate. The value of such Shares shall not bear any interest owing to the passage of time. The number of Shares of Common Stock payable will be rounded down to the nearest Share. No fractional Shares of Common Stock will be issued pursuant to this Agreement.

4. Restrictions; Forfeiture. The Performance Share Units are restricted in that they cannot be sold, transferred or otherwise alienated or hypothecated. In the event you cease to be an employee of the Company and any Subsidiary, other than as provided in Section 5 below, the Performance Share Units that are not vested on the date of such cessation of employment shall be immediately forfeited.

5. Termination of Employment.

(a) In the event that your employment with the Company or its Subsidiaries terminates prior to December 1 of Year Three (i) due to your death, (ii) on account of your total and permanent disability, as determined by the Committee in its sole discretion or (iii) due to your Retirement, then you shall forfeit a number of the Performance Share Units equal to the number of Performance Share Units specified in Section 1 hereof times the percentage that (A) the number of days beginning on the day on which the date of such termination occurs and ending on the last day of the Service Period, (B) bears to the total number of days in the Service Period. In the event of such forfeiture, the number of Shares payable hereunder shall be equal to a Performance Unit Payout Percentage of one hundred percent (100%) instead of the Performance Unit Payout Percentage that would otherwise be determined at the end of the Performance Period in accordance with Section 3, and such Performance Share Units will immediately become Earned PSUs and paid to you as provided in Section 3(b).

(b) In the event your employment with the Company or its Subsidiaries terminates prior to December 1 of Year Three as a result of a Special Involuntary Termination (subject to Section 5(d)), the Performance Share Units will become immediately Earned PSUs assuming a Performance Unit Payout Percentage of one hundred percent (100%) instead of the Performance Unit Payout Percentage that would otherwise be determined at the end of the Performance Period in accordance with Section 3.

(c) If, prior to December 1 of Year Three you voluntarily separate from employment (other than due to your Retirement) or are terminated by action of the Company (other than a Special Involuntary Termination), including if you are terminated by the Company for Cause, all Performance Share Units awarded hereunder will be forfeited.

(d) If a Special Involuntary Termination occurs prior to the Change in Control, vesting will be suspended for 60 days and the Performance Share Units will become Earned PSUs immediately prior to the date of the Change in Control only if the Change in Control occurs within 60 days after such termination of employment. If the Change in Control does not occur during the 60-day period following such termination of employment, the Performance Share Units will become null and void and shall be immediately forfeited to the Company on the 60th day following termination of employment. If the Special Involuntary Termination occurs following the Change in Control and the Performance Share Units are assumed or are otherwise continued following the Change in Control, then the Performance Share Units will become Earned PSUs on the date of the termination of employment; provided, however, in no event will the vesting of Performance Share Units pursuant to this Section 5(d) result in the settlement of Earned PSUs later than December 31st of the third year following the year in which the services were provided to which the Award relates.

(e) Notwithstanding any provision herein to the contrary, in the event of any inconsistency between this Section 5 and any employment, change in control or similar agreement entered into by and between you and the Company (or any Subsidiary), the terms of the employment, change in control or similar agreement shall control, subject to compliance with Section 409A of the Code.

(f) For purposes of this Agreement, your employment will be deemed to terminate on the date that you cease to be actively employed by the Company (or any Subsidiary) and shall not be extended by any notice period mandated or implied under local law during or for which you receive pay in lieu of notice or severance pay. The Company shall have the sole discretion to determine when you are no longer actively employed for purposes of this Agreement, without reference to any other agreement, written or oral, including your contract of employment.

6. Leave of Absence. With respect to the Performance Share Units, the Company may, in its sole discretion, determine that if you are on leave of absence for any reason you will be considered to still be in the employ of, or providing services to, the Company (or a Subsidiary), provided that, subject to applicable law, your rights to the Performance Share Units, if any, during a Performance Period in which such a leave of absence occurs will be prorated to reflect the period of time during the Performance Period that you provided actual services to the Company.

7. Limited Stockholder Rights. The Performance Share Units granted pursuant to this Agreement do not and shall not entitle you to any rights of a holder of Shares, including the right to vote, prior to the date Shares are issued to you in settlement of the Performance Share Units pursuant to Section 3; provided, however that in the event that the Company declares and pays a dividend in respect of its outstanding Shares and, on the record date for such dividend, you hold Performance Share Units granted pursuant to this Agreement that have not been settled,



the Company shall pay to you an amount in cash equal to the cash dividends you would have received if you were the holder of record as of such record date, of the number of Shares related to the number of Performance Share Units specified in Section 1 hereof, such payment (“*Dividend Equivalents*”) shall be made promptly following the date that the Company pays such dividend to its shareholders generally (however, in no event shall the Dividend Equivalents be paid later than thirty (30) days following the date on which the Company pays such dividend to its shareholders generally). Your rights with respect to the Performance Share Units shall remain forfeitable at all times prior to the date on which the rights become earned and settled as set forth in Section 3, as adjusted by Section 5, as applicable.

8. Adjustment in Number of Performance Share Units. The number of Performance Share Units subject to this Agreement shall be adjusted to reflect stock splits or other changes in the capital structure of the Company, all in accordance with the Plan. In the event that the outstanding Shares of the Company are exchanged for a different number or kind of shares or other securities, or if additional, new or different shares are distributed with respect to the Shares through merger, consolidation, or sale of all or substantially all of the assets of the Company, there shall be substituted for the Shares under the Performance Share Units subject to this Agreement the appropriate number and kind of shares of new or replacement securities as determined in the sole discretion of the Committee, subject to the terms and provisions of the Plan.

9. Payment of Taxes. The Company may require you to pay to the Company (or the Company’s Subsidiary if you are an employee of a Subsidiary of the Company), an amount the Company deems necessary to satisfy its (or its Subsidiary’s) current or future withholding with respect to federal, state or local income or other taxes that you incur as a result of the Award. With respect to any tax withholding (and to the extent permissible pursuant to Rule 16b-3 under the Exchange Act, if applicable), you may (a) direct the Company to withhold from the Shares to be issued to you under this Agreement the number of Shares necessary to satisfy the Company’s withholding of such taxes, which determination will be based on the Shares’ Fair Market Value at the time such determination is made; (b) deliver to the Company Shares sufficient to satisfy the Company’s tax withholding, based on the Shares’ Fair Market Value at the time such determination is made; or (c) deliver cash to the Company sufficient to satisfy its tax withholding obligations. If you desire to elect to use the stock withholding option described in subparagraph (a), you must make the election at the time and in the manner the Company prescribes and the maximum number of Shares that may be so withheld or surrendered shall be a number of Shares that have an aggregate Fair Market Value on the date of withholding or repurchase of up to the aggregate amount of such tax liabilities determined based on the greatest withholding rates for you in your relevant federal, state, foreign and/or local tax jurisdiction, including payroll taxes, that may be utilized without creating adverse accounting treatment with respect to the Award. The Company, in its discretion, may deny your request to satisfy its tax withholding obligations using a method described under subparagraph (a), (b) or (c) and require an alternative method of withholding. In the event the Company determines that the aggregate Fair Market Value of the Shares withheld as payment of any tax withholding obligation is insufficient to discharge that tax withholding obligation, then you must pay to the Company, in cash, the amount of that deficiency immediately upon the Company’s request.

10. Compliance with Securities and Other Applicable Laws. Notwithstanding any provision of this Agreement to the contrary, the issuance of Shares will be subject to compliance with all applicable requirements of federal, state, or foreign law with respect to such securities and with the requirements of any stock exchange or market system upon which the Shares may then be listed. No Shares will be issued hereunder if such issuance would constitute a violation of any applicable federal, state, or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Shares may then be listed. In addition, Shares will not be issued hereunder unless a registration statement under the Securities Act, is at the time of issuance in effect with respect to the Shares issued or in the opinion of legal counsel to the Company, the Shares issued may be issued in accordance with the terms of an applicable exemption from the registration requirements of the Securities Act. The inability of the Company to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Company's legal counsel to be necessary to the lawful issuance and sale of any Shares subject to the Award will relieve the Company of any liability in respect of the failure to issue such Shares as to which such requisite authority has not been obtained. As a condition to any issuance hereunder, the Company may require you to satisfy any qualifications that may be necessary or appropriate to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect to such compliance as may be requested by the Company. From time to time, the Board and appropriate officers of the Company are authorized to take the actions necessary and appropriate to file required documents with governmental authorities, stock exchanges, and other appropriate Persons to make Shares available for issuance.

11. Right of the Company and Subsidiaries to Terminate Services. Nothing in this Agreement confers upon you the right to continue in the employ of or performing services for the Company or any Subsidiary, or interfere in any way with the rights of the Company or any Subsidiary to terminate your employment or service relationship at any time subject to applicable law and the terms of any applicable employment agreement.

12. Furnish Information. You agree to furnish to the Company all information requested by the Company to enable it to comply with any reporting or other requirements imposed upon the Company by or under any applicable statute or regulation.

13. Remedies. The Company shall be entitled to recover from you reasonable attorneys' fees incurred in connection with the successful enforcement of the terms and provisions of this Agreement whether by an action to enforce specific performance or for damages for its breach or otherwise to the extent allowed by applicable law.

14. No Liability for Good Faith Determinations. The Company and the members of the Board shall not be liable for any act, omission or determination taken or made in good faith with respect to this Agreement or the Performance Share Units granted hereunder.

15. Execution of Receipts and Releases. Any payment of cash or any issuance or transfer of Shares or other property to you, or to your legal representative, heir, legatee or distributee, in accordance with the provisions hereof, will, to the extent thereof, be in full satisfaction of all claims of such Persons hereunder. In addition, the Company may require you



or your legal representative, heir, legatee or distributee, as a condition precedent to such payment or issuance, to execute a general release of all claims in favor of the Company, any Affiliate and the employees, officers, stockholders or board members of the foregoing in such form as the Company may determine. In the event the period you are given to review, execute and revoke a release provided pursuant to this Section 16 spans two calendar years, any payment to you pursuant to this Agreement will be made in the second calendar year.

16. Clawback. This Agreement is subject to any written clawback policies that the Company, with the approval of the Board or the Committee, may adopt to the extent allowed by applicable law. Any such policy may subject your Performance Share Units and amounts paid or realized with respect to the Performance Share Units under this Agreement to reduction, cancelation, forfeiture or recoupment if certain specified events or wrongful conduct occur, including but not limited to an accounting restatement due to the Company's material noncompliance with financial reporting regulations or other events or wrongful conduct specified in any such clawback policy adopted by the Company, including any policy to conform to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and rules promulgated thereunder by the Securities and Exchange Commission and that the Company determines should apply to this Agreement.

17. No Guarantee of Interests. Neither the Board nor the Company guarantee the Shares from loss or depreciation.

18. Company Records. Records of the Company or its Subsidiaries regarding your period of employment or service, termination of service and/or employment and the reason(s) therefor, leaves of absence, re-employment, and other matters shall be conclusive for all purposes hereunder, unless determined by the Company to be incorrect.

19. Notice. All notices required or permitted under this Agreement must be in writing and personally delivered or sent by mail and shall be deemed to be delivered on the date on which it is actually received by the person to whom it is properly addressed or, if earlier, the date it is sent via certified United States mail.

20. Waiver of Notice. Any person entitled to notice hereunder may waive such notice in writing.

21. Certain Covenants.

(a) Protection of Confidential Information. You acknowledge that in the course of your employment with the Company and its Subsidiaries, you have obtained and will continue to obtain confidential, proprietary and/or trade secret information of the Company, relating to, among other things, (i) programs, strategies, information or materials related to the business, services, manner of operation and activities of the Company, (ii) customers or prospects of the Company, (iii) computer hardware or software used in the course of the Company business, and (iv) marketing strategies or other activities of the Company from or on behalf of any of its clients, (hereinafter collectively referred to as "**Confidential Information**"); provided, however, that, for purposes of this Agreement, the term Confidential Information shall not include any



information that is known generally to the public or accessible to a third party on an unrestricted basis. You recognize that such Confidential Information has been developed by the Company at great expense; is a valuable, special and unique asset of the Company which it uses in its business to obtain competitive advantage over its competitors; is and shall be proprietary to the Company; is and shall remain the exclusive property of the Company; and, is not to be transmitted to any other person, entity or thing. Accordingly, as a material inducement to the Company to enter into this Agreement with you and in partial consideration for the granting of the Award, you hereby:

(i) warrant and represent that you have not disclosed, copied, disseminated, shared or transmitted any Confidential Information to any person, firm, corporation or entity for any reason or purpose whatsoever, except in the course of carrying out your duties and responsibilities of employment with the Company and its Subsidiaries;

(ii) agree not to so disclose, copy, disseminate, share or transmit any Confidential Information in the future;

(iii) agree not to make use of any Confidential Information for your own purposes or for the benefit of any person, firm, corporation or other entity, except that, in the course of carrying out the duties and responsibilities of your employment, you may use Confidential Information for the benefit of any Affiliate of the Company;

(iv) warrant and represent that all Confidential Information in your possession, custody or control that is or was a property of the Company has been or shall be returned to the Company by or on the date of your termination; and

(v) agree that you will not reveal, or cause to be revealed, this Agreement or its terms to any third party (other than your attorney, tax advisor, or spouse on the condition that they also not reveal this Agreement or its terms to any other person), except as required by law.

Your covenants in this Section 22(a) are in addition to, and do not supersede, your obligations under any confidentiality, invention or trade secret agreements executed by you, or any laws protecting the Confidential Information.

(b) Non-Solicitation. You agree that during the term of your employment with the Company or its Subsidiaries and for a period of one year following your termination of employment with the Company and its Subsidiaries, you will not, directly or indirectly, for your benefit or for the benefit of others, solicit any employee or service provider of the Company or its Affiliates to terminate his or her employment or his, her or its service relationship with the Company or its Affiliates; provided, however, that (y) after the termination of your employment for any reason, such employees and service providers shall only include such employees and service providers that you directly worked with in the twelve months preceding the date of termination of your employment, and (z) it will not constitute a violation of this Section 22(b) if an employee or service provider of the Company or its Affiliates accepts employment or a service relationship with a Person not affiliated with the Company or its Affiliates (i) pursuant to a general solicitation advertising the position, (ii) as a result of communications initiated by the



employee or service provider of the Company or its Affiliates (and not in response to any solicitation by you) or (iii) where the employment or service relationship with the Company or its Affiliates with respect to such person was terminated more than six months prior to any action by you that would otherwise be a violation of this Section 22(b).

(c) Extent of Restrictions. You acknowledge that the restrictions contained in this Section 22 correctly set forth the understanding of the parties at the time this Agreement is entered into, are reasonable and necessary to protect the legitimate interests of the Company, and that any violation will cause substantial injury to the Company. In the event of any such violation, the Company shall be entitled, in addition to any other remedy, to preliminary or permanent injunctive relief. You waive, to the maximum extent permissible by law, any defenses or other objections to such remedies or the enforceability of this Section 22. To the maximum extent permissible by law, if any court having jurisdiction shall find that any part of the restrictions set forth this Section 22 are unreasonable in any respect, it is the intent of the parties that the restrictions set forth herein shall not be terminated, but that the restrictions set forth in this Section 22 shall remain in full force and effect to the extent (as to time periods and other relevant factors) that the court shall find reasonable.

(d) Limitations. In the event any breach of the covenants set forth in this Section 22 comes to the attention of the Company, this Award and the Performance Share Units granted hereunder that have not at such time been settled shall be immediately forfeited to the Company and the Company it shall take into consideration such breach in determining whether to recommend the grant of any future similar award to you, as a factor weighing against the advisability of granting any such future award to you. However, nothing in this Agreement will prevent you from: (i) making a good faith report of possible violations of applicable law to any governmental agency or entity or (ii) making disclosures that are protected under the whistleblower provisions of applicable law. For the avoidance of doubt, nothing herein shall prevent you from making a disclosure that: (A) is made (1) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney; and (2) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. Further, an individual who files a lawsuit for retaliation by an employer of reporting a suspected violation of law may make disclosures without violating this Section 22 to the attorney of the individual and use such information in the court proceeding.

22. Section 409A. It is intended that the Performance Share Units awarded hereunder shall comply with the requirements of Section 409A of the Code (and any regulations and guidelines issued thereunder), and this Agreement shall be interpreted on a basis consistent with such intent. Payments shall only be made on an event and in a manner permitted by Section 409A of the Code. Each payment under this Agreement is considered a separate payment for purposes of Section 409A of the Code. This Agreement may be amended without your consent in any respect deemed by the Committee to be necessary in order to preserve compliance with Section 409A of the Code. All payments to be made upon a termination of employment under this Agreement may only be made upon a “separation from service” under Section 409A of the Code. In no event may you, directly or indirectly, designate the calendar year of a payment.



Notwithstanding anything in this Agreement to the contrary, if you are a “specified employee” under Section 409A of the Code at the time of separation from service and if payment of any amount under this Agreement is required to be delayed for a period of six months after the separation from service pursuant to Section 409A of the Code, payment of such amount shall be delayed as required by Section 409A of the Code, and the accumulated postponed amount shall be paid in a lump sum payment within 10 days after the end of the six-month period. If you die during the postponement period prior to the payment of postponed amount, the accumulated postponed amount shall be paid to the personal representative of your estate within 60 days after the date of your death.

23. Successors. This Agreement shall be binding upon you, your legal representatives, heirs, legatees and distributees, and upon the Company, its successors and assigns.

24. Severability. If any provision of this Agreement is held to be illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining provisions hereof, but such provision shall be fully severable and this Agreement shall be construed and enforced as if the illegal or invalid provision had never been included herein.

25. Company Action. Any action required of the Company shall be by resolution of the Board or by a person or entity authorized to act by resolution of the Board.

26. Headings. The titles and headings of Sections are included for convenience of reference only and are not to be considered in construction of the provisions hereof.

27. Governing Law. All questions arising with respect to the provisions of this Agreement shall be determined by application of the laws of the State of Texas, without giving any effect to any conflict of law provisions thereof, except to the extent Texas state law is preempted by federal law. The obligation of the Company to sell and deliver Shares hereunder is subject to applicable laws and to the approval of any governmental authority required in connection with the authorization, issuance, sale, or delivery of such Shares.

28. Consent to Texas Jurisdiction and Venue. You hereby consent and agree that state courts located in Dallas, Texas and the United States District Court for the Northern District of Texas each shall have personal jurisdiction and proper venue with respect to any dispute between you and the Company arising in connection with the Performance Share Units or this Agreement. In any dispute with the Company, you will not raise, and you hereby expressly waive, any objection or defense to any such jurisdiction as an inconvenient forum.

29. Amendment. This Agreement may be amended by the Board or by the Committee at any time (a) if the Board or the Committee determines, in its sole discretion, that amendment is necessary or advisable in light of any addition to or change in any federal or state, tax or securities law or other law or regulation, which change occurs after the Date of Grant and by its terms applies to the Award; or (b) other than in the circumstances described in clause (a) or provided in the Plan, with your consent.

30. Nontransferability of Agreement. This Agreement and all rights under this Agreement shall not be transferable by you during your life other than by will or pursuant to applicable laws of descent and distribution. Any of your rights and privileges in connection herewith shall not be transferred, assigned, pledged or hypothecated by you or by any other person or persons, in any way, whether by operation of law, or otherwise, and shall not be subject to execution, attachment, garnishment or similar process. In the event of any such occurrence, this Agreement shall automatically be terminated and shall thereafter be null and void. Notwithstanding the foregoing, all or some of the Performance Share Units or rights under this Agreement may be transferred to a spouse pursuant to a domestic relations order issued by a court of competent jurisdiction.

HollyFrontier Corporation

Michael C. Jennings, Chief Executive Officer and President



Appendix A

Defined Terms

For purposes of the Agreement, the following terms shall have the meanings assigned below:

“***Adverse Change***” means (i) a change in the city in which you are required to work regularly, (ii) a substantial increase in travel requirements of employment, (iii) a substantial reduction in duties of the type previously performed by you, or (iv) a significant reduction in your compensation or benefits (other than bonuses and other discretionary items of compensation) that does not apply generally to employees of the Company or its successor.

“***Affiliate***” has the meaning provided in Rule 12b-2 under the Exchange Act.

“***Beneficial Owner***” has the meaning provided in Rule 13d-3 under the Exchange Act.

“***Cause***” means:

(i) An act or acts of dishonesty on your part constituting a felony or serious misdemeanor and resulting or intended to result directly in gain or personal enrichment at the expense of the Company or any Subsidiary;

(ii) Gross or willful and wanton negligence in the performance of your material and substantial duties of employment with the Company and its Subsidiaries; or

(iii) Your conviction of a felony involving moral turpitude.

The existence of Cause shall be determined by the Committee, in its sole and absolute discretion.

“***Change in Control***” means the occurrence of any of the following after the Date of Grant:

(i) Any Person, other than (A) the Company or any of its Subsidiaries, (B) a trustee or other fiduciary holding securities under an employee benefit plan of the Company or any of its Affiliates, (C) an underwriter temporarily holding securities pursuant to an offering of such securities, or (D) a corporation owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, is or becomes the Beneficial Owner, directly or indirectly, of securities of the Company (not including in the securities beneficially owned by such Person any securities acquired directly from the Company or its Affiliates) representing more than 40% of the combined voting power of the Company’s then outstanding securities, or more than 40% of the then outstanding common stock of the Company, excluding any Person who becomes such a Beneficial Owner in connection with a transaction described in clause (iii)(A) below.

(ii) The individuals who as of the Date of Grant constitute the Board and any New Director cease for any reason to constitute a majority of the Board.



(iii) There is consummated a merger or consolidation of the Company or any direct or indirect Subsidiary of the Company with any other corporation, except if:

(A) the merger or consolidation results in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or any parent thereof) at least 60% of the combined voting power of the voting securities of the Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation; or

(B) the merger or consolidation is effected to implement a recapitalization of the Company (or similar transaction) in which no Person is or becomes the Beneficial Owner, directly, or indirectly, of securities of the Company (not including in the securities beneficially owned by such Person any securities acquired directly from the Company or its Affiliates other than in connection with the acquisition by the Company or its Affiliates of a business) representing more than 40% of the combined voting power of the Company's then outstanding securities.

(iv) The stockholders of the Company approve a plan of complete liquidation or dissolution of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets, other than a sale or disposition by the Company of all or substantially all of the Company's assets to an entity at least 60% of the combined voting power of the voting securities of which is owned by the stockholders of the Company in substantially the same proportions as their ownership of the Company immediately prior to such sale.

“**Division**” means each of the refining, midstream or lubricants & specialties segments of the Company, or any other segment or significant line of business identified by the Committee as a “Division.”

“**New Director**” means an individual whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the Date of Grant or whose election or nomination for election was previously so approved or recommended. However, “New Director” shall not include a director whose initial assumption of office is in connection with an actual or threatened election contest, including but not limited to a consent solicitation relating to the election of directors of the Company.

“**Peer Group**” means CVR Energy Inc., Delek U.S. Holdings, Inc., Marathon Petroleum Corporation, PBF Energy Corporation, Phillips 66 and Valero Energy Corporation. If a member of the Peer Group ceases to be a public company during the Performance Period (whether by merger, consolidation, liquidation or otherwise) or it fails to file financial statements with the SEC in a timely manner, it shall be treated as if it had not been a Peer Group member for the entire Performance Period.

“Performance Unit Payout Percentage” means the percentile obtained by dividing the sum of (1) the ROCE Performance Percentage and (2) the TSR Performance Percentage, by two.

“Person” has the meaning given in Section 3(a)(9) of the Exchange Act as modified and used in Sections 13(d) and 14(d) of the Exchange Act.

“Retirement” means your termination of employment other than for Cause on or after the date on which you: (i) have achieved ten years of continuous service with the Company and its Subsidiaries, and (ii) are age sixty (60).

“Return on Capital Employed,” or ROCE, is defined as (i) operating income before depreciation and amortization divided by (ii) the sum of shareholders’ equity, plus minority interest, plus debt, less goodwill and intangible assets, less cash and marketable securities at the beginning of the Performance Period; provided, that such metric will be calculated to exclude (a) any gains or losses attributable to FIFO inventory valuation (including lower of cost or market adjustments), (b) the effects of impairment expense related to intangible assets, including goodwill, and (c) non-cash asset writedowns; provided, further, the Committee may exclude the impact of any of the following events or occurrences (with respect to the Company or any member of the Peer Group) which the Committee determines should appropriately be excluded: (A) asset write-downs; (B) litigation, claims, judgments or settlements; (C) the effect of changes in tax law or other such laws or regulations affecting reported results; (D) accruals for reorganization and restructuring programs; (E) any extraordinary, unusual or nonrecurring items as described in the Accounting Standards Codification Topic 225, as the same may be amended or superseded from time to time; (F) any change in accounting principles as defined in the Accounting Standards Codification Topic 250, as the same may be amended or superseded from time to time; (G) any loss from a discontinued operation as described in the Accounting Standards Codification Topic 360, as the same may be amended or superseded from time to time; (H) adjustments to ROCE of the Company or any member (or multiple members) of the Peer Group to reflect mergers, acquisitions, purchases or similar transactions as necessary to prevent the increase or decrease of the ROCE of the Company or member of the Peer Group related to the merger, acquisition, purchase or similar transaction; (I) third party expenses associated with acquisitions; and (J) to the extent set forth with reasonable particularity in connection with the establishment of performance goals, any other extraordinary events or occurrences identified by the Committee.

“ROCE Performance Percentage” means the percentage set forth in the table below determined in accordance with the percentile ranking of the Return on Capital Employed of the Company compared to the ROCE of each entity in the Peer Group achieved during the Performance Period:

Ranking of the Company within Peer Group	ROCE Performance Percentage
90 th Percentile or Better	Maximum (200% of Target)
<90 th Percentile But Better than 50 th Percentile	Interpolate between 100% and 200%
50 th Percentile	Target (100%)
<50 th Percentile But Better than 25 th Percentile	Interpolate between 25% and 100%
25 th Percentile	25% of Target (Minimum)
<25 th Percentile	Zero

“**Sale of a Division**” means a sale or disposition of a substantial portion of a Division (other than a sale or disposition to the Company or any of its Subsidiaries) or any other transaction resulting in the loss of control by the Company and its Subsidiaries over a substantial portion of a Division (including a public offering of a Division where the Company does not control the Division following such offering), in each case, as determined by the Committee in its sole discretion.

“**SEC**” means the Securities and Exchange Commission.

“**Special Involuntary Termination**” means (i) the occurrence of (A) or (B) below within 60 days prior to, or at any time after, a Change in Control, where (A) is termination of your employment with the Company (including Subsidiaries of the Company) by the Company for any reason other than Cause and (B) is your resignation from employment with the Company (including Subsidiaries of the Company) within 90 days after an Adverse Change by the Company (including Subsidiaries of the Company) in the terms of your employment or (ii) the occurrence of (A) or (B) below within 60 days prior to, or within 90 days after, a Sale of a Division, where more than 50% of your full-time service to the Company is attributable to services to the Division being sold, as determined by the Company in its sole discretion, and provided that the purchaser in any Sale of a Division has not agreed to assume this Award or to substitute a similar award under the purchaser’s equity compensation plan for your Award and where (A) is termination of your employment with the Company (including Subsidiaries of the Company) by the Company (or any Subsidiary) for any reason other than Cause and (B) is your resignation from employment with the Company (including Subsidiaries of the Company) within 90 days after an Adverse Change by the Company (including Subsidiaries of the Company) in the terms of your employment.

“**Total Shareholder Return**” or TSR, means (A) the sum of (1) share price appreciation (calculated as the closing share price of the Common Stock for the last business day of the Performance Period less the closing share price of the Common Stock for the first business day of the Performance Period), plus (2) cumulative dividends during the Performance Period, plus (3) any additional value or compensation received by shareholders such as stock received from spinoffs, divided by (B) the closing share price of the Common Stock on the first business day of the Performance Period, adjusted to take into account any stock splits, changes in capitalization or other similar events. Such determinations and adjustments shall be made by the Committee in its discretion.



“*TSR Performance Percentage*” means the percentage set forth in the table below determined in accordance with the percentile ranking of the Total Shareholder Return of the Company compared to the TSR of each entity in the Peer Group achieved during the Performance Period:

Ranking of the Company within Peer Group	TSR Performance Percentage
90 th Percentile or Better	Maximum (200% of Target)
<90 th Percentile But Better than 50 th Percentile	Interpolate between 100% and 200%
50 th Percentile	Target (100%)
<50 th Percentile But Better than 25 th Percentile	Interpolate between 25% and 100%
25 th Percentile	25% of Target (Minimum)
<25 th Percentile	Zero

HOLLYFRONTIER CORPORATION

**RESTRICTED STOCK UNIT AGREEMENT
(Non-Employee Director Award)**

This Agreement is made and entered into as of the Date of Grant set forth in the Notice of Grant of Restricted Stock Units (“*Notice of Grant*”) by and between HollyFrontier Corporation, a Delaware corporation (the “*Company*”), and you;

WHEREAS, the Company, as part of your compensation for service as a member of the Company’s board of directors (the “*Board*”) and in order to induce you to materially contribute to the success of the Company, agrees to grant you this restricted stock unit award;

WHEREAS, the Company adopted the Plan (as defined in the Notice of Grant) under which the Company is authorized to grant stock units and phantom stock awards, as applicable (in each case, herein referred to as restricted stock units) to certain employees, directors and other service providers of the Company;

WHEREAS, a copy of the Plan has been furnished to you and shall be deemed a part of this Restricted Stock Unit Agreement (Non-Employee Director Award) (“*Agreement*”) as if fully set forth herein and the terms capitalized but not defined herein shall have the meanings set forth in the Plan; and

WHEREAS, you desire to accept the restricted stock unit award made pursuant to this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants set forth herein and for other valuable consideration hereinafter set forth, the parties agree as follows:

1. **The Grant**. Subject to the conditions set forth below, the Company hereby grants you effective as of the Date of Grant set forth in the Notice of Grant, as a matter of separate inducement but not in lieu of any cash or other compensation for your services for the Company, an award (the “*Award*”) consisting of the aggregate number of Shares set forth in the Notice of Grant in accordance with the terms and conditions set forth herein, in the Notice of Grant and in the Plan, plus the additional rights to receive possible dividend equivalents, in accordance with the terms and conditions set forth herein.

2. **No Shareholder Rights**. The Restricted Stock Units (“*RSUs*”) granted pursuant to this Agreement do not and shall not entitle you to any rights of a holder of Shares prior to the date Shares are issued to you in settlement of the Award.

3. **Dividend Equivalents**. In the event that the Company declares and pays a dividend in respect of its outstanding Shares on or after the Date of Grant and, on the record date for such dividend, you hold RSUs granted pursuant to this Agreement that have not been settled, the Company shall pay to you an amount in cash equal to the cash dividends you would have

received if you were the holder of record as of such record date, of the number of Shares related to the portion of your RSUs that have not been settled as of such record date, such payment (“*Dividend Equivalents*”) to be made on or promptly following the date that the Company pays such dividend (however, in no event shall the Dividend Equivalents be paid later than 30 days following the date on which the Company pays such dividend to its shareholders generally).

4. Restrictions; Forfeiture. The RSUs are restricted in that they cannot be sold, transferred or otherwise alienated or hypothecated until Shares related to such RSUs are issued pursuant to Section 6 following the removal or expiration of the restrictions as contemplated in Section 5 of this Agreement and as described in the Notice of Grant. In the event you cease to serve as a member of the Board, other than as a result of death, Disability, or Retirement, the RSUs that are not vested on the date of such cessation of service shall be immediately forfeited unless the Committee, in its sole discretion, otherwise elects to accelerate the vesting of such RSUs.

5. Expiration of Restrictions and Risk of Forfeiture. The restrictions on the RSUs granted pursuant to this Agreement will expire and the RSUs will become nonforfeitable as set forth in the Notice of Grant, provided that you remain a member of the Board until the applicable dates and times set forth therein. RSUs that have become vested and non-forfeitable as provided in this Agreement are referred to herein as “Vested.”

6. Issuance of Stock. Shares shall be issued to you in settlement of your Vested RSUs within 30 days following the date upon which such RSUs become Vested in accordance with the Agreement. At the time of settlement, the Company shall cause to be issued Shares registered in your name in payment of the Award. The Company shall evidence the Shares to be issued in payment of the RSUs in the manner it deems appropriate. The value of any fractional RSU shall be rounded down at the time Shares are issued to you. No fractional Shares, nor the cash value of any fractional Shares, will be issuable or payable to you pursuant to this Agreement. The value of Shares shall not bear any interest owing to the passage of time. Neither this Section 6 nor any action taken pursuant to or in accordance with this Section 6 shall be construed to create a trust or a funded or secured obligation of any kind.

7. Compliance with Securities and Other Applicable Laws. Notwithstanding any provision of this Agreement to the contrary, the issuance of Shares will be subject to compliance with all applicable requirements of federal, state, or foreign law with respect to such securities and with the requirements of any stock exchange or market system upon which the Shares may then be listed. No Shares will be issued hereunder if such issuance would constitute a violation of any applicable federal, state, or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Shares may then be listed. In addition, Shares will not be issued hereunder unless (a) a registration statement under the Securities Act is, at the time of issuance, in effect with respect to the Shares issued or (b) in the opinion of legal counsel to the Company, the Shares issued may be issued in accordance with the terms of an applicable exemption from the registration requirements of the Securities Act. The inability of the Company to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Company’s legal counsel to be necessary to the lawful issuance and sale of

any Shares subject to the Award will relieve the Company of any liability in respect of the failure to issue such Shares as to which such requisite authority has not been obtained. As a condition to any issuance hereunder, the Company may require you to satisfy any qualifications that may be necessary or appropriate to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect to such compliance as may be requested by the Company. From time to time, the Board and appropriate officers of the Company are authorized to take the actions necessary and appropriate to file required documents with governmental authorities, stock exchanges, and other appropriate Persons to make Shares available for issuance.

8. Legends. The Company may at any time place legends referencing any restrictions imposed on the Shares pursuant to Sections 4 and 7 of this Agreement on all certificates representing Shares issued with respect to this Award.

9. Continuation as a Director. Nothing in this Agreement confers upon you the right to continue to serve as a member of the Board.

10. Furnish Information. You agree to furnish to the Company all information requested by the Company to enable it to comply with any reporting or other requirements imposed upon the Company by or under any applicable statute or regulation.

11. Remedies. The parties to this Agreement shall be entitled to recover from each other reasonable attorneys' fees incurred in connection with the successful enforcement of the terms and provisions of this Agreement whether by an action to enforce specific performance or for damages for its breach or otherwise.

12. No Liability for Good Faith Determinations. The Company and the members of the Board shall not be liable for any act, omission or determination taken or made in good faith with respect to this Agreement or the RSUs granted hereunder.

13. Execution of Receipts and Releases. Any payment of cash or any issuance or transfer of Shares or other property to you, or to your legal representative, heir, legatee or distributee, in accordance with the provisions hereof, will, to the extent thereof, be in full satisfaction of all claims of such Persons hereunder. In addition, the Company may require you or your legal representative, heir, legatee or distributee, as a condition precedent to such payment or issuance, to execute a general release of all claims in favor of the Company, any Affiliate and the employees, officers, stockholders or board members of the foregoing in such form as the Company may determine. In the event the period you are given to review, execute and revoke a release provided pursuant to this Section 13 spans two calendar years, any payment to you pursuant to this Agreement will be made in the second calendar year.

14. No Guarantee of Interests. Neither the Board nor the Company guarantee the Shares from loss or depreciation.

15. Company Records. Records of the Company or its Subsidiaries regarding your period of service, termination of service and the reason(s) therefor, and other matters shall be conclusive for all purposes hereunder, unless determined by the Company to be incorrect.

16. Notice. All notices required or permitted under this Agreement must be in writing and personally delivered or sent by mail and shall be deemed to be delivered on the date on which it is actually received by the person to whom it is properly addressed or, if earlier, the date it is sent via certified United States mail.

17. Waiver of Notice. Any person entitled to notice hereunder may waive such notice in writing.

18. Information Confidential. As partial consideration for the granting of the Award hereunder, you hereby agree to keep confidential all information and knowledge, except that which has been disclosed in any public filings required by law, that you have relating to the terms and conditions of this Agreement; provided, however, that such information may be disclosed as required by law and may be given in confidence to your spouse and tax and financial advisors. In the event any breach of this promise comes to the attention of the Company, it shall take into consideration that breach in determining whether to recommend the grant of any future similar award to you, as a factor weighing against the advisability of granting any such future award to you. Nothing in this Agreement will prevent you from: (a) making a good faith report of possible violations of applicable law to any governmental agency or entity or (b) making disclosures that are protected under the whistleblower provisions of applicable law. For the avoidance of doubt, nothing herein shall prevent you from making a disclosure that: (i) is made (A) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney; and (B) solely for the purpose of reporting or investigating a suspected violation of law; or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. Further, an individual who files a lawsuit for retaliation by an employer of reporting a suspected violation of law may make disclosures without violating this Section 18 to the attorney of the individual and use such information in the court proceeding.

19. Section 409A. This Agreement is not intended to constitute a deferral of compensation within the meaning of Section 409A of the Code and shall be construed and interpreted in accordance with such intent. Payment under this Agreement shall be made in a manner that will be exempt from or, notwithstanding the preceding sentence, comply with Section 409A of the Code, including regulations or other guidance issued with respect thereto, except as otherwise determined by the Committee. The applicable provisions of Section 409A of the Code are hereby incorporated by reference and shall control over any contrary provisions herein that conflict therewith.

20. Successors. This Agreement shall be binding upon you, your legal representatives, heirs, legatees and distributees, and upon the Company, its successors and assigns.

21. Severability. If any provision of this Agreement is held to be illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining provisions hereof, but such

provision shall be fully severable and this Agreement shall be construed and enforced as if the illegal or invalid provision had never been included herein.

22. Company Action. Any action required of the Company shall be by resolution of the Board or by a person or entity authorized to act by resolution of the Board.

23. Headings. The titles and headings of Sections are included for convenience of reference only and are not to be considered in construction of the provisions hereof.

24. Governing Law. All questions arising with respect to the provisions of this Agreement shall be determined by application of the laws of the State of Texas, without giving any effect to any conflict of law provisions thereof, except to the extent Texas state law is preempted by federal law. The obligation of the Company to sell and deliver Shares hereunder is subject to applicable laws and to the approval of any governmental authority required in connection with the authorization, issuance, sale, or delivery of such Shares.

25. Consent to Texas Jurisdiction and Venue. You hereby consent and agree that state courts located in Dallas County, Texas and the United States District Court for the Northern District of Texas each shall have personal jurisdiction and proper venue with respect to any dispute between you and the Company arising in connection with the RSUs or this Agreement. In any dispute with the Company, you will not raise, and you hereby expressly waive, any objection or defense to such jurisdiction as an inconvenient forum.

26. Amendment. This Agreement may be amended by the Board or by the Committee at any time (a) if the Board or the Committee determines, in its sole discretion, that amendment is necessary or advisable in light of any addition to or change in any federal or state, tax or securities law or other law or regulation, which change occurs after the Date of Grant and by its terms applies to the Award; or (b) other than in the circumstances described in clause (a) or provided in the Plan, with your consent.

27. The Plan. This Agreement is subject to all the terms, conditions, limitations and restrictions contained in the Plan.

28. Defined Terms.

(a) “*Affiliate*” has the meaning provided in Rule 12b-2 under the Exchange Act.

(b) “*Beneficial Owner*” has the meaning provided in Rule 13d-3 under the Exchange Act.

(c) “*Change in Control*” means the occurrence of any of the following after the Date of Grant:

(i) Any Person, other than (A) the Company or any of its Subsidiaries, (B) a trustee or other fiduciary holding securities under an employee benefit plan of the Company or any of its Affiliates, (C) an underwriter temporarily holding securities pursuant to an offering of

such securities, or (D) a corporation owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, is or becomes the Beneficial Owner, directly or indirectly, of securities of the Company (not including in the securities beneficially owned by such Person any securities acquired directly from the Company or its Affiliates) representing more than 40% of the combined voting power of the Company's then outstanding securities, or more than 40% of the then outstanding common stock of the Company, excluding any Person who becomes such a Beneficial Owner in connection with a transaction described in clause (a)(iii)(1) below.

(ii) The individuals who as of the Date of Grant constitute the Board and any New Director cease for any reason to constitute a majority of the Board.

(iii) There is consummated a merger or consolidation of the Company or any direct or indirect Subsidiary of the Company with any other corporation, except if:

(1) the merger or consolidation results in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or any parent thereof) at least 60% of the combined voting power of the voting securities of the Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation; or

(2) the merger or consolidation is effected to implement a recapitalization of the Company (or similar transaction) in which no Person is or becomes the Beneficial Owner, directly, or indirectly, of securities of the Company (not including in the securities beneficially owned by such Person any securities acquired directly from the Company or its Affiliates other than in connection with the acquisition by the Company or its Affiliates of a business) representing more than 40% of the combined voting power of the Company's then outstanding securities.

(iv) The stockholders of the Company approve a plan of complete liquidation or dissolution of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets, other than a sale or disposition by the Company of all or substantially all of the Company's assets to an entity at least 60% of the combined voting power of the voting securities of which is owned by the stockholders of the Company in substantially the same proportions as their ownership of the Company immediately prior to such sale.

(d) “**Disability**” means you are unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

(e) **"New Director"** means an individual whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the Date of Grant or whose election or nomination for election was previously so approved or recommended. However, "New Director" shall not include a director whose initial assumption of office is in connection with an actual or threatened election contest, including but not limited to a consent solicitation relating to the election of directors of the Company.

(f) **"Person"** has the meaning given in Section 3(a)(9) of the Exchange Act as modified and used in Sections 13(d) and 14(d) of the Exchange Act.

(g) **"Retirement"** means a Separation from Service with Committee approval following your attainment of age 55.

(h) **"Separation from Service"** means a "separation from service" within the meaning of Treasury Regulation § 1.409A-1(h).

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HOLLYFRONTIER CORPORATION

NOTICE OF GRANT OF RESTRICTED STOCK UNITS

(Non-Employee Director Award)

Pursuant to the terms and conditions of the HollyFrontier Corporation Long-Term Incentive Compensation Plan (the “**Plan**”), and the associated Restricted Stock Unit Agreement (Non-Employee Director Award) which has been made separately available to you (the “**Agreement**”), you are hereby granted an award to receive the number of Restricted Stock Units (“**RSUs**”) set forth below, whereby each RSU represents the right to receive one Share, plus rights to certain dividend equivalents described in Section 3 of the Agreement, under the terms and conditions set forth below, in the Agreement, and in the Plan. Capitalized terms used but not defined herein shall have the meanings set forth in the Plan or the Agreement. You may obtain a copy of the Plan and a copy of the prospectus related to the Shares by following the instructions attached as Appendix A. Additionally, you may request a copy of the Plan or the prospectus by contacting Cara Whitesel at Cara.Whitesel@hollyfrontier.com or 214.954.6530.

Grantee: _____

Date of Grant: _____, 2020 (“**Date of Grant**”)

*Number of Restricted Stock
Units:* _____

Vesting Schedule: The RSUs granted pursuant to the Agreement will become vested and be nonforfeitable as of December 1, 2021; provided, that, you continue to serve as a member of the Board to such date. Shares will be issued with respect to the RSUs as set forth in Section 6 of the Agreement (which Shares when issued will be transferable and nonforfeitable). All of the RSUs awarded to you pursuant to this Notice of Grant of Restricted Stock Units shall become fully vested upon (a) your death (b) your Retirement in 2021, (c) your Disability, or (d) the occurrence of a Change in Control, provided you are then serving as a member of the Board immediately prior to the Change in Control.

The Shares you receive upon settlement will be taxable to you in an amount equal to the closing price of the Shares on the date of settlement (or, if such date is not a business day, the last day preceding such day). By receipt of the RSUs you acknowledge and agree that (a) you are not relying on any written or oral statement or representation by the Company, its affiliates, or any of their respective employees, directors, officers, attorneys or agents (collectively, the “**Company Parties**”) regarding the tax effects associated with this Notice of Grant of Restricted Stock Units and the Agreement and your receipt, holding and vesting of the RSUs, (b) in

accepting the RSUs you are relying on your own judgment and the judgment of the professionals of your choice with whom you have consulted, and (c) a copy of the Agreement and the Plan has been made available to you. In addition, you consent to receive documents from the Company and any plan administrator by means of electronic delivery, provided that such delivery complies with applicable law, including, without limitation, documents pursuant or relating to any equity award granted to you under the Plan or any other current or future equity or other benefit plan of the Company (the “*Company’s Equity Plans*”). This consent shall be effective for the entire time that you are a participant in a Company Equity Plan. By receiving the RSUs you hereby release, acquit and forever discharge the Company Parties from all actions, causes of actions, suits, debts, obligations, liabilities, claims, damages, losses, costs and expenses of any nature whatsoever, known or unknown, on account of, arising out of, or in any way related to the tax effects associated with this Notice of Grant of Restricted Stock Unit and the Agreement and your receipt, holding and the vesting of the RSUs.

HollyFrontier Corporation

Michael C. Jennings, Chief Executive Officer and President

Appendix A

A-1

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HOLLYFRONTIER CORPORATION
RESTRICTED STOCK UNIT AGREEMENT
(U.S.)

This Agreement is made and entered into as of the Date of Grant set forth in the Notice of Grant of Restricted Stock Units (“*Notice of Grant*”) by and between HollyFrontier Corporation, a Delaware corporation (the “*Company*”), and you;

WHEREAS, the Company, as part of your compensation for services to the Company and its Subsidiaries and in order to induce you to materially contribute to the success of the Company, agrees to grant you this restricted stock unit award;

WHEREAS, the Company adopted the Plan (as defined in the Notice of Grant) under which the Company is authorized to grant stock units and phantom stock awards, as applicable (in each case, herein referred to as restricted stock units) to certain employees, directors and other service providers of the Company and its Subsidiaries;

WHEREAS, a copy of the Plan has been furnished to you and shall be deemed a part of this Restricted Stock Unit Agreement (U.S.) (“*Agreement*”) as if fully set forth herein and the terms capitalized but not defined herein shall have the meanings set forth in the Plan; and

WHEREAS, you desire to accept the restricted stock unit award made pursuant to this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants set forth herein and for other valuable consideration hereinafter set forth, the parties hereto agree as follows:

1. **The Grant.** Subject to the conditions set forth below, the Company hereby grants you effective as of the Date of Grant set forth in the Notice of Grant, as a matter of separate inducement but not in lieu of any cash or other compensation for your services for the Company (or any Subsidiary), an award (the “*Award*”) covering the aggregate number of Shares set forth in the Notice of Grant in accordance with the terms and conditions set forth herein, in the Notice of Grant and in the Plan, plus the additional rights to receive possible dividend equivalents, in accordance with the terms and conditions set forth herein. The period of time beginning on the Date of Grant and ending on December 1, 2023 is referred to herein as the “*Service Period.*”

2. **No Shareholder Rights.** The Restricted Stock Units (“*RSUs*”) granted pursuant to this Agreement do not and shall not entitle you to any rights of a holder of Shares prior to the date Shares are issued to you in settlement of the Award.

3. **Dividend Equivalents.** In the event that the Company declares and pays a dividend in respect of its outstanding Shares on or after the Date of Grant and, on the record date for such dividend, you hold RSUs granted pursuant to this Agreement that have not been settled, the Company shall pay to you an amount in cash equal to the cash dividends you would have received if you were the holder of record as of such record date, of the number of Shares related

to the portion of your RSUs that have not been settled as of such record date, such payment (“*Dividend Equivalents*”) to be made on or promptly following the date that the Company pays such dividend (however, in no event shall the Dividend Equivalents be paid later than 30 days following the date on which the Company pays such dividend to its shareholders generally).

4. Restrictions; Forfeiture. The RSUs are restricted in that they cannot be sold, transferred or otherwise alienated or hypothecated until Shares related to such RSUs are issued pursuant to Section 8 following the removal or expiration of the restrictions as contemplated in Section 5 (and Section 6, if applicable) of this Agreement and as described in the Notice of Grant. In the event you cease to be an employee of the Company and any Subsidiary, other than as provided in Section 6 below, or in the event that you violate the covenants set forth in Section 22 of this Agreement, the RSUs that are not vested on the date of such cessation of employment shall be immediately forfeited.

5. Expiration of Restrictions and Risk of Forfeiture. The restrictions on the RSUs granted pursuant to this Agreement will expire and the RSUs will become nonforfeitable as set forth in the Notice of Grant, provided that you remain an employee of the Company and its Subsidiaries until the applicable dates and times set forth therein. RSUs that have become vested and non-forfeitable as provided in this Agreement are referred to herein as “*Vested.*”

6. Termination of Employment.

(a) Termination Generally. Subject to subsections (b), (c), and (d) below, if your employment relationship with the Company and its Subsidiaries is terminated for any reason (including if you voluntarily separate from employment (other than due to your Retirement) or are terminated by action of the Company (including termination for Cause but other than a Special Involuntary Termination), then those RSUs that have not become Vested as of the date of termination shall become null and void and those RSUs shall be forfeited to the Company. The RSUs that are Vested as of the date of such termination shall not be forfeited to the Company and will be settled in accordance with Section 8.

(b) Death, Disability or Retirement. In the event of termination of your employment due to your (i) death, (ii) total and permanent disability, as determined by the Committee in its sole discretion, or (iii) Retirement, in each case, before all the RSUs granted pursuant to this Agreement have become Vested, you will forfeit a number of RSUs equal to the number of RSUs specified in the Notice of Grant times the percentage that (A) the number of days beginning on the day on which the termination due to death, disability or Retirement occurs and ending on the last day of the Service Period, (B) bears to the total number of days in the Service Period, and any remaining RSUs that are not vested will become Vested upon such termination; provided, however, that any fractional RSUs will become null and void and automatically forfeited.

(c) Special Involuntary Termination. In the event of a Special Involuntary Termination, all of the RSUs granted pursuant to this Agreement will become Vested. If a Special Involuntary Termination occurs prior to the Change in Control, the vesting will be suspended for 60 days and the RSUs will become Vested immediately prior to the date of the



Change in Control only if the Change in Control occurs within 60 days after such termination of employment. If the Change in Control does not occur during the 60-day period following such termination of employment, the RSUs will become null and void and shall be immediately forfeited to the Company on the 60th day following termination of employment. If the Special Involuntary Termination occurs following the Change in Control and the RSUs are assumed or are otherwise continued following the Change in Control, then the RSUs will become Vested on the date of the termination of employment.

(d) Effect of Employment Agreement. Notwithstanding any provision herein to the contrary, in the event of any inconsistency between this Section 6 and any employment, change in control, or similar agreement entered into by and between you and the Company (or any Subsidiary), the terms of the employment, change in control or similar agreement shall control, subject to compliance with Section 409A of the Code.

7. Leave of Absence. With respect to the Award, the Company may, in its sole discretion, determine that if you are on leave of absence for any reason you will be considered to still be in the employ of the Company (or a Subsidiary), provided that, subject to applicable law, rights to the RSUs during a leave of absence will be limited to the extent to which those rights were earned or vested when the leave of absence began.

8. Issuance of Stock. Shares shall be issued to you in settlement of your Vested RSUs within 30 days following the date upon which such RSUs become Vested in accordance with the Agreement (or such longer period of days, not more than 65, specified in a release described in Section 16). At the time of settlement, the Company shall cause to be issued Shares registered in your name in payment of the Award. The Company shall evidence the Shares to be issued in payment of the RSUs in the manner it deems appropriate. The value of any fractional RSU shall be rounded down at the time Shares are issued to you. No fractional Shares, nor the cash value of any fractional Shares, will be issuable or payable to you pursuant to this Agreement. The value of Shares shall not bear any interest owing to the passage of time. Neither this Section 8 nor any action taken pursuant to or in accordance with this Section 8 shall be construed to create a trust or a funded or secured obligation of any kind.

9. Payment of Taxes. The Company may require you to pay to the Company (or the Company's Subsidiary if you are an employee of a Subsidiary of the Company), an amount the Company deems necessary to satisfy its (or its Subsidiary's) current or future withholding with respect to federal, state or local income or other taxes that you incur as a result of the Award. With respect to any tax withholding (and to the extent permissible pursuant to Rule 16b-3 under the Exchange Act, if applicable), you may (a) direct the Company to withhold from the Shares to be issued to you under this Agreement the number of Shares necessary to satisfy the Company's withholding of such taxes, which determination will be based on the Shares' Fair Market Value at the time such determination is made; (b) deliver to the Company Shares sufficient to satisfy the Company's tax withholding, based on the Shares' Fair Market Value at the time such determination is made; or (c) deliver cash to the Company sufficient to satisfy its tax withholding obligations. If you desire to elect to use the stock withholding option described in subparagraph (a), you must make the election at the time and in the manner the Company prescribes and the

maximum number of Shares that may be so withheld or surrendered shall be a number of Shares that have an aggregate Fair Market Value on the date of withholding or repurchase of up to the aggregate amount of such tax liabilities determined based on the greatest withholding rates for you in your relevant federal, state, foreign and/or local tax jurisdiction, including payroll taxes, that may be utilized without creating adverse accounting treatment with respect to the Award. The Company, in its discretion, may deny your request to satisfy its tax withholding obligations using a method described under subparagraph (a), (b) or (c) and require an alternative method of withholding. In the event the Company determines that the aggregate Fair Market Value of the Shares withheld as payment of any tax withholding obligation is insufficient to discharge that tax withholding obligation, then you must pay to the Company, in cash, the amount of that deficiency immediately upon the Company's request.

10. Compliance with Securities and Other Applicable Laws. Notwithstanding any provision of this Agreement to the contrary, the issuance of Shares will be subject to compliance with all applicable requirements of federal, state, or foreign law with respect to such securities and with the requirements of any stock exchange or market system upon which the Shares may then be listed. No Shares will be issued hereunder if such issuance would constitute a violation of any applicable federal, state, or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Shares may then be listed. In addition, Shares will not be issued hereunder unless (a) a registration statement under the Securities Act is, at the time of issuance, in effect with respect to the Shares issued or (b) in the opinion of legal counsel to the Company, the Shares issued may be issued in accordance with the terms of an applicable exemption from the registration requirements of the Securities Act. The inability of the Company to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Company's legal counsel to be necessary to the lawful issuance and sale of any Shares subject to the Award will relieve the Company of any liability in respect of the failure to issue such Shares as to which such requisite authority has not been obtained. As a condition to any issuance hereunder, the Company may require you to satisfy any qualifications that may be necessary or appropriate to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect to such compliance as may be requested by the Company. From time to time, the Board and appropriate officers of the Company are authorized to take the actions necessary and appropriate to file required documents with governmental authorities, stock exchanges, and other appropriate Persons to make Shares available for issuance.

11. Legends. The Company may at any time place legends referencing any restrictions imposed on the Shares pursuant to Sections 4 and 10 of this Agreement on all certificates representing Shares issued with respect to this Award.

12. Right of the Company and Subsidiaries to Terminate Services. Nothing in this Agreement confers upon you the right to continue in the employ of or performing services for the Company or any Subsidiary, or interfere in any way with the rights of the Company or any Subsidiary to terminate your employment or service relationship at any time subject to applicable law and the terms of any applicable employment agreement.

13. Furnish Information. You agree to furnish to the Company all information requested by the Company to enable it to comply with any reporting or other requirements imposed upon the Company by or under any applicable statute or regulation.

14. Remedies. The Company shall be entitled to recover from you reasonable attorneys' fees incurred in connection with the successful enforcement of the terms and provisions of this Agreement whether by an action to enforce specific performance or for damages for its breach or otherwise to the extent allowed by applicable law.

15. No Liability for Good Faith Determinations. The Company and the members of the Board shall not be liable for any act, omission or determination taken or made in good faith with respect to this Agreement or the RSUs granted hereunder.

16. Execution of Receipts and Releases. Any payment of cash or any issuance or transfer of RSUs or other property to you, or to your legal representative, heir, legatee or distributee, in accordance with the provisions hereof, will, to the extent thereof, be in full satisfaction of all claims of such Persons hereunder. In addition, the Company may require you or your legal representative, heir, legatee or distributee, as a condition precedent to such payment or issuance, to execute a general release of all claims in favor of the Company, any Affiliate and the employees, officers, stockholders or board members of the foregoing in such form as the Company may determine. In the event the period you are given to review, execute and revoke a release provided pursuant to this Section 16 spans two calendar years, any payment to you pursuant to this Agreement will be made in the second calendar year.

17. Clawback. This Agreement is subject to any written clawback policies that the Company, with the approval of the Board or the Committee, may adopt to the extent allowed by applicable law. Any such policy may subject your RSUs and amounts paid or realized with respect to the RSUs under this Agreement to reduction, cancelation, forfeiture or recoupment if certain specified events or wrongful conduct occur, including but not limited to an accounting restatement due to the Company's material noncompliance with financial reporting regulations or other events or wrongful conduct specified in any such clawback policy adopted by the Company, including any policy to conform to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and rules promulgated thereunder by the Securities and Exchange Commission and that the Company determines should apply to this Agreement.

18. No Guarantee of Interests. Neither the Board nor the Company guarantee the Shares from loss or depreciation.

19. Company Records. Records of the Company or its Subsidiaries regarding your period of employment or service, termination of service and/or employment and the reason(s) therefor, leaves of absence, re-employment, and other matters shall be conclusive for all purposes hereunder, unless determined by the Company to be incorrect.

20. Notice. All notices required or permitted under this Agreement must be in writing and personally delivered or sent by mail and shall be deemed to be delivered on the date on



which it is actually received by the person to whom it is properly addressed or, if earlier, the date it is sent via certified United States mail.

21. Waiver of Notice. Any person entitled to notice hereunder may waive such notice in writing.

22. Certain Covenants.

(a) Protection of Confidential Information. You acknowledge that in the course of your employment with the Company and its Subsidiaries, you have obtained and will continue to obtain confidential, proprietary and/or trade secret information of the Company, relating to, among other things, (i) programs, strategies, information or materials related to the business, services, manner of operation and activities of the Company, (ii) customers or prospects of the Company, (iii) computer hardware or software used in the course of the Company business, and (iv) marketing strategies or other activities of the Company from or on behalf of any of its clients, (hereinafter collectively referred to as “**Confidential Information**”); provided, however, that, for purposes of this Agreement, the term Confidential Information shall not include any information that is known generally to the public or accessible to a third party on an unrestricted basis. You recognize that such Confidential Information has been developed by the Company at great expense; is a valuable, special and unique asset of the Company which it uses in its business to obtain competitive advantage over its competitors; is and shall be proprietary to the Company; is and shall remain the exclusive property of the Company; and, is not to be transmitted to any other person, entity or thing. Accordingly, as a material inducement to the Company to enter into this Agreement with you and in partial consideration for the granting of the Award, you hereby:

(i) warrant and represent that you have not disclosed, copied, disseminated, shared or transmitted any Confidential Information to any person, firm, corporation or entity for any reason or purpose whatsoever, except in the course of carrying out your duties and responsibilities of employment with the Company and its Subsidiaries;

(ii) agree not to so disclose, copy, disseminate, share or transmit any Confidential Information in the future;

(iii) agree not to make use of any Confidential Information for your own purposes or for the benefit of any person, firm, corporation or other entity, except that, in the course of carrying out the duties and responsibilities of your employment, you may use Confidential Information for the benefit of any Affiliate of the Company;

(iv) warrant and represent that all Confidential Information in your possession, custody or control that is or was a property of the Company has been or shall be returned to the Company by or on the date of your termination; and

(v) agree that you will not reveal, or cause to be revealed, this Agreement or its terms to any third party (other than your attorney, tax advisor, or spouse on the condition



that they also not reveal this Agreement or its terms to any other person), except as required by law.

Your covenants in this Section 22(a) are in addition to, and do not supersede, your obligations under any confidentiality, invention or trade secret agreements executed by you, or any laws protecting the Confidential Information.

(b) Non-Solicitation. You agree that during the term of your employment with the Company or its Subsidiaries and for a period of one year following your termination of employment with the Company and its Subsidiaries, you will not, directly or indirectly, for your benefit or for the benefit of others, solicit any employee or service provider of the Company or its Affiliates to terminate his or her employment or his, her or its service relationship with the Company or its Affiliates; provided, however, that (y) after the termination of your employment for any reason, such employees and service providers shall only include such employees and service providers that you directly worked with in the twelve months preceding the date of termination of your employment, and (z) it will not constitute a violation of this Section 22(b) if an employee or service provider of the Company or its Affiliates accepts employment or a service relationship with a Person not affiliated with the Company or its Affiliates (i) pursuant to a general solicitation advertising the position, (ii) as a result of communications initiated by the employee or service provider of the Company or its Affiliates (and not in response to any solicitation by you) or (iii) where the employment or service relationship with the Company or its Affiliates with respect to such person was terminated more than six months prior to any action by you that would otherwise be a violation of this Section 22(b).

(c) Extent of Restrictions. You acknowledge that the restrictions contained in this Section 22 correctly set forth the understanding of the parties at the time this Agreement is entered into, are reasonable and necessary to protect the legitimate interests of the Company, and that any violation will cause substantial injury to the Company. In the event of any such violation, the Company shall be entitled, in addition to any other remedy, to preliminary or permanent injunctive relief. You waive, to the maximum extent permissible by law, any defenses or other objections to such remedies or the enforceability of this Section 22. To the maximum extent permissible by law, if any court having jurisdiction shall find that any part of the restrictions set forth this Section 22 are unreasonable in any respect, it is the intent of the parties that the restrictions set forth herein shall not be terminated, but that the restrictions set forth in this Section 22 shall remain in full force and effect to the extent (as to time periods and other relevant factors) that the court shall find reasonable.

(d) Limitations. In the event any breach of the covenants set forth in this Section 22 comes to the attention of the Company, this Award and the RSUs granted hereunder that have not at such time been settled shall be immediately forfeited to the Company and the Company it shall take into consideration such breach in determining whether to recommend the grant of any future similar award to you, as a factor weighing against the advisability of granting any such future award to you. However, nothing in this Agreement will prevent you from: (i) making a good faith report of possible violations of applicable law to any governmental agency or entity or (ii) making disclosures that are protected under the whistleblower provisions of

applicable law. For the avoidance of doubt, nothing herein shall prevent you from making a disclosure that: (A) is made (1) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney; and (2) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. Further, an individual who files a lawsuit for retaliation by an employer of reporting a suspected violation of law may make disclosures without violating this Section 22 to the attorney of the individual and use such information in the court proceeding.

23. Section 409A. It is intended that the RSUs awarded hereunder shall comply with the requirements of Section 409A of the Code (and any regulations and guidelines issued thereunder), and this Agreement shall be interpreted on a basis consistent with such intent. Payments shall only be made on an event and in a manner permitted by Section 409A of the Code. Each payment under this Agreement is considered a separate payment for purposes of Section 409A of the Code. This Agreement may be amended without your consent in any respect deemed by the Committee to be necessary in order to preserve compliance with Section 409A of the Code. All payments to be made upon a termination of employment under this Agreement may only be made upon a “separation from service” under Section 409A of the Code. In no event may you, directly or indirectly, designate the calendar year of a payment. Notwithstanding anything in this Agreement to the contrary, if you are a “specified employee” under Section 409A of the Code at the time of separation from service and if payment of any amount under this Agreement is required to be delayed for a period of six months after the separation from service pursuant to Section 409A of the Code, payment of such amount shall be delayed as required by Section 409A of the Code, and the accumulated postponed amount shall be paid in a lump sum payment within 10 days after the end of the six-month period. If you die during the postponement period prior to the payment of postponed amount, the accumulated postponed amount shall be paid to the personal representative of your estate within 60 days after the date of your death.

24. Successors. This Agreement shall be binding upon you, your legal representatives, heirs, legatees and distributees, and upon the Company, its successors and assigns.

25. Severability. If any provision of this Agreement is held to be illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining provisions hereof, but such provision shall be fully severable and this Agreement shall be construed and enforced as if the illegal or invalid provision had never been included herein.

26. Company Action. Any action required of the Company shall be by resolution of the Board or by a person or entity authorized to act by resolution of the Board.

27. Headings. The titles and headings of Sections are included for convenience of reference only and are not to be considered in construction of the provisions hereof.

28. Governing Law. All questions arising with respect to the provisions of this Agreement shall be determined by application of the laws of the State of Texas, without giving



any effect to any conflict of law provisions thereof, except to the extent Texas state law is preempted by federal law. The obligation of the Company to sell and deliver Shares hereunder is subject to applicable laws and to the approval of any governmental authority required in connection with the authorization, issuance, sale, or delivery of such Shares.

29. Consent to Texas Jurisdiction and Venue. You hereby consent and agree that state courts located in Dallas, Texas and the United States District Court for the Northern District of Texas each shall have personal jurisdiction and proper venue with respect to any dispute between you and the Company arising in connection with the RSUs or this Agreement. In any dispute with the Company, you will not raise, and you hereby expressly waive, any objection or defense to any such jurisdiction as an inconvenient forum.

30. Amendment. This Agreement may be amended by the Board or by the Committee at any time (a) if the Board or the Committee determines, in its sole discretion, that amendment is necessary or advisable in light of any addition to or change in any federal or state, tax or securities law or other law or regulation, which change occurs after the Date of Grant and by its terms applies to the Award; or (b) other than in the circumstances described in clause (a) or provided in the Plan, with your consent.

31. The Plan. This Agreement is subject to all the terms, conditions, limitations and restrictions contained in the Plan.

32. Defined Terms.

(a) “**Adverse Change**” means (i) a change in the city in which you are required to work regularly, (ii) a substantial increase in travel requirements of employment, (iii) a substantial reduction in duties of the type previously performed by you, or (iv) a significant reduction in your compensation or benefits (other than bonuses and other discretionary items of compensation) that does not apply generally to employees of the Company or its successor.

(b) “**Affiliate**” has the meaning provided in Rule 12b-2 under the Exchange Act.

(c) “**Beneficial Owner**” has the meaning provided in Rule 13d-3 under the Exchange Act.

(d) “**Cause**” means:

(i) An act or acts of dishonesty on your part constituting a felony or serious misdemeanor and resulting or intended to result directly in gain or personal enrichment at the expense of the Company or any Subsidiary;

(ii) Gross or willful and wanton negligence in the performance of your material and substantial duties of employment with the Company and its Subsidiaries; or

(iii) Your conviction of a felony involving moral turpitude.



The existence of Cause shall be determined by the Committee, in its sole and absolute discretion.

(e) “*Change in Control*” means the occurrence of any of the following after the Date of Grant:

(i) Any Person, other than (A) the Company or any of its Subsidiaries, (B) a trustee or other fiduciary holding securities under an employee benefit plan of the Company or any of its Affiliates, (C) an underwriter temporarily holding securities pursuant to an offering of such securities, or (D) a corporation owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, is or becomes the Beneficial Owner, directly or indirectly, of securities of the Company (not including in the securities beneficially owned by such Person any securities acquired directly from the Company or its Affiliates) representing more than 40% of the combined voting power of the Company’s then outstanding securities, or more than 40% of the then outstanding common stock of the Company, excluding any Person who becomes such a Beneficial Owner in connection with a transaction described in clause (e)(iii)(1) below.

(ii) The individuals who as of the Date of Grant constitute the Board and any New Director cease for any reason to constitute a majority of the Board.

(iii) There is consummated a merger or consolidation of the Company or any direct or indirect Subsidiary of the Company with any other corporation, except if:

(1) the merger or consolidation results in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or any parent thereof) at least 60% of the combined voting power of the voting securities of the Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation; or

(2) the merger or consolidation is effected to implement a recapitalization of the Company (or similar transaction) in which no Person is or becomes the Beneficial Owner, directly, or indirectly, of securities of the Company (not including in the securities beneficially owned by such Person any securities acquired directly from the Company or its Affiliates other than in connection with the acquisition by the Company or its Affiliates of a business) representing more than 40% of the combined voting power of the Company’s then outstanding securities.

(iv) The stockholders of the Company approve a plan of complete liquidation or dissolution of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company’s assets, other than a sale or disposition by the Company of all or substantially all of the Company’s assets to an entity at least 60% of the combined voting power of the voting securities of which is owned by the stockholders of the

Company in substantially the same proportions as their ownership of the Company immediately prior to such sale.

(f) “**Division**” means each of the refining, midstream or lubricants & specialties segments of the Company, or any other segment or significant line of business identified by the Committee as a “Division.”

(g) “**New Director**” means an individual whose election by the Board or nomination for election by the Company’s stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the Date of Grant or whose election or nomination for election was previously so approved or recommended. However, “New Director” shall not include a director whose initial assumption of office is in connection with an actual or threatened election contest, including but not limited to a consent solicitation relating to the election of directors of the Company.

(h) “**Person**” has the meaning given in Section 3(a)(9) of the Exchange Act as modified and used in Sections 13(d) and 14(d) of the Exchange Act.

(i) “**Retirement**” means your termination of employment other than for Cause on or after the date on which you: (i) have achieved ten years of continuous service with the Company and its Subsidiaries, and (ii) are age sixty (60).

(j) “**Sale of a Division**” means a sale or disposition of a substantial portion of a Division (other than a sale or disposition to the Company or any of its Subsidiaries) or any other transaction resulting in the loss of control by the Company and its Subsidiaries over a substantial portion of a Division (including a public offering of a Division where the Company does not control the Division following such offering), in each case, as determined by the Committee in its sole discretion.

(k) “**Service Period**” means the period of time beginning on the Date of Grant specified in the Notice of Grant and ending on the final vesting date specified in the Notice of Grant.

(l) “**Special Involuntary Termination**” means (i) the occurrence of (A) or (B) below within 60 days prior to, or at any time after, a Change in Control, where (A) is termination of your employment with the Company (including Subsidiaries of the Company) by the Company (or any Subsidiary) for any reason other than Cause and (B) is your resignation from employment with the Company (including Subsidiaries of the Company) within 90 days after an Adverse Change by the Company (including Subsidiaries of the Company) in the terms of your employment or (ii) the occurrence of (A) or (B) below within 60 days prior to, or within 90 days after, a Sale of a Division, where more than 50% of your full-time service to the Company is attributable to services to the Division being sold, as determined by the Company in its sole discretion, and provided that the purchaser in any Sale of a Division has not agreed to assume this Award or to substitute a similar award under the purchaser’s equity compensation plan for your Award and where (A) is termination of your employment with the Company (including Subsidiaries of the Company) by the Company (or any Subsidiary) for any reason other than

Cause and (B) is your resignation from employment with the Company (including Subsidiaries of the Company) within 90 days after an Adverse Change by the Company (including Subsidiaries of the Company) in the terms of your employment.

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HOLLYFRONTIER CORPORATION

NOTICE OF GRANT OF RESTRICTED STOCK UNITS

(U.S.)

Pursuant to the terms and conditions of the HollyFrontier Corporation Long-Term Incentive Compensation Plan (the “**Plan**”), and the associated Restricted Stock Unit Agreement (U.S.) which has been made separately available to you (the “**Agreement**”), you are hereby granted an award to receive the number of Restricted Stock Units (“**RSUs**”) set forth below, whereby each RSU represents the right to receive one Share (as provided in Section 8 of the Agreement), plus rights to certain dividend equivalents described in Section 3 of the Agreement, under the terms and conditions set forth below, in the Agreement, and in the Plan. Capitalized terms used but not defined herein shall have the meanings set forth in the Plan or the Agreement. You may obtain a copy of the Plan and a copy of the prospectus related to the Shares by following the instructions attached as Appendix A. Additionally, you may request a copy of the Plan or the prospectus by contacting Cara Whitesel at Cara.Whitesel@hollyfrontier.com or 214.954.6530.

Grantee: _____

Date of Grant: _____, 2020 (“**Date of Grant**”)

Number of Restricted Stock Units: _____

Vesting Schedule: The restrictions on all of the RSUs granted pursuant to the Agreement will expire and the RSUs will vest according to the following schedule (or on the first business day thereafter if the date below falls on a weekend) (each such date, a “**Regular Vesting Date**”); provided, that (except as otherwise provided in Section 6 of your Agreement) you remain in the employ of the Company or its Subsidiaries continuously from the Date of Grant through such Regular Vesting Dates (as determined under the Agreement).

On Each of the Following Regular Vesting Dates	Cumulative Portion of RSUs that will become Vested
December 1, 2021	One-third
December 1, 2022	One-third
December 1, 2023	One-third

Except as otherwise provided in Section 6 of your Agreement, all RSUs that have not become vested and non-forfeitable pursuant to this Notice will be null and void and forfeited to the Company in the event of your termination by the Company or its Subsidiaries for any reason or upon your breach of the covenants set forth in Section 22 of the Agreement.

The Shares you receive upon settlement will be taxable to you in an amount equal to the closing price of the Shares on the date of settlement. By receipt or acceptance of the RSUs you acknowledge and agree that (a) you are not relying on any written or oral statement or representation by the Company, its affiliates, or any of their respective employees, directors, officers, attorneys or agents (collectively, the “*Company Parties*”) regarding the tax effects associated with this Notice of Grant of Restricted Stock Units and the Agreement and your receipt, holding and vesting of the RSUs, (b) in accepting the RSUs you are relying on your own judgment and the judgment of the professionals of your choice with whom you have consulted, (c) a copy of the Agreement and the Plan has been made available to you and (d) you agree to comply with the terms and conditions of the Plan and the Agreement (including, but not limited to, the covenants set forth in Section 22 of the Agreement). In addition, you consent to receive documents from the Company and any plan administrator by means of electronic delivery, provided that such delivery complies with applicable law, including, without limitation, documents pursuant to or relating to any equity award granted to you under the Plan or any other current or future equity or other benefit plan of the Company (the “*Company’s Equity Plans*”). This consent shall be effective for the entire time that you are a participant in a Company Equity Plan. By receiving or accepting the RSUs you hereby release, acquit and forever discharge the Company Parties from all actions, causes of actions, suits, debts, obligations, liabilities, claims, damages, losses, costs and expenses of any nature whatsoever, known or unknown, on account of, arising out of, or in any way related to the tax effects associated with this Notice of Grant of Restricted Stock Unit and the Agreement and your receipt, holding and the vesting and settlement of the RSUs.

HollyFrontier Corporation

Michael C. Jennings, Chief Executive Officer and President

Appendix A

A-1

**HOLLYFRONTIER CORPORATION
SUBSIDIARIES OF REGISTRANT**

State or Country of	<u>Name of Entity</u>	<u>Incorporation or Organization</u>
	7037619 Canada Inc.	Canada
	Artesia PTU	Delaware
	Artesia Renewable Diesel Company LLC	Delaware
	Black Eagle LLC	Delaware
	Cheyenne Logistics LLC ⁽³⁾	Delaware
	Cheyenne Pipeline LLC (joint venture) ⁽³⁾	Texas
	Cheyenne Renewable Diesel Company LLC	Delaware
	Cushing Connect Pipeline & Terminal LLC (joint venture)	Delaware
	Cushing Connect Terminal Holdings LLC (joint venture subsidiary)	Delaware
	Cushing Connect Pipeline Holdings LLC (joint venture subsidiary)	Delaware
	Eagle Consolidation LLC	Delaware
	El Dorado Logistics LLC ⁽³⁾	Delaware
	El Dorado Operating LLC ⁽³⁾	Delaware
	El Dorado Osage LLC ⁽³⁾	Delaware
	El Paso Operating LLC	Delaware
	Ethanol Management Company LLC	Delaware
	Frontier Aspen LLC (f/k/a HEP Casper SLC LLC) ⁽³⁾	Delaware
	Frontier Pipeline LLC	Delaware
	Frontier Refining & Marketing LLC	Delaware
	HEP Cheyenne LLC ⁽³⁾	Delaware
	HEP Cushing LLC (f/k/a HEP Cheyenne Shortline LLC) ⁽³⁾	Delaware
	HEP El Dorado LLC ⁽³⁾	Delaware
	HEP Fin-Tex/Trust-River, L.P. ⁽³⁾	Texas
	HEP Logistics GP, L.L.C. ⁽³⁾	Delaware
	HEP Logistics Holdings, L.P.	Delaware
	HEP Mountain Home, L.L.C. ⁽³⁾	Delaware
	HEP Navajo Southern, L.P. ⁽³⁾	Delaware
	HEP Oklahoma LLC ⁽³⁾	Delaware
	HEP Pipeline Assets, Limited Partnership ⁽³⁾	Delaware
	HEP Pipeline GP, L.L.C. ⁽³⁾	Delaware
	HEP Pipeline, L.L.C. ⁽³⁾	Delaware
	HEP Refining Assets, L.P. ⁽³⁾	Delaware
	HEP Refining GP, L.L.C. ⁽³⁾	Delaware
	HEP Refining, L.L.C. ⁽³⁾	Delaware
	HEP Tulsa LLC ⁽³⁾	Delaware
	HEP UNEV Holdings LLC ⁽³⁾	Delaware

HEP UNEV Pipeline LLC ⁽³⁾ Delaware
HEP Woods Cross, L.L.C. ⁽³⁾ Delaware
Holly Energy Finance Corp. ⁽³⁾ Delaware
Holly Energy Holdings LLC ⁽³⁾ Delaware
Holly Energy Partners – Operating, L.P. ^{(2),(3)} Delaware
Holly Energy Partners, L.P. ⁽²⁾⁽³⁾ Delaware
Holly Energy Storage – Lovington LLC ⁽³⁾ Delaware
Holly Logistic Services, L.L.C. Delaware
Holly Logistics Limited LLC Delaware
Holly Petroleum, Inc. Delaware
Holly Realty, LLC Delaware
Holly Refining Communications, Inc. Delaware
HollyFrontier Asphalt Company LLC Delaware
HollyFrontier Cheyenne Refining LLC Delaware
HollyFrontier Cyprus Limited Cyprus
HollyFrontier El Dorado Refining LLC Delaware
HollyFrontier Holdings LLC Delaware

HollyFrontier LSP Brand Strategies LLC Delaware
HollyFrontier LSP Europe B. V. (f/k/a Petro-Canada Lubricants Netherlands B.V.) Netherlands
HollyFrontier LSP Holdings LLC Delaware
HollyFrontier LSP Latin America Holdings LLC Delaware
HollyFrontier LSP Mexico S. de R.L. de C.V. Mexico
HollyFrontier LSP Services LLC Delaware
HollyFrontier LSP US Holdings LLC Delaware
HollyFrontier Luxembourg Holding Company Luxembourg
HollyFrontier Mexico Services S. de R.L. de C.V. Mexico
HollyFrontier Navajo Refining LLC Delaware
HollyFrontier Netherlands B.V. Netherlands
HollyFrontier Payroll Services, Inc. Delaware
HollyFrontier Refining & Marketing LLC Delaware
HollyFrontier Renewables Holding Company LLC (f/k/a HollyFrontier Midstream Holding Company Inc.) Delaware
HollyFrontier Renewables Marketing LLC Delaware
HollyFrontier Services LLC Delaware
HollyFrontier Transportation LLC Delaware
HollyFrontier Tulsa Refining LLC Delaware
HollyFrontier Woods Cross Refining LLC Delaware
Hollymarks, LLC Delaware
HRM Realty, LLC Delaware
Jia Shi Lubricants Trading (Shanghai) Co. Ltd. China
Lea Refining Company Delaware
Lovington-Artesia, L.L.C. ⁽³⁾ Delaware
Navajo Holdings, Inc. New Mexico
Navajo Pipeline Co., L.P. ⁽¹⁾ Delaware
Navajo Pipeline GP, L.L.C. Delaware
Navajo Pipeline LP, L.L.C. Delaware
NWNAL LLC ⁽³⁾ Delaware
Osage Pipe Line Company, LLC (joint venture) ⁽³⁾ Delaware
Petro-Canada America Lubricants LLC Delaware
Petro-Canada Europe Lubricants Limited U.K.
Petro-Canada Lubricants Inc. Canada
Qingdao Sonneborn Refined Products Co., Ltd. China
Red Giant Oil Company LLC Delaware
Roadrunner Pipeline, L.L.C. ⁽³⁾ Delaware
SLC Pipeline LLC (f/k/a HEP SLC, LLC) ⁽³⁾ Delaware
Sonneborn do Brasil Representacoes Comerciais LTDA Brazil
Sonneborn Refined Products B.V. Netherlands
Sonneborn US Holdings LLC Delaware
Sonneborn, LLC Delaware
UNEV Pipeline, LLC (joint venture) ⁽³⁾ Delaware
Wainoco Oil and Gas Company Delaware
Wainoco Resources, Inc. Delaware
Woods Cross Operating LLC ⁽³⁾ Delaware

- (1) Navajo Pipeline Co., L.P. also does business as Navajo Pipeline Co.
- (2) Holly Energy Partners, L.P. and Holly Energy Partners – Operating, L.P. also do business as Holly Energy Partners.
- (3) Represents a subsidiary of Holly Energy Partners, L.P. We have presented these entities in our list of subsidiaries as a result of our reconsolidation of Holly Energy Partners, L.P. on March 1, 2008.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-211557) of HollyFrontier Corporation,
- (2) Registration Statement (Form S-8 No. 333-238835) of HollyFrontier Corporation, and
- (3) Registration Statement (Form S-3 ASR No. 333-228429) of HollyFrontier Corporation;

of our reports dated February 24, 2021, with respect to the consolidated financial statements of HollyFrontier Corporation and the effectiveness of internal control over financial reporting of HollyFrontier Corporation included in this Annual Report (Form 10-K) for the year ended December 31, 2020.

/s/ Ernst & Young LLP

Dallas, Texas
February 24, 2021

CERTIFICATION

I, Michael C. Jennings, certify that:

1. I have reviewed this annual report on Form 10-K of HollyFrontier Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting

Date: February 24, 2021

/s/ Michael C. Jennings

Michael C. Jennings

Chief Executive Officer and President

CERTIFICATION

I, Richard L. Voliva III, certify that:

1. I have reviewed this annual report on Form 10-K of HollyFrontier Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2021

/s/ Richard L. Voliva III

Richard L. Voliva III

Executive Vice President and Chief Financial Officer

**CERTIFICATION OF CHIEF EXECUTIVE
OFFICER UNDER SECTION 906 OF THE
SARBANES OXLEY ACT OF 2002, 18 U.S.C. § 1350**

In connection with the accompanying report on Form 10-K for the annual period ending December 31, 2020 and filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Michael C. Jennings, Chief Executive Officer of HollyFrontier Corporation (the “Company”) hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 24, 2021

/s/ Michael C. Jennings

Michael C. Jennings

Chief Executive Officer and President

**CERTIFICATION OF CHIEF FINANCIAL
OFFICER UNDER SECTION 906 OF THE
SARBANES OXLEY ACT OF 2002, 18 U.S.C. § 1350**

In connection with the accompanying report on Form 10-K for the annual period ending December 31, 2020 and filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Richard L. Voliva III, Chief Financial Officer of HollyFrontier Corporation (the "Company") hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 24, 2021

/s/ Richard L. Voliva III

Richard L. Voliva III

Executive Vice President and Chief Financial Officer

Cover Page - USD (\$)
\$ / shares in Units, \$ in
Billions

12 Months Ended

Dec. 31, 2020

Feb. 19,
2021

Jun.
30,
2020

Cover [Abstract]

<u>Document Type</u>	10-K
<u>Document Annual Report</u>	true
<u>Document Period End Date</u>	Dec. 31, 2020
<u>Current Fiscal Year End Date</u>	--12-31
<u>Document Transition Report</u>	false
<u>Entity File Number</u>	1-3876
<u>Entity Registrant Name</u>	HOLLYFRONTIER CORP
<u>Entity Incorporation, State or Country Code</u>	DE
<u>Entity Tax Identification Number</u>	75-1056913
<u>Entity Address, Address Line One</u>	2828 N. Harwood, Suite 1300
<u>Entity Address, City or Town</u>	Dallas
<u>Entity Address, State or Province</u>	TX
<u>Entity Address, Postal Zip Code</u>	75201
<u>City Area Code</u>	214
<u>Local Phone Number</u>	871-3555
<u>Title of 12(b) Security</u>	Common Stock \$0.01 par value
<u>Trading Symbol</u>	HFC
<u>Security Exchange Name</u>	NYSE
<u>Entity Well-known Seasoned Issuer</u>	Yes
<u>Entity Voluntary Filers</u>	No
<u>Entity Current Reporting Status</u>	Yes
<u>Entity Interactive Data Current</u>	Yes
<u>Entity Filer Category</u>	Large Accelerated Filer
<u>Entity Small Business</u>	false
<u>Entity Emerging Growth Company</u>	false
<u>ICFR Auditor Attestation Flag</u>	true
<u>Entity Shell Company</u>	false
<u>Entity Listing, Par Value Per Share (in USD per share)</u>	\$ 0.01
<u>Entity Public Float</u>	

\$ 4.3

Entity Common Stock, Shares Outstanding (in shares)	162,414,838
Documents Incorporated by Reference	Portions of the registrant's proxy statement for its annual meeting of stockholders to be held on May 12, 2021, which proxy statement will be filed with the Securities and Exchange Commission within 120 days after December 31, 2020, are incorporated by reference in Part III.
Entity Central Index Key	0000048039
Document Fiscal Year Focus	2020
Document Fiscal Period Focus	FY
Amendment Flag	false

Consolidated Balance Sheets
- USD (\$)
\$ in Thousands

	Dec. 31,	Dec. 31,
	2020	2019
Current assets:		
<u>Cash and cash equivalents (HEP: \$21,990 and \$13,287, respectively)</u>	\$ 1,368,318	\$ 885,162
<u>Accounts receivable: Product and transportation (HEP: \$14,543 and \$18,732, respectively)</u>	590,526	834,771
<u>Crude oil resales</u>	39,510	44,914
<u>Accounts receivable, total</u>	630,036	879,685
<u>Inventories: Crude oil and refined products</u>	965,858	1,282,789
<u>Materials, supplies and other (HEP: \$895 and \$833, respectively)</u>	207,618	191,413
<u>Total inventory</u>	1,173,476	1,474,202
<u>Income taxes receivable</u>	91,348	5,478
<u>Prepayments and other (HEP: \$8,591 and \$6,795, respectively)</u>	47,583	61,662
<u>Total current assets</u>	3,310,761	3,306,189
<u>Properties, plants and equipment, at cost (HEP: \$2,119,295 and \$2,047,674, respectively)</u>	7,299,517	7,237,297
<u>Less accumulated depreciation (HEP: \$(644,149) and \$(552,786)), respectively)</u>	(2,726,378)	(2,414,585)
<u>Property, plant and equipment, net</u>	4,573,139	4,822,712
<u>Operating lease right-of-use assets (HEP: \$2,979 and \$2,652, respectively)</u>	350,548	467,109
<u>Other assets: Turnaround costs</u>	314,816	521,278
<u>Goodwill (HEP: \$312,873 and \$312,873, respectively)</u>	2,293,935	2,373,907
<u>Intangibles and other (HEP: \$365,773 and \$319,569, respectively)</u>	334,802	373,507
<u>Other assets, total</u>	3,272,416	3,568,831
<u>Total assets</u>	11,506,864	12,164,841
Current liabilities:		
<u>Accounts payable (HEP: \$28,565 and \$18,050, respectively)</u>	1,000,959	1,215,555
<u>Income taxes payable</u>	1,801	27,965
<u>Operating lease liabilities (HEP \$3,827 and \$3,608, respectively)</u>	97,937	104,415
<u>Accrued liabilities (HEP: \$29,518 and \$30,418, respectively)</u>	274,459	337,993
<u>Total current liabilities</u>	1,375,156	1,685,928
<u>Long-term debt (HEP: \$1,405,603 and \$1,462,031, respectively)</u>	3,142,718	2,455,640
<u>Noncurrent operating lease liabilities (HEP \$68,454 and \$72,000, respectively)</u>	285,785	364,420
<u>Deferred income taxes (HEP: \$449 and \$424, respectively)</u>	713,703	889,270
<u>Other long-term liabilities (HEP: \$55,105 and \$59,021, respectively)</u>	267,299	260,157
<u>Commitments and contingencies (Note 19)</u>		
HollyFrontier stockholders' equity:		
<u>Preferred stock, \$1.00 par value – 5,000,000 shares authorized; none issued</u>	0	0
<u>Common stock \$0.01 par value – 320,000,000 shares authorized; 256,046,051 and 256,042,554 shares issued as of December 31, 2020 and December 31, 2019</u>	2,560	2,560
<u>Additional capital</u>	4,207,672	4,204,547
<u>Retained earnings</u>	3,913,179	4,744,120
<u>Accumulated other comprehensive income</u>	13,462	14,774

<u>Common stock held in treasury, at cost - 93,632,391 and 94,196,029 shares as of December 31, 2020 and December 31, 2019, respectively</u>	(2,968,512)	(2,987,808)
<u>Total HollyFrontier stockholders' equity</u>	5,168,361	5,978,193
<u>Noncontrolling interest</u>	553,842	531,233
<u>Total equity</u>	5,722,203	6,509,426
<u>Total liabilities and equity</u>	\$	\$
	11,506,864	12,164,841

Consolidated Balance Sheets
(Parenthetical) - USD (\$)
\$ in Thousands

Dec. 31, 2020 Dec. 31, 2019

Variable Interest Entity [Line Items]

<u>Cash and cash equivalents</u>	\$ 1,368,318	\$ 885,162
<u>Accounts receivable: product and transportation</u>	590,526	834,771
<u>Inventories: materials, supplies and other</u>	207,618	191,413
<u>Prepayments and other</u>	47,583	61,662
<u>Properties, plants and equipment, at cost</u>	7,299,517	7,237,297
<u>Accumulated depreciation</u>	(2,726,378)	(2,414,585)
<u>Operating lease right-of-use assets</u>	350,548	467,109
<u>Goodwill</u>	2,293,935	2,373,907
<u>Intangibles and other</u>	663,665	673,646
<u>Accounts payable</u>	1,000,959	1,215,555
<u>Operating lease liabilities</u>	97,937	104,415
<u>Accrued liabilities</u>	274,459	337,993
<u>Long-term debt</u>	3,142,718	2,455,640
<u>Noncurrent operating lease liabilities</u>	285,785	364,420
<u>Deferred income taxes</u>	713,703	889,270
<u>Other long-term liabilities</u>	\$ 267,299	\$ 260,157
<u>Preferred stock par value (in USD per share)</u>	\$ 1.00	\$ 1.00
<u>Preferred stock, shares authorized (in shares)</u>	5,000,000	5,000,000
<u>Preferred stock, shares issued (in shares)</u>	0	0
<u>Common stock par value (in USD per share)</u>	\$ 0.01	\$ 0.01
<u>Common stock, shares authorized (in shares)</u>	320,000,000	320,000,000
<u>Common stock, shares issued (in shares)</u>	256,046,051	256,042,554
<u>Common stock held in treasury (in shares)</u>	93,632,391	94,196,029

Variable Interest Entity

Variable Interest Entity [Line Items]

<u>Cash and cash equivalents</u>	\$ 21,990	\$ 13,287
<u>Accounts receivable: product and transportation</u>	14,543	18,732
<u>Inventories: materials, supplies and other</u>	895	833
<u>Prepayments and other</u>	8,591	6,795
<u>Properties, plants and equipment, at cost</u>	2,119,295	2,047,674
<u>Accumulated depreciation</u>	(644,149)	(552,786)
<u>Operating lease right-of-use assets</u>	2,979	2,652
<u>Goodwill</u>	312,873	312,873
<u>Intangibles and other</u>	365,773	319,569
<u>Accounts payable</u>	28,565	18,050
<u>Operating lease liabilities</u>	3,827	3,608
<u>Accrued liabilities</u>	29,518	30,418
<u>Long-term debt</u>	1,405,603	1,462,031
<u>Noncurrent operating lease liabilities</u>	68,454	72,000

<u>Deferred income taxes</u>	449	424
<u>Other long-term liabilities</u>	\$ 55,105	\$ 59,021

**Consolidated Statements Of
Income - USD (\$)
shares in Thousands**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Income Statement [Abstract]

<u>Sales and other revenues</u>	\$	\$	\$
	11,183,643,000	17,486,578,000	17,714,666,000
<u>Operating costs and expenses:</u>			
<u>Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)</u>	9,158,805,000	13,918,384,000	13,940,782,000
<u>Lower of cost or market inventory valuation adjustment</u>	78,499,000	(119,775,000)	136,305,000
<u>Cost of products sold (exclusive of depreciation and amortization)</u>	9,237,304,000	13,798,609,000	14,077,087,000
<u>Operating expenses (exclusive of depreciation and amortization)</u>	1,300,277,000	1,394,052,000	1,285,838,000
<u>Selling, general and administrative expenses (exclusive of depreciation and amortization)</u>	313,600,000	354,236,000	290,424,000
<u>Depreciation and amortization</u>	520,912,000	509,925,000	437,324,000
<u>Goodwill and long-lived asset impairments</u>	545,293,000	152,712,000	0
<u>Total operating costs and expenses</u>	11,917,386,000	16,209,534,000	16,090,673,000
<u>Income (loss) from operations</u>	(733,743,000)	1,277,044,000	1,623,993,000
<u>Other income (expense):</u>			
<u>Earnings of equity method investments</u>	6,647,000	5,180,000	5,825,000
<u>Interest income</u>	7,633,000	22,139,000	16,892,000
<u>Interest expense</u>	(126,527,000)	(143,321,000)	(131,363,000)
<u>Gain on business interruption insurance settlement</u>	81,000,000	0	0
<u>Gain on sales-type leases</u>	33,834,000	0	0
<u>Loss on early extinguishment of debt</u>	(25,915,000)	0	0
<u>Gain on foreign currency transactions</u>	2,201,000	5,449,000	6,197,000
<u>Other, net</u>	7,824,000	5,013,000	2,923,000
<u>Other income (expense) total</u>	(13,303,000)	(105,540,000)	(99,526,000)
<u>Income (loss) before income taxes</u>	(747,046,000)	1,171,504,000	1,524,467,000
<u>Income tax expense (benefit):</u>			
<u>Current</u>	(55,420,000)	220,486,000	270,274,000
<u>Deferred</u>	(176,727,000)	78,666,000	76,969,000
<u>Income tax expense (benefit) total</u>	(232,147,000)	299,152,000	347,243,000
<u>Net income (loss)</u>	(514,899,000)	872,352,000	1,177,224,000
<u>Less net income attributable to noncontrolling interest</u>	86,549,000	99,964,000	79,264,000
<u>Net income (loss) attributable to HollyFrontier stockholders</u>	\$ (601,448,000)	\$ 772,388,000	\$ 1,097,960,000
<u>Earnings (loss) per share:</u>			
<u>Basic (in USD per share)</u>	\$ (3.72)	\$ 4.64	\$ 6.25
<u>Diluted (in USD per share)</u>	\$ (3.72)	\$ 4.61	\$ 6.19
<u>Average number of common shares outstanding:</u>			
<u>Average number of shares of common stock outstanding - basic (in shares)</u>	161,983	166,287	175,009

<u>Average number of shares of common stock outstanding - diluted</u> <u>(in shares)</u>	161,983	167,385	176,661
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**Consolidated Statements Of
Comprehensive Income -
USD (\$)
\$ in Thousands**

12 Months Ended

	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
<u>Net income (loss)</u>	\$ (514,899)	\$ 872,352	\$ 1,177,224
<u>Other comprehensive income (loss):</u>			
<u>Foreign currency translation adjustment</u>	6,226	13,337	(38,227)
<u>Change in fair value of cash flow hedging instruments</u>	(7,475)	14,364	5,166
<u>Reclassification adjustments to net income (loss) on settlement of cash flow hedging instruments</u>	2,604	(19,713)	6,055
<u>Net unrealized gain (loss) on hedging instruments</u>	(4,871)	(5,349)	11,221
<u>Net change in pension and other post-retirement benefit obligations</u>	(3,461)	(7,207)	(1,507)
<u>Other comprehensive income (loss) before income taxes</u>	(2,106)	781	(28,513)
<u>Income tax benefit</u>	(794)	(370)	(5,585)
<u>Other comprehensive income (loss)</u>	(1,312)	1,151	(22,928)
<u>Total comprehensive income (loss)</u>	(516,211)	873,503	1,154,296
<u>Less noncontrolling interest in comprehensive income</u>	86,549	99,964	79,264
<u>Comprehensive income (loss) attributable to HollyFrontier stockholders</u>	(602,760)	773,539	1,075,032
<u>Pension obligations</u>			
<u>Other comprehensive income (loss):</u>			
<u>Actuarial gain (loss) on plan</u>	1,862	(990)	(923)
<u>Plan gain reclassified to net income</u>	(422)	0	0
<u>Post-retirement healthcare obligations</u>			
<u>Other comprehensive income (loss):</u>			
<u>Actuarial gain (loss) on plan</u>	(1,129)	(2,412)	2,612
<u>Plan gain reclassified to net income</u>	(3,564)	(3,587)	(3,481)
<u>Retirement restoration plan</u>			
<u>Other comprehensive income (loss):</u>			
<u>Actuarial gain (loss) on retirement restoration plan</u>	(230)	(224)	258
<u>Retirement restoration plan loss reclassified to net income (loss)</u>	\$ 22	\$ 6	\$ 27

**Consolidated Statements Of
Cash Flows - USD (\$)**

**12 Months Ended
Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018**

Cash flows from operating activities:

<u>Net income (loss)</u>	\$		\$		\$
	(514,899,000)		\$ 872,352,000		1,177,224,000

Adjustments to reconcile net income to net cash provided by operating activities:

<u>Depreciation and amortization</u>	520,912,000	509,925,000	437,324,000
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<u>Goodwill and long-lived asset impairments</u>	545,293,000	152,712,000	0
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<u>Lower of cost or market inventory valuation adjustment</u>	78,499,000	(119,775,000)	136,305,000
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<u>Earnings of equity method investments, inclusive of distributions</u>	1,084,000	(213,000)	(149,000)
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<u>Loss on early extinguishment of debt</u>	25,915,000	0	0
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<u>Gain on sales-type leases</u>	(33,834,000)	0	0
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<u>(Gain) loss on sale of assets</u>	(201,000)	50,000	2,171,000
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<u>Deferred income taxes</u>	(176,727,000)	78,666,000	76,969,000
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<u>Equity-based compensation expense</u>	31,654,000	42,269,000	42,172,000
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<u>Change in fair value – derivative instruments</u>	26,456,000	36,888,000	(31,515,000)
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(Increase) decrease in current assets:

<u>Accounts receivable</u>	254,684,000	(150,437,000)	35,793,000
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<u>Inventories</u>	230,142,000	91,599,000	136,551,000
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<u>Income taxes receivable</u>	(85,442,000)	32,368,000	7,752,000
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<u>Prepayments and other</u>	(2,541,000)	3,633,000	(10,340,000)
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Increase (decrease) in current liabilities:

<u>Accounts payable</u>	(241,765,000)	312,794,000	(326,030,000)
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<u>Income taxes payable</u>	(25,897,000)	9,048,000	15,281,000
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<u>Accrued liabilities</u>	(85,708,000)	13,748,000	53,281,000
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<u>Turnaround expenditures</u>	(94,692,000)	(318,415,000)	(217,228,000)
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<u>Other, net</u>	4,998,000	(18,601,000)	18,855,000
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<u>Net cash provided by operating activities</u>	457,931,000	1,548,611,000	1,554,416,000
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Cash flows from investing activities:

<u>Additions to properties, plants and equipment</u>	(270,877,000)	(263,651,000)	(256,888,000)
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<u>Acquisitions, net of cash acquired</u>	0	(662,665,000)	(54,179,000)
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<u>Investment in equity company - HEP</u>	(2,438,000)	(17,886,000)	0
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<u>Proceeds from sale of assets</u>	1,554,000	194,000	3,100,000
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<u>Other, net</u>	882,000	1,206,000	1,588,000
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<u>Net cash used for investing activities</u>	(330,162,000)	(972,914,000)	(360,520,000)
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Cash flows from financing activities:

<u>Borrowings under credit agreements</u>	258,500,000	365,500,000	337,000,000
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<u>Repayments under credit agreements</u>	(310,500,000)	(323,000,000)	(426,000,000)
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<u>Proceeds from issuance of senior notes – HFC</u>	748,925,000	0	0
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<u>Proceeds from issuance of senior notes – HEP</u>	748,925,000	0	0
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<u>Purchase of treasury stock</u>	(7,642,000)	(533,083,000)	(363,437,000)
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<u>Dividends</u>	(229,493,000)	(225,170,000)	(233,544,000)
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<u>Distributions to noncontrolling interest</u>	(89,001,000)	(132,268,000)	(125,653,000)
<u>Proceeds of financing arrangements</u>	0	0	32,547,000
<u>Proceeds from issuance of common units - HEP</u>	0	0	114,759,000
<u>Contribution from noncontrolling interests</u>	23,899,000	3,210,000	0
<u>Payments on finance leases</u>	(2,995,000)	(1,551,000)	0
<u>Deferred financing costs</u>	(15,538,000)	0	0
<u>Other, net</u>	(429,000)	(1,893,000)	0
<u>Net cash provided by (used for) financing activities</u>	353,226,000	(848,255,000)	(664,328,000)
<u>Effect of exchange rate on cash flow</u>	2,161,000	2,968,000	(5,573,000)
<u>Cash and cash equivalents:</u>			
<u>Increase (decrease) for the period</u>	483,156,000	(269,590,000)	523,995,000
<u>Beginning of period</u>	885,162,000	1,154,752,000	630,757,000
<u>End of period</u>	1,368,318,000	885,162,000	1,154,752,000
<u>Cash paid during the period for:</u>			
<u>Interest</u>	(120,257,000)	(133,809,000)	(130,106,000)
<u>Income taxes, net</u>	(54,256,000)	(178,967,000)	(252,644,000)
<u>Accrued and unpaid capital expenditures</u>	73,867,000	19,752,000	28,066,000
<u>HEP</u>			
<u>Cash flows from investing activities:</u>			
<u>Additions to properties, plants and equipment</u>	(59,283,000)	(30,112,000)	(54,141,000)
<u>Cash flows from financing activities:</u>			
<u>Proceeds from issuance of senior notes – HFC</u>	500,000,000	0	0
<u>Proceeds from issuance of senior notes – HEP</u>	500,000,000	0	0
<u>Redemption of senior notes - HEP</u>	\$		
	(522,500,000)	\$ 0	\$ 0

Consolidated Statements Of Equity - USD (\$) \$ in Thousands	Total	Cumulative Effect, Period of Adoption, Adjustment	Common Stock	Additional Capital	Retained Earnings	Retained	Accumulated	Accumulated	Treasury Stock	Non- controlling Interest
						Earnings Cumulative Effect, Period of Adoption, Adjustment	Other Comprehensive Income	Other Comprehensive Income Cumulative Effect, Period of Adoption, Adjustment		
Balance at beginning of period at Dec. 31, 2017	\$ 5,896,940	\$ (7,447)	\$ 2,560	\$ 4,132,696	\$ 3,346,615	\$ (14,129)	\$ 29,869	\$ 6,682	\$ (2,140,911)	\$ 526,111
Net income (loss)	\$ 1,177,224				1,097,960					79,264
Dividends declared per common share (in USD per share)	\$ 1.32									
Dividends (\$1.40 declared per common share)	\$ (233,544)				(233,544)					
Distributions to noncontrolling interest holders	(125,653)									(125,653)
Other comprehensive loss, net of tax	(22,928)						(22,928)			
Equity attributable to HEP common unit issuances, net of tax	100,333			42,199						58,134
Issuance of common stock under incentive compensation plans				(17,742)					17,742	
Equity-based compensation	42,172			38,972						3,200
Purchase of treasury stock	(367,470)								(367,470)	
Purchase of HEP units for restricted grants	(568)									(568)
Balance at end of period at Dec. 31, 2018	\$ 6,459,059		2,560	4,196,125	4,196,902		13,623		(2,490,639)	540,488
Accounting Standards Update [Extensible List]	us-gaap:AccountingStandardsUpdate201409Member									
Net income (loss)	\$ 872,352				772,388					99,964
Dividends declared per common share (in USD per share)	\$ 1.34									
Dividends (\$1.40 declared per common share)	\$ (225,170)				(225,170)					
Distributions to noncontrolling interest holders	(132,268)									(132,268)
Other comprehensive loss, net of tax	1,151						1,151			
Equity attributable to HEP common unit issuances, net of tax	(139)									(139)
Issuance of common stock under incentive compensation plans				(31,314)					31,314	
Equity-based compensation	42,269			39,736						2,533
Purchase of treasury stock	(528,483)								(528,483)	
Purchase of HEP units for restricted grants	(1,893)									(1,893)
Contributions from noncontrolling interests	22,548									22,548
Balance at end of period at Dec. 31, 2019	6,509,426		2,560	4,204,547	4,744,120		14,774		(2,987,808)	531,233
Net income (loss)	\$ (514,899)				(601,448)					86,549
Dividends declared per common share (in USD per share)	\$ 1.40									
Dividends (\$1.40 declared per common share)	\$ (229,493)				(229,493)					
Distributions to noncontrolling interest holders	(89,001)									(89,001)
Other comprehensive loss, net of tax	(1,312)						(1,312)			
Issuance of common stock under incentive compensation plans				(26,938)					26,938	
Equity-based compensation	31,654			29,460						2,194
Purchase of treasury stock	(7,642)								(7,642)	
Purchase of HEP units for restricted grants	(1,032)									(1,032)
Contributions from noncontrolling interests	23,899									23,899
Other	603			603						
Balance at end of period at Dec. 31, 2020	\$ 5,722,203		\$ 2,560	\$ 4,207,672	\$ 3,913,179		\$ 13,462		\$ (2,968,512)	\$ 553,842

**Description of Business and
Summary of Significant
Accounting Policies**

12 Months Ended

Dec. 31, 2020

**Organization, Consolidation
and Presentation of
Financial Statements**
[Abstract]

**Description of Business and
Summary of Significant
Accounting Policies**

Description of Business: References herein to HollyFrontier Corporation (“HollyFrontier”) include HollyFrontier and its consolidated subsidiaries. In accordance with the Securities and Exchange Commission’s (“SEC”) “Plain English” guidelines, this Annual Report on Form 10-K has been written in the first person. In these financial statements, the words “we,” “our,” “ours” and “us” refer only to HollyFrontier and its consolidated subsidiaries or to HollyFrontier or an individual subsidiary and not to any other person, with certain exceptions. Generally, the words “we,” “our,” “ours” and “us” include Holly Energy Partners, L.P. (“HEP”) and its subsidiaries as consolidated subsidiaries of HollyFrontier, unless when used in disclosures of transactions or obligations between HEP and HollyFrontier or its other subsidiaries. These financial statements contain certain disclosures of agreements that are specific to HEP and its consolidated subsidiaries and do not necessarily represent obligations of HollyFrontier. When used in descriptions of agreements and transactions, “HEP” refers to HEP and its consolidated subsidiaries.

We are an independent petroleum refiner and marketer that produces high-value light products such as gasoline, diesel fuel, jet fuel, specialty lubricant products and specialty and modified asphalt. We own and operate petroleum refineries that serve markets throughout the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. In addition, we produce base oils and other specialized lubricants in the United States, Canada and the Netherlands, with retail and wholesale marketing of our products through a global sales network with locations in Canada, the United States, Europe, China and Latin America.

As of December 31, 2020, we:

- owned and operated a petroleum refinery in El Dorado, Kansas (the “El Dorado Refinery”), two refinery facilities located in Tulsa, Oklahoma (collectively, the “Tulsa Refineries”), a refinery in Artesia, New Mexico that is operated in conjunction with crude oil distillation and vacuum distillation and other facilities situated 65 miles away in Lovington, New Mexico (collectively, the “Navajo Refinery”) and a refinery in Woods Cross, Utah (the “Woods Cross Refinery”);
- owned a facility in Cheyenne, Wyoming, which operated as a petroleum refinery until early August 2020, at which time its assets began to be converted to renewable diesel production (the “Cheyenne Refinery”);
- owned and operated Petro-Canada Lubricants Inc. (“PCLI”) located in Mississauga, Ontario, which produces base oils and other specialty lubricant products;
- owned and operated Sonneborn (as defined below) with manufacturing facilities in Petrolia, Pennsylvania and the Netherlands, which produce specialty lubricant products, such as white oils, petrolatums and waxes;

- owned and operated Red Giant Oil Company LLC (“Red Giant Oil”), which supplies locomotive engine oil and has storage and distribution facilities in Iowa and Wyoming, along with a blending and packaging facility in Texas;
- owned and operated HollyFrontier Asphalt Company LLC (“HFC Asphalt”), which operates various asphalt terminals in Arizona, New Mexico and Oklahoma; and
- owned a 57% limited partner interest and a non-economic general partner interest in HEP, a variable interest entity (“VIE”). HEP owns and operates logistic assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery processing units that principally support our refining and marketing operations in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States.

In the third quarter of 2020, we permanently ceased petroleum refining operations at our Cheyenne Refinery and subsequently began converting certain assets at our Cheyenne Refinery to renewable diesel production. This decision was primarily based on a positive outlook in the market for renewable diesel and the expectation that future free cash flow generation at our Cheyenne Refinery would be challenged due to lower gross margins resulting from the economic impact of the COVID-19 pandemic and compressed crude differentials due to dislocations in the crude oil market. Additional factors included uncompetitive operating and maintenance costs forecasted for our Cheyenne Refinery and the anticipated loss of the Environmental Protection Agency’s (“EPA”) small refinery exemption.

During the second quarter of 2020, we recorded long-lived asset impairment charges of \$232.2 million related to our Cheyenne Refinery asset group. In connection with the cessation of petroleum refining operations at our Cheyenne Refinery, we recognized \$24.7 million in decommissioning expense for the year ended December 31, 2020. In addition, for the year ended December 31, 2020, we recorded a reserve of \$9.0 million against our repair and maintenance supplies inventory and \$3.8 million in employee severance costs related to the conversion of our Cheyenne Refinery to renewable diesel production. These decommissioning, inventory reserve and severance costs were recognized in operating expenses, of which \$24.8 million was recorded in our Refining segment and \$12.7 million was recorded in our Corporate and Other segment.

During the second quarter of 2020, we also initiated and completed a corporate restructuring. As a result of this restructuring, we recorded \$3.7 million in employee severance costs, which were recognized primarily as operating expenses in our Refining segment and selling, general and administrative expenses in our Corporate and Other segment.

On November 12, 2018, we entered into an equity purchase agreement to acquire 100% of the issued and outstanding capital stock of Sonneborn US Holdings Inc. and 100% of the membership rights in Sonneborn Coöperatief U.A. (collectively, “Sonneborn”). The acquisition closed on February 1, 2019.

On July 10, 2018, we entered into a definitive agreement to acquire Red Giant Oil, a privately-owned lubricants company. The acquisition closed on August 1, 2018.

See Note 2 for additional information on these acquisitions.

Principles of Consolidation: Our consolidated financial statements include our accounts and the accounts of partnerships and joint ventures that we control through an ownership interest greater

than 50% or through a controlling financial interest with respect to variable interest entities. All significant intercompany transactions and balances have been eliminated.

Variable Interest Entities: HEP is a VIE as defined under U.S. generally accepted accounting principles (“GAAP”). A VIE is a legal entity whose equity owners do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support or, as a group, the equity holders lack the power, through voting rights, to direct the activities that most significantly impact the entity's financial performance, the obligation to absorb the entity's expected losses or rights to expected residual returns. As the general partner of HEP, we have the sole ability to direct the activities of HEP that most significantly impact HEP's financial performance, and therefore as HEP's primary beneficiary, we consolidate HEP.

In 2019, HEP Cushing LLC, a wholly-owned subsidiary of HEP, and Plains Marketing, L.P., a wholly-owned subsidiary of Plains All American Pipeline, L.P. (“Plains”), formed a 50/50 joint venture, Cushing Connect Pipeline & Terminal LLC. Cushing Connect Pipeline & Terminal LLC and its two subsidiaries, Cushing Connect Pipeline and Cushing Connect Terminal, are each VIE's because they do not have sufficient equity at risk to finance their activities without additional financial support. HEP is the primary beneficiary of two of these entities as HEP is constructing and will operate the Cushing Connect Pipeline, and HEP has more ability to direct the activities that most significantly impact the financial performance of Cushing Connect Pipeline & Terminal LLC and Cushing Connect Pipeline. Therefore, HEP consolidates these two entities. HEP is not the primary beneficiary of Cushing Connect Terminal, which HEP accounts for using the equity method of accounting.

Use of Estimates: The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash Equivalents: We consider all highly liquid instruments with a maturity of three months or less at the date of purchase to be cash equivalents. Cash equivalents are stated at cost, which approximates market value and are primarily invested in highly-rated instruments issued by government or municipal entities with strong credit standings.

Balance Sheet Offsetting: We purchase and sell inventories of crude oil with certain same-parties that are net settled in accordance with contractual net settlement provisions. Our policy is to present such balances on a net basis since it presents our accounts receivables and payables consistent with our contractual settlement provisions.

Accounts Receivable: Our accounts receivable consist of amounts due from customers that are primarily companies in the petroleum industry. Credit is extended based on our evaluation of the customer's financial condition, and in certain circumstances collateral, such as letters of credit or guarantees, is required. We reserve for doubtful accounts based on our historical loss experience as well as expected credit losses from current economic conditions and management's expectations of future economic conditions. Credit losses are charged to the allowance for doubtful accounts when an account is deemed uncollectible. Our allowance for doubtful accounts was \$3.4 million at December 31, 2020 and \$4.5 million at December 31, 2019.

Accounts receivable attributable to crude oil resales generally represent the sale of excess crude oil to other purchasers and / or users in cases when our crude oil supplies are in excess of our

immediate needs as well as certain reciprocal buy / sell exchanges of crude oil. At times we enter into such buy / sell exchanges to facilitate the delivery of quantities to certain locations. In many cases, we enter into net settlement agreements relating to the buy / sell arrangements, which may mitigate credit risk.

Inventories: Inventories related to our refining operations are stated at the lower of cost, using the last-in, first-out (“LIFO”) method for crude oil and unfinished and finished refined products, or market. Cost, consisting of raw material, transportation and conversion costs, is determined using the LIFO inventory valuation methodology and market is determined using current replacement costs. Under the LIFO method, the most recently incurred costs are charged to cost of sales and inventories are valued at the earliest acquisition costs. In periods of rapidly declining prices, LIFO inventories may have to be written down to market value due to the higher costs assigned to LIFO layers in prior periods. In addition, the use of the LIFO inventory method may result in increases or decreases to cost of sales in years that inventory volumes decline as the result of charging cost of sales with LIFO inventory costs generated in prior periods. An actual valuation of inventory under the LIFO method is made at the end of each year based on the inventory levels at that time. Accordingly, interim LIFO calculations are based on management’s estimates of expected year-end inventory levels and are subject to the final year-end LIFO inventory valuation.

Inventories of our Petro-Canada Lubricants and Sonneborn businesses are stated at the lower of cost, using the first-in, first-out (“FIFO”) method, or net realizable value.

Inventories consisting of process chemicals, materials and maintenance supplies and renewable identification numbers (“RINs”) are stated at the lower of weighted-average cost or net realizable value.

Leases: Effective January 1, 2019, we adopted Accounting Standards Update (“ASU”) 2016-02, “Leases” (Topic 842). At inception, we determine if an arrangement is or contains a lease. Right-of-use (“ROU”) assets represent our right to use an underlying asset for the lease term and lease liabilities represent our payment obligation under the leasing arrangement. ROU assets and lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. We use our estimated incremental borrowing rate (“IBR”) to determine the present value of lease payments as most of our leases do not contain an implicit rate. Our IBR represents the interest rate which we would pay to borrow, on a collateralized basis, an amount equal to the lease payments over a similar term in a similar economic environment. We use the implicit rate when readily determinable.

Operating leases are recorded in operating lease right-of-use assets and current and noncurrent operating lease liabilities on our consolidated balance sheet. Finance leases are included in properties, plants and equipment and accrued liabilities and other long-term liabilities on our consolidated balance sheet.

Our lease term includes an option to extend the lease when it is reasonably certain that we will exercise that option. Leases with a term of 12 months or less are not recorded on our balance sheet. For certain equipment leases, we apply a portfolio approach for the operating lease ROU assets and liabilities. Also, as a lessee, we separate non-lease components that are identifiable and exclude them from the determination of net present value of lease payment obligations. In addition, HEP, as a lessor, does not separate the non-lease (service) component in contracts in which the lease

component is the dominant component. HEP treats these combined components as an operating lease.

Derivative Instruments: All derivative instruments are recognized as either assets or liabilities in our consolidated balance sheets and are measured at fair value. Changes in the derivative instrument's fair value are recognized in earnings unless specific hedge accounting criteria are met. See Note 14 for additional information.

Properties, Plants and Equipment: Properties, plants and equipment are stated at cost. Depreciation is provided by the straight-line method over the estimated useful lives of the assets, primarily 15 to 32 years for refining, pipeline and terminal facilities, 10 to 40 years for buildings and improvements, 5 to 30 years for other fixed assets and 5 years for vehicles.

Asset Retirement Obligations: We record legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development and / or the normal operation of long-lived assets. The fair value of the estimated cost to retire a tangible long-lived asset is recorded as a liability with the associated retirement costs capitalized as part of the asset's carrying amount in the period in which it is incurred and when a reasonable estimate of the fair value of the liability can be made. If a reasonable estimate cannot be made at the time the liability is incurred, we record the liability when sufficient information is available to estimate the liability's fair value. Certain of our refining assets have no recorded liability for asset retirement obligations since the timing of any retirement and related costs are currently indeterminable.

Our asset retirement obligations were \$42.6 million and \$35.9 million at December 31, 2020 and 2019, respectively, which are included in "Other long-term liabilities" in our consolidated balance sheets. Accretion expense was insignificant for the years ended December 31, 2020, 2019 and 2018.

Intangibles, Goodwill and Long-lived Assets: Intangible assets are assets (other than financial assets) that lack physical substance, and goodwill represents the excess of the cost of an acquired entity over the fair value of the assets acquired and liabilities assumed. Goodwill acquired in a business combination and intangibles with indefinite useful lives are not amortized, whereas intangible assets with finite useful lives are amortized on a straight-line basis. Goodwill and intangible assets that are not subject to amortization are tested for impairment annually or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Our goodwill impairment testing first entails either a quantitative assessment or an optional qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If we determine that based on the qualitative factors that it is more likely than not that the carrying amount of the reporting unit is greater than its fair value, a quantitative test is performed in which we estimate the fair value of the related reporting unit. If the carrying amount of a reporting unit exceeds its fair value, the goodwill of that reporting unit is impaired, and we measure goodwill impairment as the excess of the carrying amount of the reporting unit over the related fair value. The carrying amount of our intangible assets and goodwill may fluctuate from period to period due to the effects of foreign currency translation adjustments on goodwill and intangible assets assigned to our Lubricants and Specialty Products segment.

For purposes of long-lived asset impairment evaluation, we have grouped our long-lived assets as follows: (i) our refinery asset groups, which include certain HEP logistics assets, (ii) our Lubricants and Specialty Products asset groups and (iii) our HEP asset groups, which comprises

HEP assets not included in our refinery asset groups. These asset groups represent the lowest level for which independent cash flows can be identified. Our long-lived assets are evaluated for impairment by identifying whether indicators of impairment exist and if so, assessing whether the long-lived assets are recoverable from estimated future undiscounted cash flows. The actual amount of impairment loss measured, if any, is equal to the amount by which the asset group's carrying value exceeds its fair value.

See Note 11 for additional information regarding our goodwill and long-lived assets including impairment charges recorded during the years ended December 31, 2020 and 2019.

Equity Method Investments: We account for investments in which we have a noncontrolling interest, yet have significant influence over the entity, using the equity method of accounting, whereby we record our pro-rata share of earnings and contributions to and distributions from joint ventures as adjustments to our investment balance. HEP has a 50% interest in Osage Pipe Line Company, LLC, the owner of a pipeline running from Cushing, Oklahoma to El Dorado, Kansas (the "Osage Pipeline") and a 50% interest in Cheyenne Pipeline, LLC, the owner of a pipeline running from Fort Laramie, Wyoming to Cheyenne, Wyoming (the "Cheyenne Pipeline"). HEP also accounts for Cushing Connect Terminal, a subsidiary of the Cushing Connect Pipeline & Terminal LLC joint venture, using the equity method of accounting, as HEP does not have the ability to direct the activities that most significantly impact the entity. As of December 31, 2020, HEP's underlying equity and recorded investment balances in the joint ventures are \$93.2 million and \$120.5 million respectively. The differences are being amortized as adjustments to HEP's pro-rata share of earnings in the joint ventures.

Revenue Recognition: Revenues on refined product and excess crude oil sales are recognized when delivered (via pipeline, in-tank or rack) and the customer obtains control of such inventory, which is typically when title passes and the customer is billed. All revenues are reported inclusive of shipping and handling costs billed and exclusive of any taxes billed to customers. Shipping and handling costs incurred are reported as cost of products sold.

Our lubricants and specialty products business has sales agreements with marketers and distributors that provide certain rights of return or provisions for the repurchase of products previously sold to them. Under these agreements, revenues and cost of revenues are deferred until the products have been sold to end customers. Our lubricants and specialty products business also has agreements that create an obligation to deliver products at a future date for which consideration has already been received and recorded as deferred revenue. This revenue is recognized when the products are delivered to the customer.

HEP recognizes revenues as products are shipped through its pipelines and terminals and as other services are rendered. Additionally, HEP has certain throughput agreements that specify minimum volume requirements, whereby HEP bills a customer for a minimum level of shipments in the event a customer ships below their contractual requirements. If there are no future performance obligations, HEP recognizes these deficiency payments as revenue. In certain of these throughput agreements, a customer may later utilize such shortfall billings as credit towards future volume shipments in excess of its minimum levels within its respective contractual shortfall make-up period. Such amounts represent an obligation to perform future services, which may be initially deferred and later recognized as revenue based on estimated future shipping levels, including the likelihood of a customer's ability to utilize such amounts prior to the end of the contractual shortfall make-up period. HEP recognizes the service portion of these deficiency payments as revenue when HEP does not expect it will be required to satisfy these performance obligations

in the future based on the pattern of rights exercised by the customer. Payment terms under our contracts with customers are consistent with industry norms and are typically payable within 30 days of the date of invoice.

Cost Classifications: Costs of products sold include the cost of crude oil, other feedstocks, blendstocks and purchased finished products, inclusive of transportation costs. We purchase crude oil that at times exceeds the supply needs of our refineries. Quantities in excess of our needs are sold at market prices to purchasers of crude oil that are recorded on a gross basis with the sales price recorded as revenues and the corresponding acquisition cost as cost of products sold. Additionally, we enter into buy / sell exchanges of crude oil with certain parties to facilitate the delivery of quantities to certain locations that are netted at cost. Operating expenses include direct costs of labor, maintenance materials and services, utilities and other direct operating costs. Selling, general and administrative expenses include compensation, professional services and other support costs.

Deferred Maintenance Costs: Our refinery units require regular major maintenance and repairs which are commonly referred to as “turnarounds.” Catalysts used in certain refinery processes also require regular “change-outs.” The required frequency of the maintenance varies by unit and by catalyst, but generally is every two to five years. Turnaround costs are deferred and amortized over the period until the next scheduled turnaround. Other repairs and maintenance costs are expensed when incurred. Deferred turnaround and catalyst amortization expense was \$158.4 million, \$141.9 million and \$110.9 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Environmental Costs: Environmental costs are charged to operating expenses if they relate to an existing condition caused by past operations and do not contribute to current or future revenue generation. We have ongoing investigations of environmental matters at various locations and routinely assess our recorded environmental obligations, if any, with respect to such matters. Liabilities are recorded when site restoration and environmental remediation, cleanup and other obligations are either known or considered probable and can be reasonably estimated. Such estimates are undiscounted and require judgment with respect to costs, time frame and extent of required remedial and clean-up activities and are subject to periodic adjustments based on currently available information. Recoveries of environmental costs through insurance, indemnification arrangements or other sources are included in other assets to the extent such recoveries are considered probable.

Contingencies: We are subject to proceedings, lawsuits and other claims related to environmental, labor, product and other matters. We are required to assess the likelihood of any adverse judgments or outcomes to these matters as well as potential ranges of probable losses. We accrue for contingencies when it is probable that a loss has occurred and when the amount of that loss is reasonably estimable. A determination of the amount of reserves required, if any, for these contingencies is made after careful analysis of each individual issue. The required reserves may change in the future due to new developments in each matter or changes in approach such as a change in settlement strategy in dealing with these matters.

Foreign Currency Translation: Assets and liabilities recorded in foreign currencies are translated into U.S. dollars using exchange rates in effect as of the balance sheet date. Revenue and expense accounts are translated using the weighted-average exchange rates during the period presented. Foreign currency translation adjustments are recorded as a component of accumulated other comprehensive income.

In connection with our PCLI acquisition, we issued intercompany notes to initially fund certain of our foreign businesses. Remeasurement adjustments resulting from the conversion of such intercompany financing amounts to functional currencies are recorded as gains and losses as a component of other income (expense) in the income statement. Such adjustments are not recorded to the Lubricants and Specialty Products segment operations, but to Corporate and Other. See Note 20 for additional information on our segments.

Income Taxes: Provisions for income taxes include deferred taxes resulting from temporary differences in income for financial and tax purposes, using the liability method of accounting for income taxes. The liability method requires the effect of tax rate changes on deferred income taxes to be reflected in the period in which the rate change was enacted. The liability method also requires that deferred tax assets be reduced by a valuation allowance unless it is more likely than not that the assets will be realized.

Potential interest and penalties related to income tax matters are recognized in income tax expense. We believe we have appropriate support for the income tax positions taken and to be taken on our income tax returns and that our accruals for tax liabilities are adequate for all open years based on an assessment of many factors, including past experience and interpretations of tax law applied to the facts of each matter.

Inventory Repurchase Obligations: We periodically enter into same-party sell / buy transactions, whereby we sell certain refined product inventory and subsequently repurchase the inventory in order to facilitate delivery to certain locations. Such sell / buy transactions are accounted for as inventory repurchase obligations under which proceeds received under the initial sell is recognized as inventory repurchase obligations that are subsequently reversed when the inventories are repurchased. For the years ended December 31, 2020, 2019 and 2018, we received proceeds of \$44.9 million, \$52.1 million and \$51.2 million and subsequently repaid \$46.4 million, \$49.2 million and \$52.5 million, respectively, under these sell / buy transactions.

Accounting Pronouncements - Recently Adopted

Income Tax Accounting

In December 2019, ASU 2019-12, “Simplifying the Accounting for Income Taxes,” was issued which eliminates some exceptions to the general approach in ASC Topic 740 “Income Taxes” and also provides clarification of other aspects of ASC 740. We adopted this standard effective January 1, 2020 on a prospective basis, and it did not have a material affect on our financial condition, results of operations or cash flows for the periods presented.

Fair Value Measurements

In August 2018, ASU 2018-13, “Changes to the Disclosure Requirements for Fair Value Measurement,” was issued which removed, modified and added certain disclosures for fair value measurements. We adopted this standard effective January 1, 2020, and it did not affect our financial condition, results of operations or cash flows.

Defined Benefit Plans

In August 2018, ASU 2018-14, “Changes to the Disclosure Requirements for Defined Benefit Plans,” was issued which removed disclosure requirements for (i) the amounts in accumulated other comprehensive income expected to be recognized as components of net periodic benefit cost over the next fiscal year and (ii) the effects of a one-percentage-point change in assumed health

care cost trend rates on the aggregate of the service and interest cost components of net periodic benefit costs and the benefit obligation for postretirement health care benefits. Additionally, a new disclosure required under this standard is an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. We adopted this standard effective December 31, 2020 with the updated disclosures in Note 18. The adoption of this standard had no impact on our financial condition, results of operations or cash flows.

Credit Losses Measurement

In June 2016, ASU 2016-13, “Measurement of Credit Losses on Financial Instruments,” was issued requiring measurement of all expected credit losses for certain types of financial instruments, including trade receivables, held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. We adopted this standard effective January 1, 2020, at which time our review of historic and expected credit losses resulted in a decrease of \$3.2 million in our reserve for doubtful accounts. Based upon our assessment of the potential impact of current and forecasted conditions, we increased our reserve for doubtful accounts by \$2.1 million during the the year ended December 31, 2020. Assumptions about the potential effects of the COVID-19 pandemic on our estimate of expected credit losses are inherently subjective and difficult to forecast. However, we believe that our current estimate of allowance for doubtful accounts to be reasonable based upon current information and forecasts.

Acquisitions

[Business Combinations](#)

[\[Abstract\]](#)

[Acquisitions](#)

12 Months Ended

Dec. 31, 2020

Acquisitions

Sonneborn

On November 12, 2018, we entered into an equity purchase agreement to acquire 100% of the capital stock of Sonneborn. The acquisition closed on February 1, 2019. Aggregate consideration totaled \$701.6 million and consisted of \$662.7 million in cash and \$38.9 million in debt. The acquisition, net of cash acquired. Sonneborn is a producer of specialty hydrocarbon chemicals such as white oils, petrolatums and greases with manufacturing facilities in the United States and Europe.

This transaction was accounted for as a business combination using the acquisition method of accounting, with the purchase price allocated to the fair value of the acquired Sonneborn assets and liabilities as of the February 1, 2019 acquisition date, with the remaining purchase price recorded as goodwill. This goodwill was assigned to our Lubricants and Specialty Products segment and is not deductible for income tax purposes.

Fair values were as follows: cash and cash equivalents \$38.9 million, current assets \$139.4 million, properties, plants and equipment \$168.2 million, goodwill \$282.3 million, intangibles and other noncurrent assets \$231.5 million, current liabilities \$47.9 million, deferred income tax and other long-term liabilities \$110.8 million.

Intangibles included customer relationships, trademarks, patents and technical know-how totaling \$214.6 million that are being amortized on a straight-line basis over a 12-year period.

Our consolidated financial and operating results reflect the Sonneborn operations beginning February 1, 2019. Our results of operations include revenue and income before income taxes of \$340.3 million and \$5.1 million, respectively, for the period from February 1 through December 31, 2019 related to these operations.

The following unaudited pro forma information for the years ended December 31, 2019 and 2018 presents the revenues and operating income for our Lubricants and Specialty Products segment assuming the acquisition of Sonneborn had occurred as of January 1, 2018. The proforma effects on consolidated HFC revenue and operating income are not material.

	Years Ended December 31,	
	2019	2018
	(In thousands)	
Sales and other revenues	\$ 2,124,778	\$ 2,195,690
Operating income ⁽¹⁾	\$ (116,254)	\$ 99,371

(1) The year ended December 31, 2019, includes goodwill impairment of \$152.7 million from the PCLI reporting unit of our Lubricants and Specialty Products segment. See Note 11 for additional information on this goodwill impairment.

Red Giant Oil

On July 10, 2018, we entered into a definitive agreement to acquire Red Giant Oil, a privately-owned lubricants company. The acquisition closed on August 1, 2018. Cash consideration paid was \$54.2 million. Red Giant Oil is one of the largest suppliers of locomotive engine oil in North America and is headquartered in Council Bluffs, Iowa.

This transaction was accounted for as a business combination using the acquisition method of accounting, with the purchase price allocated to the fair value of the acquired Red Giant Oil assets and liabilities as of the August 1 acquisition date, with the remaining purchase price recorded as goodwill assigned to our Lubricants and Specialty Products segment. This goodwill is deductible for income tax purposes. Fair values were as follows: current assets \$14.4 million, properties and equipment \$21.3 million, intangible assets \$10.8 million, goodwill \$10.8 million and current liabilities \$2.0 million.

We incurred \$2.0 million, \$24.2 million and \$3.6 million, for the years ended December 31, 2020, 2019 and 2018, respectively, for incremental direct integration and regulatory costs that principally relate to legal, advisory, regulatory and other professional fees. These costs are presented as selling, general and administrative expenses.

Leases

[Leases \[Abstract\]](#)
[Leases](#)

12 Months Ended
 Dec. 31, 2020

Leases

Lessee

We have operating and finance leases for land, buildings, pipelines, storage tanks, transportation and other equipment for our operations. Our leases range from one to 59 years, some of which include options to extend the leases for up to 10 years. Certain of our leases for pipeline assets include provisions for renewal. Our leases are based on a measure of throughput and also contain a provision for the lessor to adjust the rate per barrel periodically over the life of the lease. The lease expense is included in the initial measurement of ROU assets and lease liabilities.

The following table presents the amounts and balance sheet locations of our operating and financing leases recorded on our consolidated balance sheet as of

	December 31,	
	2020	
	(In thousands)	
Operating leases:		
Operating lease right-of-use assets	\$	350,548 \$
Operating lease liabilities		97,937
Noncurrent operating lease liabilities		285,785
Total operating lease liabilities	\$	383,722 \$
Finance leases:		
Properties, plants and equipment, at cost	\$	24,321 \$
Accumulated amortization		(5,713)
Properties, plants and equipment, net	\$	18,608 \$
Accrued liabilities	\$	1,916 \$
Other long-term liabilities		5,097
Total finance lease liabilities	\$	7,013 \$

Supplemental balance sheet information related to our leases was as follows:

	December 31,	
	2020	
Weighted average remaining lease term (in years)		
Operating leases		7.2
Finance leases		3.3
Weighted average discount rate		
Operating leases		4.1 %
Finance leases		5.3 %

The components of lease expense were as follows:

	Years Ended Decem	
	2020	
	(In thousands)	
Operating lease expense	\$	121,608 \$
Finance lease expense:		
Amortization of right-of-use assets		4,400
Interest on lease liabilities		415
Variable lease cost		3,580
Total lease expense	\$	130,003 \$

Supplemental cash flow information related to leases was as follows:

	Years Ended Decem	
	2020	
	(In thousands)	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$	126,313 \$
Operating cash flows from finance leases	\$	415 \$
Financing cash flows from finance leases	\$	2,995 \$
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	\$	18,823 \$
Finance leases	\$	4,085 \$

As of December 31, 2020, minimum future lease payments of our operating and finance lease obligations were as follows:

	Operating	
	(In thousands)	
2021	\$	109,756 \$
2022		91,172
2023		75,878
2024		51,859
2025		12,871
2025 and thereafter		116,502
Future minimum lease payments		458,038
Less: imputed interest		74,316
Total lease obligations		383,722
Less: current obligations		97,937
Long-term lease obligations	\$	285,785 \$

As of December 31, 2020, we have entered into certain leases that have not yet commenced. Such leases include a 2-year lease for petroleum t future lease payments of \$2.6 million, expected to commence in the first quarter of 2021.

Lessor

Our consolidated statements of income reflect lease revenue recognized by HEP for contracts with third parties in which HEP is the lessor.

Substantially all of the assets supporting contracts meeting the definition of a lease have long useful lives, and HEP believes these assets will continue to be used in its operations. As current agreements expire due to HEP's risk management strategy for protecting the residual fair value of the underlying assets by performing operations over the lease term.

One of HEP's throughput agreements with Delek US Holdings, Inc. ("Delek") was partially renewed during the year ended December 31, 2020. This agreement met the criteria of sales-type leases since the underlying assets are not expected to have an alternative use at the end of the lease term. Under sales-type lease accounting, at the commencement date, the lessor recognizes a net investment in the lease, based on the estimated fair value of the assets at contract inception, and derecognizes the underlying assets with the difference recorded as selling profit or loss arising from the lease. HEP recognized a gain on sales-type leases totaling \$33.8 million during the year ended December 31, 2020. This sales-type lease transaction, including the related transaction.

Lease income recognized was as follows:

	Years Ended Decem	
	2020	
	(In thousands)	
Operating lease revenues	\$	22,636 \$
Gain on sales-type leases	\$	33,834 \$
Sales-type lease interest income	\$	1,928 \$
Lease revenues relating to variable lease payments not included in measurement of the sales-type lease receivable	\$	1,690 \$

For HEP's sales-type leases, HEP included customer obligations related to minimum volume requirements in guaranteed minimum lease payments. Minimum guaranteed pipeline tariffs for assets subject to sales-type lease accounting are recorded as interest income with the remaining amount as net investment in leases. HEP recognized any billings for throughput volumes in excess of minimum volume requirements as variable lease payments which were recorded in lease revenues.

Annual minimum undiscounted lease payments in which HEP is a lessor to third-party contracts as of December 31, 2020 were as follows:

	Operating	Sales-type
	(In thousands)	
2021	\$ 11,586	\$
2022	9,128	
2023	9,000	
2024	9,000	
2025	2,512	
Thereafter	—	
Total lease payment receipts	\$ 41,226	
Less: imputed interest		
Unguaranteed residual assets at end of leases		
Net investment in leases		\$

Net investment in sales-type leases recorded on our consolidated balance sheet was composed of the following:

	December 31, 2020
	(In thousands)
Lease receivables	\$
Unguaranteed residual assets	
Net investment in leases	\$

Holly Energy Partners

12 Months Ended

Dec. 31, 2020

Equity Method Investments and Joint Ventures

[Abstract]

Holly Energy Partners

Holly Energy PartnersHEP is a publicly held master limited partnership that owns and operates logistic assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery processing units that principally support our refining and marketing operations, as well as other third-party refineries, in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. Additionally, as of December 31, 2020, HEP owned a 75% interest in UNEV Pipeline, LLC (“UNEV”), the owner of a pipeline running from Woods Cross, Utah to Las Vegas, Nevada (the “UNEV Pipeline”) and associated product terminals, and a 50% ownership interest in each of Osage Pipe Line Company, LLC, the owner of a pipeline running from Cushing, Oklahoma to El Dorado, Kansas (the “Osage Pipeline”); Cheyenne Pipeline, LLC, the owner of a pipeline running from Fort Laramie, Wyoming to Cheyenne, Wyoming (the “Cheyenne Pipeline”) and Cushing Connect Pipeline & Terminal LLC (“Cushing Connect”), the owner of a crude oil storage terminal in Cushing, Oklahoma and a pipeline under construction that will run from Cushing, Oklahoma to our Tulsa Refineries.

At December 31, 2020, we owned a 57% limited partner interest and a non-economic general partner interest in HEP. As the general partner of HEP, we have the sole ability to direct the activities that most significantly impact HEP's financial performance, and therefore as HEP's primary beneficiary, we consolidate HEP.

HEP has two primary customers (including us) and generates revenues by charging tariffs for transporting petroleum products and crude oil through its pipelines, by charging fees for terminalling refined products and other hydrocarbons, and by storing and providing other services at its storage tanks and terminals. Under our long-term transportation agreements with HEP (discussed further below), we accounted for 80% of HEP's total revenues for the year ended December 31, 2020. We do not provide financial or equity support through any liquidity arrangements and / or debt guarantees to HEP.

HEP has outstanding debt under a senior secured revolving credit agreement and its senior notes. HEP's creditors have no recourse to our assets. Furthermore, our creditors have no recourse to the assets of HEP and its consolidated subsidiaries. See Note 13 for a description of HEP's debt obligations.

HEP has risk associated with its operations. If a major customer of HEP were to terminate its contracts or fail to meet desired shipping or throughput levels for an extended period of time, revenue would be reduced and HEP could suffer substantial losses to the extent that a new customer is not found. In the event that HEP incurs a loss, our operating results will reflect HEP's loss, net of intercompany eliminations, to the extent of our ownership interest in HEP at that point in time.

Cushing Connect Joint Venture

In October 2019, HEP Cushing LLC (“HEP Cushing”), a wholly-owned subsidiary of HEP, and Plains Marketing, L.P. (“PMLP”), a wholly-owned subsidiary of Plains All American Pipeline, L.P. (“Plains”), formed a 50/50 joint venture, Cushing Connect, for (i) the development, construction, ownership and operation of a new 160,000 barrel per day common carrier crude oil pipeline (the “Cushing Connect Pipeline”) that will connect the Cushing, Oklahoma crude oil hub to our Tulsa Refineries and (ii) the ownership and operation of 1.5 million barrels of crude oil storage in Cushing, Oklahoma (the “Cushing Connect Terminal”). The Cushing Connect Terminal was fully in service beginning in April 2020, and the Cushing Connect Pipeline is expected to be placed in service during the second quarter of 2021. Long-term commercial agreements have been entered into to support the Cushing Connect assets.

Cushing Connect will contract with an affiliate of HEP to manage the construction and operation of the Cushing Connect Pipeline and with an affiliate of Plains to manage the operation of the Cushing Connect Terminal. The total investment in Cushing Connect will be shared proportionately among the partners, and HEP estimates its share of the cost of the Cushing Connect Terminal contributed by Plains and Cushing Connect Pipeline construction costs are approximately \$65.0 million. However, any Cushing Connect Pipeline construction costs exceeding 10% of the budget are borne solely by HEP.

Transportation Agreements

HEP serves our refineries under long-term pipeline, terminal and tankage throughput agreements and refinery processing tolling agreements expiring from 2021 through 2036. Under these agreements, we pay HEP fees to transport, store and process throughput volumes of refined products, crude oil and feedstocks on HEP's pipelines, terminals, tankage, loading rack facilities and refinery processing units that result in minimum annual payments to HEP including UNEV (a consolidated subsidiary of HEP). Under these agreements, the agreed upon tariff rates are subject to annual tariff rate adjustments on July 1 at a rate based upon the percentage change in Producer Price Index or Federal Energy Regulatory Commission index. As of December 31, 2020, these agreements required minimum annualized payments to HEP of \$351.1 million. However, subsequent to year end, these agreements were modified to account for the conversion of our Cheyenne Refinery to renewable diesel production, and as of January 1, 2021, require minimum annualized payments to HEP of \$341.9 million.

Our transactions with HEP and fees paid under our transportation agreements with HEP and UNEV are eliminated and have no impact on our consolidated financial statements.

Incentive Distribution Rights Simplification Agreement

On October 31, 2017, we closed on an equity restructuring transaction with HEP pursuant to which our incentive distribution rights were canceled and our 2% general partner interest in HEP was converted into a non-economic general partner interest in HEP. In consideration, we received 37,250,000 HEP common units. In addition, we agreed to waive \$2.5 million of limited partner cash distributions for each of twelve consecutive quarters beginning with the first quarter the units issued were eligible to receive distributions as consideration.

HEP Private Placement Agreements

On January 25, 2018, HEP entered into a common unit purchase agreement in which certain purchasers agreed to purchase in a private placement 3,700,000 HEP common units, representing limited partner interests, at a price of \$29.73 per common unit. The private placement closed on February 6, 2018, at which time HEP received proceeds of \$110.0 million, which were used to repay indebtedness under the HEP Credit Agreement.

HEP Common Unit Continuous Offering Program

In May 2016, HEP established a continuous offering program under which HEP may issue and sell common units from time to time, representing limited partner interests, up to an aggregate gross sales amount of \$200 million. During the year ended December 31, 2020, HEP did not issue any common units under this program. As of December 31, 2020, HEP has issued 2,413,153 common units under this program, providing \$82.3 million in gross proceeds.

As a result of these transactions and resulting HEP ownership changes, we adjusted additional capital and equity attributable to HEP's noncontrolling interest holders to reallocate HEP's equity among its unitholders.

Revenues

12 Months Ended
Dec. 31, 2020

[Revenue from Contract with Customer \[Abstract\]](#)

[Revenues](#)

Revenues

Substantially all revenue-generating activities relate to sales of refined product and excess crude oil inventories sold at market prices (variable contracts) with customers. Additionally, we have revenues attributable to HEP logistics services provided under petroleum product and crude oil pipeline storage and terminalling agreements with third parties.

Disaggregated revenues were as follows:

	Years Ended December	
	2020	2019
	(In thousands)	
Revenues by type		
Refined product revenues		
Transportation fuels ⁽¹⁾	\$ 7,825,625	\$ 12,952,899
Specialty lubricant products ⁽²⁾	1,657,344	1,864,450
Asphalt, fuel oil and other products ⁽³⁾	672,371	1,025,663
Total refined product revenues	10,155,340	15,843,012
Excess crude oil revenues ⁽⁴⁾	884,248	1,470,148
Transportation and logistic services	98,039	121,027
Other revenues ⁽⁵⁾	46,016	52,391
Total sales and other revenues	\$ 11,183,643	\$ 17,486,578

	Years Ended December	
	2020	2019
	(In thousands)	
Refined product revenues by market		
United States		
Mid-Continent	\$ 5,096,268	\$ 8,424,191
Southwest	2,310,432	3,621,273
Rocky Mountains	1,311,416	2,208,541
Northeast	552,069	578,932
Canada	616,683	721,169
Europe, Asia and Latin America	268,472	288,906
Total refined product revenues	\$ 10,155,340	\$ 15,843,012

- (1) Transportation fuels consist of gasoline, diesel and jet fuel. For the year ended December 31, 2020, \$1.6 million is reported in our Corporate segment.
- (2) Specialty lubricant products consist of base oil, waxes, finished lubricants and other specialty fluids.
- (3) Asphalt, fuel oil and other products revenue include revenues attributable to our Refining, Lubricants and Specialty Products and Corporate segments. For the year ended December 31, 2020, \$533.5 million, \$135.4 million and \$3.5 million respectively, for the year ended December 31, 2019, \$533.5 million, \$135.4 million and \$3.5 million respectively, for the year ended December 31, 2018, \$533.5 million, \$135.4 million and \$3.5 million, respectively, for the year ended December 31, 2018.
- (4) Excess crude oil revenues represent sales of purchased crude oil inventory that at times exceeds the supply needs of our refineries.
- (5) Other revenues are principally attributable to our Refining segment.

Our consolidated balance sheets reflect contract liabilities related to unearned revenues attributable to future service obligations under HEP's contracts with customers and production agreements from the acquisition of Sonneborn on February 1, 2019. The following table presents changes to contract liabilities for the years ended December 31, 2020 and 2019:

	Years Ended December 31,			
	2020		2019	
	(In thousands)			
Balance at January 1	\$	4,652	\$	132
Sonneborn acquisition		—		6,463
Increase		28,746		26,751
Recognized as revenue		(26,660)		(28,694)
Balance at December 31	\$	6,738	\$	4,652

As of December 31, 2020, we have long-term contracts with customers that specify minimum volumes of gasoline, diesel, lubricants and specialty products to be delivered ratably at market prices through 2025. Such volumes are typically nominated in the month preceding delivery and delivered ratably throughout the term of the contracts. Contract prices are subject to market fluctuations and therefore, we have elected the exemption to exclude variable consideration under these contracts under ASC 606-10-50-14A. Aggregate minimum volumes expected to be sold (future performance obligations) under our long-term product sales contracts are as follows:

	2021	2022	2023	Thereafter
	(In thousands)			
Refined product sales volumes (barrels)	19,318	13,771	12,795	

Additionally, HEP has long-term contracts with third-party customers that specify minimum volumes of product to be transported through its pipeline. These contracts result in fixed-minimum annual revenues through 2025. Annual minimum revenues attributable to HEP's third-party contracts as of December 31, 2020 are as follows:

	2021	2022	2023	Thereafter
	(In thousands)			
HEP contractual minimum revenues	\$ 22,041	\$ 11,053	\$ 9,000	\$

We have no customers which had accounted for over 10% of our annual revenues for the years ended December 31, 2020, 2019 or 2018.

Fair Value Measurements

12 Months Ended
Dec. 31, 2020

[Fair Value Disclosures](#)

[\[Abstract\]](#)

[Fair Value Measurements](#)

Fair Value Measurements

Our financial instruments measured at fair value on a recurring basis consist of derivative instruments.

Fair value measurements are derived using inputs (assumptions that market participants would use in pricing an asset or liability, including assumptions about risk) and the fair value measurement model categorizes inputs used in fair value measurements into three broad levels as follows:

- (Level 1) Quoted prices in active markets for identical assets or liabilities.
- (Level 2) Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets or inputs that are observable for the assets or liabilities in markets that are not active or can be corroborated by observable market data.
- (Level 3) Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. These unobservable inputs require the use of valuation techniques that involve significant unobservable inputs.

The carrying amounts of derivative instruments at December 31, 2020 and 2019 were as follows:

Financial Instrument	Carrying Amount	Fair Value by Input	
		Level 1	Level 2
(In thousands)			
December 31, 2020			
Assets:			
Commodity forward contracts	\$ 275	\$ —	\$ 275
Total assets	<u>\$ 275</u>	<u>\$ —</u>	<u>\$ 275</u>
Liabilities:			
NYMEX futures contracts	\$ 418	\$ 418	\$ —
Commodity price swaps	359	—	359
Commodity forward contracts	196	—	196
Foreign currency forward contracts	23,005	—	23,005
Total liabilities	<u>\$ 23,978</u>	<u>\$ 418</u>	<u>\$ 23,560</u>

Financial Instrument	Carrying Amount	Fair Value by Input	
		Level 1	Level 2
(In thousands)			
December 31, 2019			
Assets:			
Commodity price swaps	\$ 13,455	\$ —	\$ 13,455
Commodity forward contracts	4,133	—	4,133
Total assets	<u>\$ 17,588</u>	<u>\$ —</u>	<u>\$ 17,588</u>
Liabilities:			
NYMEX futures contracts	\$ 2,578	\$ 2,578	\$ —
Commodity price swaps	1,230	—	1,230
Commodity forward contracts	3,685	—	3,685
Foreign currency forward contracts	6,722	—	6,722
Total liabilities	<u>\$ 14,215</u>	<u>\$ 2,578</u>	<u>\$ 11,637</u>

Level 1 Financial Instruments

Our NYMEX futures contracts are exchange traded and are measured and recorded at fair value using quoted market prices, a Level 1 input.

Level 2 Financial Instruments

Derivative instruments consisting of foreign currency forward contracts, commodity price swaps and forward sales and purchase contracts are measured at fair value using Level 2 inputs. The fair value of the commodity price swap contracts is based on the net present value of expected future cash flows from the fixed rate legs of the respective swap agreements. The measurements are computed using market-based observable input and quoted forward commodity prices for our commodity price swaps. The fair value of the forward sales and purchase contracts are computed using quoted forward commodity prices. Foreign currency forward contracts are based on values provided by a third party, which were derived using market quotes for similar type instruments, a

Nonrecurring Fair Value Measurements

During the year ended December 31, 2020, we recognized goodwill and long-lived asset impairment charges based on fair value measurements and long-lived asset impairment testing (see Note 11). The fair value measurements were based on a combination of valuation methods including guideline public company and guideline transaction methods and obsolescence adjusted replacement costs, all of which are Level 3 inputs.

During the year ended December 31, 2020, HEP recognized a gain on sales-type leases (see Note 4). The estimated fair value of the underlying leased asset at inception and the present value of the estimated unguaranteed residual asset at the end of the lease term were used in determining the net investment in sales-type leases. The asset valuation estimates included Level 3 inputs based on a replacement cost valuation method.

Earnings Per Share

12 Months Ended
Dec. 31, 2020

[Earnings Per Share](#)

[\[Abstract\]](#)

[Earnings Per Share](#)

Earnings Per Share

Basic earnings per share is calculated as net income (loss) attributable to HollyFrontier stockholders, adjusted for participating securities' share, divided by the average number of shares of common stock outstanding. Diluted earnings per share includes the incremental shares resulting from our restricted stock units if the effect is dilutive. The following is a reconciliation of the denominators of the basic and diluted per share computations for net income (loss) attributable to HollyFrontier stockholders:

	Years Ended December 31	
	2020	2019
	(In thousands, except per share)	
Net income (loss) attributable to HollyFrontier stockholders	\$ (601,448)	\$ 772,388
Participating securities' share in earnings	1,811	1,034
Net income (loss) attributable to common shares	<u>\$ (603,259)</u>	<u>\$ 771,354</u>
Average number of shares of common stock outstanding	161,983	166,287
Effect of dilutive variable restricted stock units and performance share units ⁽¹⁾	—	1,098
Average number of shares of common stock outstanding assuming dilution	<u>161,983</u>	<u>167,385</u>
Basic earnings (loss) per share	<u>\$ (3.72)</u>	<u>\$ 4.64</u>
Diluted earnings (loss) per share	<u>\$ (3.72)</u>	<u>\$ 4.61</u>
(1) Excludes anti-dilutive restricted and performance share units of:	<u>1,082</u>	<u>302</u>

Stock-Based Compensation

12 Months Ended
Dec. 31, 2020

[Share-based Payment Arrangement, Noncash Expense \[Abstract\]](#)
[Stock-Based Compensation](#)

Stock-Based Compensation

We have a principal share-based compensation plan (the “2020 Long-Term Incentive Plan”), which allows us to grant new equity awards until February 2021. We also have a long-term incentive compensation plan which expired pursuant to its terms on December 31, 2020, but it will continue to govern outstanding awards thereunder. The compensation cost charged against income for these plans was \$29.7 million, \$41.5 million and \$39.0 million for the years ended December 31, 2020, 2019 and 2018, respectively. Our accounting policy for the recognition of compensation expense for awards with pro-rata vesting is to expense the cost over the vesting periods.

Additionally, HEP maintains a share-based compensation plan for Holly Logistic Services, L.L.C.'s non-employee directors and certain officers. Compensation cost attributable to HEP's share-based compensation plan was \$2.2 million, \$2.5 million and \$3.2 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Restricted Stock Units

Under our long-term incentive plan, we grant certain officers and other key employees restricted stock unit awards, which are payable in stock over a period of three years. Restricted stock unit award recipients have the right to receive dividends, however, restricted stock units do not have ownership. Upon vesting, restrictions on the restricted stock units lapse at which time they convert to common shares or cash. In addition, we grant restricted stock unit awards, which typically vest over a period of one year and are payable in stock. The fair value of each restricted stock unit award is the grant date market price of our common shares and is amortized over the respective vesting period. We account for forfeitures on an estimated basis. A summary of restricted stock unit activity during the year ended December 31, 2020 is presented below:

Restricted Stock Units	Grants	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2020	1,101,781	\$ 53.30
Granted	1,574,929	\$ 22.20
Vested	(549,144)	\$ 51.40
Forfeited	(89,971)	\$ 53.66
Converted from performance share units	19,450	\$ 38.13
Outstanding at December 31, 2020	2,057,045	\$ 29.76

For the years ended December 31, 2020, 2019 and 2018, restricted stock and restricted stock units vested having a grant date fair value of \$28.2 million, \$30.0 million, respectively. For the years ended December 31, 2019 and 2018, we granted restricted stock units having a weighted average grant date fair value of \$29.76 and \$64.96, respectively. As of December 31, 2020, there was \$40.4 million of total unrecognized compensation cost related to non-vested restricted stock units. This cost is expected to be recognized over a weighted-average period of 1.7 years. For the years ended December 31, 2020, 2019 and 2018, we paid \$0.1 million, \$0.1 million, and \$0.1 million, respectively, in cash equal to the value of the stock award on the vest date to certain employees to settle 55,222, 32,648 and 2,648 restricted stock units.

Performance Share Units

Under our long-term incentive plan, we grant certain officers and other key employees performance share units, which are payable in stock or cash based on performance criteria over the service period, and generally vest over a period of three years. Under the terms of our performance share unit grants, awards are based on “financial performance” and “market performance” criteria. Financial performance is based on our financial performance compared to a peer group of independent member companies while market performance is based on the relative standing of total shareholder return achieved by HollyFrontier compared to peer group companies. The amount of stock or cash ultimately issued or cash paid under these awards can range from zero to 200% of target award amounts. Holders of performance share units are entitled to dividends, dividend equivalents and other distributions with respect to such performance share units based on the target level of payout.

A summary of performance share unit activity and changes during the year ended December 31, 2020 is presented below:

Performance Share Units	Grants
Outstanding at January 1, 2020	375,588
Granted	434,378
Vested	(124,303)
Forfeited	(31,009)
Converted to restricted stock units	(19,450)
Outstanding at December 31, 2020	<u>635,204</u>

For the year ended December 31, 2020, we issued 296,801 shares of common stock, representing a 150% payout on vested units having a grant date fair value of \$6.2 million. For the years ended December 31, 2019 and 2018, we issued common stock representing 150% of the performance share units having a grant date fair value of \$7.3 million and \$8.8 million, respectively. As of December 31, 2020, there was \$14.5 million of total unrecognized compensation cost related to non-vested performance share units having a weighted-average period of 2.5 years. That cost is expected to be recognized over a weighted-average period of 2.5 years.

Inventories

12 Months Ended
Dec. 31, 2020

[Inventory, Net \[Abstract\]](#) [Inventories](#)

Inventories

Inventory consists of the following components:

	Decem
	2020
	(In th
Crude oil	\$ 451,967
Other raw materials and unfinished products ⁽¹⁾	260,495
Finished products ⁽²⁾	572,258
Lower of cost or market reserve	(318,862)
Process chemicals ⁽³⁾	35,006
Repairs and maintenance supplies and other ⁽⁴⁾	172,612
Total inventory	\$ 1,173,476

- (1) Other raw materials and unfinished products include feedstocks and blendstocks, other than crude.
- (2) Finished products include gasolines, jet fuels, diesels, lubricants, asphalts, LPG's and residual fuels.
- (3) Process chemicals include additives and other chemicals.
- (4) Includes RINs

Our inventories that are valued at the lower of LIFO cost or market reflect a valuation reserve of \$318.9 million and \$240.4 million at Dec respectively. The December 31, 2019 market reserve of \$240.4 million was reversed due to the sale of inventory quantities that gave rise to the 2 reserve of \$318.9 million was established as of December 31, 2020 based on market conditions and prices at that time. The effect of the change in reserve was an increase to cost of products sold totaling \$78.5 million for the year ended December 31, 2020, a decrease of \$119.8 million for the 2019 and an increase of \$136.3 million for the year ended December 31, 2018.

At December 31, 2020, 2019 and 2018, the LIFO value of inventory, net of the lower of cost or market reserve, was equal to current costs. For the 2020, we recognized a charge of \$36.9 million to cost of products sold as we liquidated certain quantities of LIFO inventory at our Cheyenne R historical acquisition costs above market prices at the time of liquidation

During the three months ended September 30, 2019, the EPA granted the Cheyenne Refinery and the Woods Cross Refinery each a one-year sma the Renewable Fuel Standard ("RFS") program requirements for the 2018 calendar year end. As a result, the Cheyenne Refinery's and the Wood and diesel production are not subject to the Renewable Volume Obligation ("RVO") for 2018. In the third quarter of 2019, we increased our inve our cost of products sold by \$36.6 million representing the net cost of the RINs charge to cost of products sold in 2018, less the loss incurred for in excess of those which we can use subject to the 20% carryover limit.

During the three months ended June 30, 2018, the EPA granted the Woods Cross Refinery a one-year small refinery exemption from the RFS the 2017 calendar year end. As a result, the Woods Cross Refinery's gasoline and diesel production are not subject to the RVO for 2017. In the s increased our inventory of RINs and reduced our cost of products sold by \$25.3 million, representing the net cost of the Woods Cross Refiner products sold in 2017, less the loss incurred for selling 2017 vintage RINs in excess of those which we can use subject to the 20% carryover limit

During the three months ended March 31, 2018, the EPA granted the Cheyenne Refinery a one-year small refinery exemption from the RFS pro 2015 and 2017 calendar years end. As a result, the Cheyenne Refinery's gasoline and diesel production are not subject to the RVO for those year the 2017 Cheyenne Refinery exemption, we had not yet retired RINs to satisfy the 2017 RVO, which we intended to satisfy, in part, with 2016 20% carryover limit. In the first quarter of 2018, we increased our inventory of RINs and reduced our cost of products sold by \$37.9 million, repr Cheyenne Refinery's RINs charged to cost of products sold in 2017, less the loss incurred from selling 2016 vintage RINs prior to their expiration In the first quarter of 2018, the EPA provided us 2018 vintage RINs to replace the RINs previously retired to meet the Ch 2015 RVO. In the first quarter of 2018, we increased our inventory of RINs and reduced our cost of products sold by \$33 representing the fair value of the 2018 replacement RINs obtained from the Cheyenne Refinery's exemption of its 2015 F

**Properties, Plants and
Equipment**

[Property, Plant and
Equipment \[Abstract\]](#)
[Properties, Plants and
Equipment](#)

**12 Months Ended
Dec. 31, 2020**

Properties, Plants and Equipment

The components of properties, plants and equipment are as follows:

	Decem
	2020
	(In th
Land, buildings and improvements	\$ 517,829
Refining facilities	4,202,524
Pipelines and terminals	1,786,279
Transportation vehicles	26,715
Other fixed assets	400,159
Construction in progress	366,011
	<u>7,299,517</u>
Accumulated depreciation	(2,726,378)
	<u>\$ 4,573,139</u>

We capitalized interest attributable to construction projects of \$4.1 million, \$2.5 million and \$4.8 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Depreciation expense was \$333.0 million, \$334.2 million and \$309.0 million for the years ended December 31, 2020, 2019 and 2018, respectively.

**Goodwill, Long-lived Asset
and Intangibles**

**12 Months Ended
Dec. 31, 2020**

[Goodwill \[Abstract\]](#)

[Goodwill, Long-lived Asset
and Intangibles](#)

Goodwill, Long-lived Assets and Intangibles

Goodwill and long-lived assets

As of December 31, 2020, our goodwill balance was \$2.3 billion. The carrying amount of our goodwill may fluctuate from period to period due to currency translation adjustments on goodwill assigned to our Lubricants and Specialty Products segment.

The following is a summary of our goodwill by segment:

	Refining	Lubricants and Specialty Products	HEP	Total
(In thousands)				
Balance at December 31, 2019				
Goodwill	\$ 2,042,790	\$ 480,274	\$ 312,873	\$ 2,835,937
Accumulated impairment losses	(309,318)	(152,712)	—	(462,030)
	1,733,472	327,562	312,873	2,373,907
Foreign currency translation adjustment	—	1,895	—	1,895
Current year impairment losses	—	(81,867)	—	(81,867)
Balance at December 31, 2020				
Goodwill	2,042,790	482,169	312,873	2,837,832
Accumulated impairment losses	(309,318)	(234,579)	—	(543,897)
	\$ 1,733,472	\$ 247,590	\$ 312,873	\$ 2,293,935

Goodwill and long-lived asset impairment testing

During the second quarter of 2020, we determined that indicators of potential goodwill and long-lived asset impairments were present and performed impairment testing on our long-lived assets and an interim test for goodwill impairment as of May 31, 2020. Impairment indicators included the recent economic slowdown due to the COVID-19 pandemic, reductions in the prices of our finished goods and raw materials and the related decrease in our gross margins, as well as the re-evaluation of our PCLI asset group's capitalization. Additionally, our second quarter announcement of the planned conversion of our Cheyenne Refinery to renewable diesel production was a triggering event requiring assessment of potential impairments to the carrying value of our Cheyenne Refinery asset group. As a result of our long-lived asset impairment testing, we determined that the carrying value of the long-lived assets of our Cheyenne Refinery and PCLI asset groups were not recoverable, and we recorded asset impairment charges of \$232.2 million and \$204.7 million, respectively, in the second quarter of 2020. Our interim goodwill impairment test determined there was no impairment of goodwill at our Refining and Lubricants and Specialty Products reporting units as of May 31, 2020. The estimated fair values of our PCLI asset groups were determined using a combination of the income and cost approaches. The income approach was based on management's best estimate of future cash flows over the remaining useful life of the asset group. The cost approach utilized assumptions for the current replacement costs of the assets, estimated depreciation and economic obsolescence. These fair value measurements involve significant unobservable inputs (Level 3 inputs). See Note 6 of our 2020 Form 10-K for more information of Level 3 inputs.

As of July 1, 2020, we performed our annual goodwill impairment testing quantitatively and determined there was no impairment of goodwill at our reporting units at that time.

During the fourth quarter of 2020, we incurred long-lived asset impairment charges of \$26.5 million for construction-in-progress, consisting primarily of potential upgrades to certain processing units at our Tulsa and El Dorado Refineries. During the quarter, we concluded not to pursue these projects due to unfavorable operating and market conditions.

Additionally, in the fourth quarter of 2020, our annual budgeting process identified downward forecast revisions specific to the Sonneborn reporting unit in our Refining and Specialty Products segment; largely from declines in gross margin as compared to historic levels and an increase in forecasted capital expenditures. As a result, it was more likely than not that the carrying value of the Sonneborn reporting unit exceeded its fair value, and we performed an interim goodwill impairment test as of December 1, 2020. As a result of our impairment testing, we recognized a goodwill impairment charge of \$81.9 million during the fourth quarter for the Sonneborn reporting unit. No other reporting units required an interim impairment test during the fourth quarter.

The estimated fair values of our reporting units tested quantitatively in the current year were derived using a combination of income and market approaches. The income approach reflects expected future cash flows based on estimated forecasted production levels, selling prices, gross margins, operating costs and other factors. The market approach reflects guideline public company and guideline transaction methods. Both methods utilize pricing multiples derived from the market transactions of other like kind assets. These fair value measurements involve significant unobservable inputs (Level 3 inputs). See Note 6 for more information of Level 3 inputs.

There was no impairment of long-lived assets during the years ended December 31, 2019 and 2018.

During the year ended December 31, 2019, we recorded a goodwill impairment charge of \$152.7 million to fully impair the goodwill of the PCL our Lubricants and Specialty Products segment. There was no impairment of goodwill during the year ended December 31, 2018.

A reasonable expectation exists that further deterioration in our operating results or overall economic conditions could result in an impairment of long-lived assets impairments at some point in the future. Future impairment charges could be material to our results of operations and financial c

Intangibles

The carrying amounts of our intangible assets presented in “Intangibles and other” in our consolidated balance sheet are as follows:

	<u>Useful Life</u>	<u>2020</u>	Decem
			(In tho
Customer relationships	10 - 20 years	\$ 239,773	
Transportation agreements	30 years	59,933	
Trademarks, patents and other	10 - 20 years	157,120	
		<u>456,826</u>	
Accumulated amortization		<u>(122,024)</u>	
Total intangibles, net		<u>\$ 334,802</u>	

Amortization expense was \$34.1 million, \$33.8 million and \$16.6 million for the years ended December 31, 2020, 2019 and 2018, respectively and \$34.1 million for each of the next five years.

Environmental

**12 Months Ended
Dec. 31, 2020**

Environmental Expense and Liabilities [Abstract]

Environmental

Environmental We expensed \$7.1 million, \$11.2 million and \$14.8 million for the years ended December 31, 2020, 2019 and 2018, respectively, for environmental remediation obligations. The accrued environmental liability reflected in our consolidated balance sheets was \$115.0 million and \$117.7 million at December 31, 2020 and 2019, respectively, of which \$94.0 million and \$95.6 million, respectively, were classified as other long-term liabilities. These accruals include remediation and monitoring costs expected to be incurred over an extended period of time (up to 30 years for certain projects). Estimated liabilities could increase in the future when the results of ongoing investigations become known, are considered probable and can be reasonably estimated.

Debt

12 Months Ended
Dec. 31, 2020

[Debt Disclosure \[Abstract\]](#) [Debt](#)

Debt

HollyFrontier Credit Agreement

We have a \$1.35 billion senior unsecured revolving credit facility maturing in February 2022 (the “HollyFrontier Credit Agreement”). The HollyFrontier Credit Agreement may be used for revolving credit loans and letters of credit from time to time and is available to fund general corporate purposes. At December 31, 2020, HollyFrontier was in compliance with all covenants, had no outstanding borrowings and had outstanding letters of credit totaling \$5.7 million under the HollyFrontier Credit Agreement. Indebtedness under the HollyFrontier Credit Agreement bears interest, at our option at either a) an alternate base rate (as defined in the credit agreement) plus an applicable margin of (ranging from 0.125% - 1.000%), b) LIBOR plus an applicable margin (ranging from 1.125% to 2.000%), or c) Canadian Dealer Offered Rate plus an applicable margin (ranging from 1.125% to 2.000%) for Canadian dollar denominated borrowings.

HEP Credit Agreement

HEP has a \$1.4 billion senior secured revolving credit facility maturing in July 2022 (the “HEP Credit Agreement”) and is available to fund capital expenditures, acquisitions, distribution payments, working capital and for general partnership purposes. It is also available to fund letters of credit up to a \$500 million accordion. During the year ended December 31, 2020, HEP received advances totaling \$258.5 million and repaid \$310.5 million under the HEP Credit Agreement. At December 31, 2020, HEP was in compliance with all of its covenants, had outstanding borrowings of \$913.5 million and no outstanding letters of credit under the HEP Credit Agreement.

Indebtedness under the HEP Credit Agreement bears interest, at HEP's option, at either a reference rate announced by the administrative agent or at a rate equal to LIBOR plus an applicable margin. In each case, the applicable margin is based upon the ratio of HEP's funded debt to earnings before depreciation and amortization (as defined in the HEP Credit Agreement). The weighted average interest rates in effect on HEP's Credit Agreement were 4.24% for December 31, 2020 and 2019, respectively.

HEP's obligations under the HEP Credit Agreement are collateralized by substantially all of HEP's assets and are guaranteed by HEP's material subsidiaries. Any recourse to the general partner would be limited to the extent of HEP Logistics Holdings, L.P.'s assets, which other than its investment in HEP, HEP's creditors have no recourse to our other assets. Furthermore, our creditors have no recourse to the assets of HEP and its consolidated subsidiaries.

HollyFrontier Senior Notes

On September 28, 2020, we completed a public offering of \$350.0 million in aggregate principal amount of 2.625% senior notes maturing October 2025 (the “2.625% Senior Notes”) and \$400.0 million in aggregate principal amount of 4.500% senior notes maturing October 2030 (the “4.500% Senior Notes”). We intend to use the proceeds for general corporate purposes, which may include capital expenditures.

As a result, as of December 31, 2020, our outstanding senior notes consist of \$1.0 billion in aggregate principal amount of 5.875% senior notes maturing October 2025 (the “5.875% Senior Notes”), the 2.625% Senior Notes and the 4.500% Senior Notes (collectively, the “HollyFrontier Senior Notes”). The HollyFrontier Senior Notes are unsecured and unsubordinated obligations of ours and rank equally with all our other existing and future unsecured and unsubordinated indebtedness.

HollyFrontier Financing Arrangements

In December 2018, certain of our wholly-owned subsidiaries entered into financing arrangements whereby such subsidiaries sold a portion of their precious metals catalyst to a financial institution and then leased back the precious metals catalyst in exchange for total cash received of \$32.5 million. The volume of the lease, the lease rate and the lease term are fixed over the term of each lease, and the lease payments are recorded as interest expense. The leases mature on February 28, 2021 and February 28, 2022. We must either satisfy the obligation at fair market value or refinance to extend the maturity. These financing arrangements are recorded at a net liability of \$43.9 million and \$40.0 million at December 31, 2020 and 2019, respectively, and are included in “Accrued liabilities” in our consolidated balance sheet. For additional information on Level 2 inputs.

HEP Senior Notes

On February 4, 2020, HEP closed a private placement of \$500.0 million in aggregate principal amount of 5.0% HEP senior unsecured notes maturing February 2025 (the “HEP Senior Notes”). On February 5, 2020, HEP redeemed its existing \$500.0 million aggregate principal amount of 6.0% senior notes maturing February 2025 at a redemption cost of \$522.5 million. HEP recognized a \$25.9 million early extinguishment loss consisting of a \$22.5 million debt redemption loss, a \$2.5 million discount and financing costs of \$3.4 million. HEP funded the \$522.5 million redemption with proceeds from the issuance of its 5.0% senior notes under the HEP Credit Agreement.

The HEP Senior Notes are unsecured and impose certain restrictive covenants, including limitations on HEP's ability to incur additional indebtedness, sell assets, incur certain liens, pay distributions, enter into transactions with affiliates, and enter into mergers. HEP was in compliance with the restrictive covenants of the HEP Senior Notes as of December 31, 2020. At any time when the HEP Senior Notes are rated investment grade by either Moody's or Standard & Poor's, in the event of default exists, HEP will not be subject to many of the foregoing covenants. Additionally, HEP has certain redemption rights under the HEP Senior Notes.

Indebtedness under the HEP Senior Notes is guaranteed by HEP's wholly-owned subsidiaries. HEP's creditors have no recourse to our assets. Furthermore, our creditors have no recourse to the assets of HEP and its consolidated subsidiaries.

The carrying amounts of long-term debt are as follows:

	December
	2020
	(In thousands)
HollyFrontier	
2.625% Senior Notes	\$ 350,000
5.875% Senior Notes	1,000,000
4.500% Senior Notes	400,000
	1,750,000
Unamortized discount and debt issuance costs	(12,885)
Total HollyFrontier long-term debt	1,737,115
HEP	
HEP Credit Agreement	913,500
5.00% Senior Notes	500,000
6.00% Senior Notes	—
	500,000
Unamortized discount and debt issuance costs	(7,897)
Total HEP long-term debt	1,405,603
Total long-term debt	\$ 3,142,718

The fair values of the senior notes are as follows:

	December
	2020
	(In thousands)
HollyFrontier Senior Notes	\$ 1,903,867
HEP Senior Notes	\$ 506,540

These fair values are based on a Level 2 input. See Note 6 for additional information on Level 2 inputs.

Principal maturities of long-term debt as of December 31, 2020 are as follows:

Years Ending December 31,	(In thousands)
2021	\$ —
2022	913,500
2023	350,000
2024	—
2025	—
Thereafter	1,900,000
Total	\$ 3,163,500

Derivative Instruments and Hedging Activities

**12 Months Ended
Dec. 31, 2020**

[Derivative Instruments and Hedging Activities](#)

[Disclosure \[Abstract\]](#)

[Derivative Instruments and Hedging Activities](#)

Derivative Instruments and Hedging Activities

Commodity Price Risk Management

Our primary market risk is commodity price risk. We are exposed to market risks related to the volatility in crude oil and refined products, as well as natural gas used in our refining operations. We periodically enter into derivative contracts in the form of commodity price swaps, forward purchase contracts to mitigate price exposure with respect to our inventory positions, natural gas purchases, sales prices of refined products and crude oil contracts.

Foreign Currency Risk Management

We are exposed to market risk related to the volatility in foreign currency exchange rates. We periodically enter into derivative contracts in the form of forward and foreign exchange swap contracts to mitigate the exposure associated with fluctuations on intercompany notes with our foreign subsidiaries denominated in the U.S. dollar.

Accounting Hedges

We have swap contracts serving as cash flow hedges against price risk on forecasted purchases of natural gas. We also periodically have swap contracts to hedge basis differentials on forecasted purchases of crude oil and forward sales contracts that lock in the prices of future sales of crude oil and refined products. These contracts are designated as accounting hedges and are measured at fair value with offsetting adjustments (gains/losses) recorded directly to other comprehensive income. These adjustments are later reclassified to earnings as the hedging instruments mature.

The following table presents the pre-tax effect on other comprehensive income ("OCI") and earnings due to fair value adjustments and maturities under hedge accounting:

Derivatives Designated as Cash Flow Hedging Instruments	Net Unrealized Gain (Loss) Recognized in OCI			Income Statement Location	Gain (Loss) Reclassified into Earnings	
	Years Ended December 31,				Years Ended	
	2020	2019	2018		2020	2019
(In thousands)						
Commodity contracts	\$ (4,871)	\$ (5,349)	\$ 11,221	Sales and other revenues	\$ (5,168)	\$ (8,117)
				Cost of products sold	4,281	(1,717)
				Operating expenses	(1,717)	(1,717)
Total	\$ (4,871)	\$ (5,349)	\$ 11,221		\$ (2,604)	\$ (1,717)

Economic Hedges

We have commodity contracts including NYMEX futures contracts to lock in prices on forecasted purchases and sales of inventory and forward purchase contracts, as well as periodically have contracts to lock in basis spread differentials on forecasted purchases of crude oil and swap contracts to lock in the price of gasoline, that serve as economic hedges (derivatives used for risk management, but not designated as accounting hedges). We also have forward contracts to hedge the rate of foreign currency. In addition, our catalyst financing arrangements discussed in Note 13 could require repayment under certain conditions of platinum, which is an embedded derivative. These contracts are measured at fair value with offsetting adjustments (gains / losses) recorded directly to earnings.

The following table presents the pre-tax effect on income due to maturities and fair value adjustments of our economic hedges:

Derivatives Not Designated as Hedging Instruments	Income Statement Location	Gain (Loss) Recognized in Earnings	
		Years Ended December 31,	
		2020	2019
(In thousands)			
Commodity contracts	Cost of products sold	\$ 18,646	\$ (8,117)
	Interest expense	(4,250)	(6,250)
Foreign currency contracts	Gain on foreign currency transactions	(7,300)	(17,300)
	Total	\$ 7,096	\$ (32,667)

As of December 31, 2020, we have the following notional contract volumes related to outstanding derivative instruments (all maturing in 2021):

	Total Outstanding Notional	Unit of Measure
Derivatives designated as hedging instruments:		
Natural gas price swaps - long	1,800,000	MMBTU
Derivatives not designated as hedging instruments:		
NYMEX futures (WTI) - short	160,000	Barrels
Forward gasoline and diesel contracts - long	195,000	Barrels
Foreign currency forward contracts	418,192,532	U. S. dollar
Forward commodity contracts (platinum)	40,867	Troy ounces

The following table presents the fair value and balance sheet locations of our outstanding derivative instruments. These amounts are presented on a net basis to reflect the net settlement balances that reconcile to a net asset or liability position in our consolidated balance sheets. We present on a net basis to reflect the net settlement balances in accordance with provisions of our master netting arrangements.

	Derivatives in Net Asset Position			Derivatives in Net Liability	
	Gross Assets	Gross Liabilities Offset in Balance Sheet	Net Assets Recognized in Balance Sheet	Gross Liabilities	Gross Assets in Balance Sheet
(In thousands)					
December 31, 2020					
Derivatives designated as cash flow hedging instruments:					
Commodity price swap contracts	\$ —	\$ —	\$ —	\$ 359	\$ —
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 359</u>	<u>\$ —</u>
Derivatives not designated as cash flow hedging instruments:					
NYMEX futures contracts	\$ —	\$ —	\$ —	\$ 418	\$ —
Commodity forward contracts	275	—	275	196	—
Foreign currency forward contracts	—	—	—	23,005	—
	<u>\$ 275</u>	<u>\$ —</u>	<u>\$ 275</u>	<u>\$ 23,619</u>	<u>\$ —</u>
Total net balance			<u>\$ 275</u>		
Balance sheet classification:	Prepayment and other		<u>\$ 275</u>	Accrued liabilities	

	Derivatives in Net Asset Position			Derivatives in Net Liabilities	
	Gross Assets	Gross Liabilities Offset in Balance Sheet	Net Assets Recognized in Balance Sheet	Gross Liabilities	Gross Assets O in Balance Sh
(In thousands)					
December 31, 2019					
<i>Derivatives designated as cash flow hedging instruments:</i>					
Commodity price swap contracts	\$ 7,526	\$ (1,784)	\$ 5,742	\$ 1,230	\$
	<u>\$ 7,526</u>	<u>\$ (1,784)</u>	<u>\$ 5,742</u>	<u>\$ 1,230</u>	<u>\$</u>
<i>Derivatives not designated as cash flow hedging instruments:</i>					
NYMEX futures contracts	\$ —	\$ —	\$ —	\$ 2,578	\$
Commodity price swap contracts	7,713	—	7,713	—	
Commodity forward contracts	4,133	—	4,133	3,685	
Foreign currency forward contracts	—	—	—	6,722	
	<u>\$ 11,846</u>	<u>\$ —</u>	<u>\$ 11,846</u>	<u>\$ 12,985</u>	<u>\$</u>
Total net balance			<u>\$ 17,588</u>		
Balance sheet classification:	Prepayments and other		\$ 17,588	Accrued liabilities	
				Other long-term liabilities	
			<u>\$ 17,588</u>		

At December 31, 2020, we had a pre-tax net unrealized loss of \$0.4 million classified in accumulated other comprehensive income that relates to all contractual maturities through 2021, which assuming commodity prices remain unchanged will be effectively transferred from accumulated other comprehensive income to the statement of income as the hedging instruments contractually mature over the next twelve-month period.

Income Taxes

12 Months Ended
Dec. 31, 2020

[Income Tax Disclosure](#)

[\[Abstract\]](#)

[Income Taxes](#)

Income Taxes

The provision for income taxes is comprised of the following:

	Years Ended December	
	2020	2019
	(In thousands)	
Current		
Federal	\$ (59,452)	\$ 187,134
State	(5,391)	29,547
Foreign	9,423	3,805
Deferred		
Federal	(64,836)	77,916
State	(52,872)	26,073
Foreign	(59,019)	(25,323)
	<u>\$ (232,147)</u>	<u>\$ 299,152</u>

The statutory federal income tax rate applied to pre-tax book income reconciles to income tax expense (benefit) as follows:

	Years Ended December	
	2020	2019
	(In thousands)	
Tax computed at statutory rate	\$ (156,880)	\$ 246,013
Effect of the Tax Cuts and Jobs Act	—	—
State income taxes, net of federal tax benefit	(41,566)	47,259
Noncontrolling interest in net income	(21,799)	(25,494)
CARES Act benefits	(19,837)	—
Foreign rate differential	(14,294)	—
Effect of nondeductible goodwill impairment charge	16,573	32,069
Other	5,656	(695)
	<u>\$ (232,147)</u>	<u>\$ 299,152</u>

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their tax basis. Our deferred income tax assets and liabilities as of December 31, 2020 and 2019 are as follows:

	December 31, 2020	
	Assets	Liabilities
	(In thousands)	
Deferred income taxes		
Properties, plants and equipment (due primarily to tax in excess of book depreciation)	\$ —	\$ (712,339)
Lease obligation	94,447	—
Accrued employee benefits	21,819	—
Accrued post-retirement benefits	11,646	—
Accrued environmental costs	27,200	—
Hedging instruments	—	(903)
Inventory differences	—	(24,271)
Deferred turnaround costs	—	(85,326)
Net operating loss and tax credit carryforwards	51,227	—
Investment in HEP	—	(94,982)
Valuation allowance	—	(8,577)
Other	6,356	—
Total	<u>\$ 212,695</u>	<u>\$ (926,398)</u>

	December 31, 2019	
	Assets	Liabilities
	(In thousands)	
Deferred income taxes		
Properties, plants and equipment (due primarily to tax in excess of book depreciation)	\$ —	\$ (809,966)
Lease obligation	120,435	—
Accrued employee benefits	13,635	—
Accrued post-retirement benefits	11,027	—
Accrued environmental costs	28,708	—
Hedging instruments	—	(2,439)
Inventory differences	—	(43,500)
Deferred turnaround costs	—	(135,920)
Net operating loss and tax credit carryforwards	22,912	—
Investment in HEP	—	(95,037)
Valuation allowance	—	(4,600)
Other	5,475	—
Total	<u>\$ 202,192</u>	<u>\$ (1,091,462)</u>

We have Kansas income tax credits of \$12.8 million and Oklahoma income tax credits of \$5.5 million that can be carried forward 16 and 19 tax years, respectively. We also have net operating losses of \$61.8 million in Luxembourg and \$27.6 million in Canada. We have reflected a valuation allowance of \$8.6 million in 2019 with respect to these net operating carry forwards that primarily relate to the losses in Luxembourg.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	Years Ended December 31	
	2020	2019
	(In thousands)	
Balance at January 1	\$ 56,621	\$ 53,751
Additions for tax positions of prior years	6	2,891
Reductions for tax positions of prior years	(1,500)	(2,891)
Lapse of statute of limitations	(228)	—
Balance at December 31	<u>\$ 54,899</u>	<u>\$ 56,621</u>

At December 31, 2020, 2019 and 2018, there were \$54.9 million, \$56.6 million, and \$53.8 million, respectively, of unrecognized tax benefits that could potentially affect our effective tax rate. Unrecognized tax benefits are adjusted in the period in which new information about a tax position becomes available and the amount differs from the amount recorded.

Approximately \$53.7 million of the unrecognized tax benefits relates to claims filed with the IRS on the federal income tax treatment of research and development tax credits for certain prior years. The issues related to the claims are complex and uncertain, and we cannot conclude that it is more likely than not that the IRS will sustain the claims. Therefore, no tax benefit has been recognized for the filed claims. During the next 12 months, it is reasonably possible that developments regarding these claims could reduce unrecognized tax benefits (due to possible court rulings in favor of the IRS).

We recognize interest and penalties relating to liabilities for unrecognized tax benefits as an element of tax expense. We have not recorded a liability for uncertain tax positions as we believe that it is more likely than not that there will not be any assessment of penalties.

We are subject to U.S. and Canadian federal income tax, Oklahoma, Kansas, New Mexico, Iowa, Arizona, Utah, Colorado, and state and local income tax and to income tax of multiple other state jurisdictions. We have substantially concluded all state and local income tax years through 2015. Other than the federal claim noted above, we have materially concluded all U.S. federal income tax years through December 31, 2016.

Stockholders' Equity

12 Months Ended
Dec. 31, 2020

[Stockholders' Equity Note](#)

[\[Abstract\]](#)

[Stockholders' Equity](#)

Stockholders' Equity

Shares of our common stock outstanding and activity for the years ended December 31, 2020, 2019 and 2018 are presented below:

	Years Ended December	
	2020	2019
Common shares outstanding at January 1	161,846,525	172,121,491
Vesting of performance units	296,801	592,602
Vesting of restricted stock with performance feature	553,381	412,465
Forfeitures of restricted stock	—	(13,807)
Purchase of treasury stock ⁽¹⁾	(283,047)	(11,266,226)
Common shares outstanding at December 31	162,413,660	161,846,525

(1) Includes 283,047, 415,466 and 369,255 shares, respectively, withheld under the terms of stock-based compensation agreements to provide funds for income taxes due at the vesting of share-based awards, as well as other stock repurchases under separate authority from our Board of Directors.

In November 2019, our Board of Directors approved a \$1.0 billion share repurchase program, which replaced all existing share repurchase programs. The program allows us to repurchase common stock in the open market or through privately negotiated transactions. The timing and amount of stock repurchases will depend on market conditions and corporate, regulatory and other relevant considerations. This program may be discontinued at any time by the Board of Directors. As of December 31, 2019, we have repurchased common stock under this stock repurchase program. In addition, we are authorized by our Board of Directors to repurchase shares of common stock to offset shares issued under our compensation programs.

During the years ended December 31, 2020, 2019 and 2018, we withheld shares of our common stock from certain employees in the amounts of \$19.6 million, \$19.6 million and \$19.6 million, respectively. These withholdings were made under the terms of restricted stock unit and performance share unit agreements and we concurrently made cash payments to fund payroll and income taxes on behalf of officers and employees who elected to have shares withheld for such taxes.

**Other Comprehensive
Income (Loss)**

**12 Months Ended
Dec. 31, 2020**

[Other Comprehensive
Income \(Loss\), before Tax
\[Abstract\]](#)

[Other Comprehensive Income](#) Other Comprehensive Income (Loss)

[\(Loss\)](#)

The components and allocated tax effects of other comprehensive income are as follows:

	Before-Tax	Tax Expense (Benefit)
		(In thousands)
Year Ended December 31, 2020		
Net change in foreign currency translation adjustment	\$ 6,226	\$ 1,35
Net unrealized loss on hedging instruments	(4,871)	(1,22
Net change in pension and other post-retirement benefit obligations	(3,461)	(92
Other comprehensive loss attributable to HollyFrontier stockholders	<u>\$ (2,106)</u>	<u>\$ (79)</u>
Year Ended December 31, 2019		
Net change in foreign currency translation adjustment	\$ 13,337	\$ 2,84
Net unrealized loss on hedging instruments	(5,349)	(1,36
Net change in pension and other post-retirement benefit obligations	(7,207)	(1,85
Other comprehensive income attributable to HollyFrontier stockholders	<u>\$ 781</u>	<u>\$ (37</u>
Year Ended December 31, 2018		
Net change in foreign currency translation adjustment	\$ (38,227)	\$ (8,06
Net unrealized gain on hedging instruments	11,221	2,85
Net change in pension and other post-retirement benefit obligations	(1,507)	(37
Other comprehensive loss attributable to HollyFrontier stockholders	<u>\$ (28,513)</u>	<u>\$ (5,58</u>

The following table presents the income statement line item effects for reclassifications out of accumulated other comprehensive income ("AOCI")

AOCI Component	Gain (Loss) Reclassified From AOCI			Income Statement Component
	Years Ended December 31,			
	2020	2019	2018	
(In thousands)				
Hedging instruments:				
Commodity price swaps	\$ (5,168)	\$ (1,799)	\$ (5,093)	Sales and other revenue
	4,281	22,876	—	Cost of products sold
	(1,717)	(1,364)	(962)	Operating expenses
	(2,604)	19,713	(6,055)	
	(664)	5,027	(1,544)	Income tax expense
	(1,940)	14,686	(4,511)	Net of tax
Other post-retirement benefit obligations:				
Pension obligations	422	—	—	Other, net
	108	—	—	Income tax expense
	314	—	—	Net of tax
Post-retirement healthcare obligations	3,564	3,587	3,481	Other, net
	909	915	888	Income tax expense
	2,655	2,672	2,593	Net of tax
Retirement restoration plan	(22)	(6)	(27)	Other, net
	(6)	(2)	(7)	Income tax benefit
	(16)	(4)	(20)	Net of tax
Total reclassifications for the period	\$ 1,013	\$ 17,354	\$ (1,938)	

Accumulated other comprehensive income in the equity section of our consolidated balance sheets includes:

	Years Ended
	2020
	(In thousands)
Foreign currency translation adjustment	\$ 2,688
Unrealized loss on pension obligations	(248)
Unrealized gain on post-retirement benefit obligations	11,311
Unrealized gain (loss) on hedging instruments	(288)
Accumulated other comprehensive income	\$ 13,463

**Pension and Post-retirement
Plans**

**12 Months Ended
Dec. 31, 2020**

**Pension and Other
Postretirement Benefits Cost
(Reversal of Cost) [Abstract]**

**Pension and Post-retirement
Plans**

Pension and Post-retirement Plans Certain PCLI employees are participants in union and non-union pension plans which are frozen and employees will be transitioned to a defined contribution plan. Accordingly, these changes have been accounted for and contractual termination benefits. In addition, Sonneborn employees in the Netherlands have a defined benefit pension plan which is frozen and all plan participants became inactive in 2016. The plan assets are in the form of a third-party insurance contract on the assets held by the insurer and insures a value which approximates the accrued benefits related to the plan's accumulated obligation. At that time, a new plan was established to provide future indexation benefits to participants who had accrued expiring arrangements.

The following table sets forth the changes in the benefit obligation and plan assets of our PCLI pension plans for the years ended December 31, 2020 and 2019, and the Sonneborn Netherlands plans for the period February 1, 2019 to December 31, 2019 and for the year ended December 31, 2020:

	Years Ended Decem	
	2020	
	(In thousands)	
Change in plans' benefit obligations		
Pension plans benefit obligation - beginning of period	\$	110,410 \$
Acquisition of Sonneborn		—
Service cost		3,929
Interest cost		2,772
Actuarial loss		8,391
Benefits paid		(1,558)
Curtailement		(4,078)
Contractual termination benefits		915
Transfer from other plans		479
Foreign currency exchange rate changes		5,360
Pension plans benefit obligation - end of year	\$	126,620 \$
Change in pension plans assets		
Fair value of plans assets - beginning of period	\$	105,358 \$
Acquisition of Sonneborn		—
Return on plans assets		10,936
Employer contributions		3,487
Benefits paid		(1,558)
Transfer payments		479
Foreign currency exchange rate changes		5,248
Fair value of plans assets - end of year	\$	123,950 \$
Funded status		
Under-funded balance	\$	(2,670) \$
Amounts recognized in consolidated balance sheets		
Other long-term liabilities	\$	(2,670) \$
Amounts recognized in accumulated other comprehensive income		
Cumulative actuarial loss	\$	1,658 \$

The accumulated benefit obligation was \$119.2 million and \$100.5 million at December 31, 2020 and 2019, respectively, which are also the means of the pension plans.

The following tables provide information regarding pension plans with a projected benefit obligation and accumulated benefit obligation in excess of plan assets:

	December 31,	
	2020	2019
	(In thousands)	
Projected benefit obligation	\$ 79,866	\$ 100,000
Fair value of plan assets	\$ 77,035	\$ 100,000

	December 31,	
	2020	2019
	(In thousands)	
Accumulated benefit obligation	\$ 41,654	\$ 41,654
Fair value of plan assets	\$ 39,105	\$ 39,105

The weighted average assumptions used to determine end of period benefit obligations for the PCLI plans for the years ended December 31, 2020 and 2019 were discount rates of 2.60% and 3.10%, respectively, and rates of future compensation increases of 3.00% for each year. For the years ended December 31, 2020 and 2019, the weighted average assumption used to determine end of period benefit obligations for Sonneborn were discount rates of 1.10% and 1.50%, respectively.

Net periodic pension expense consisted of the following components:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Service cost - benefit earned during the period	\$ 3,929	\$ 4,135	\$ 4,135
Interest cost on projected benefit obligations	2,772	3,026	3,026
Expected return on plans assets	(4,578)	(3,840)	(3,840)
Amortization of gain	(422)	—	—
Curtailement	(137)	—	—
Contractual termination benefits	915	—	—
Net periodic pension expense	<u>\$ 2,479</u>	<u>\$ 3,321</u>	<u>\$ 3,321</u>

The components, other than service cost, of our net periodic pension expense are recorded in Other, net in our consolidated statements of income.

At December 31, 2020 and 2019, PCLI's pension plans assets were allocated as follows:

Asset Category	Percentage of Plan Assets at Year End	
	December 31, 2020	December 31, 2019
Canadian equities	42 %	47 %
Fixed income	57 %	29 %
Real estate and infrastructure	— %	14 %
Other	1 %	9 %
Cash	— %	1 %
Total	<u>100 %</u>	<u>100 %</u>

At December 31, 2020, these fair values are based on Level 2 inputs. See Note 6 for additional information on Level 2 inputs.

The expected long-term rate of return on plan assets is 3.00% for the PCLI pension plans, and is based on a target investment mix of 16% Canadian equities, 5% real estate and infrastructure and 4% other.

We expect to contribute \$3.5 million to the PCLI and Sonneborn pensions plans in 2021. Benefit payments, which reflect expected future service costs, are expected to be as follows: \$2.1 million in 2021, \$2.5 million in 2022, \$3.0 million in 2023, \$3.3 million in 2024, \$3.8 million in 2025 and \$24.5 million in 2026 to 2030.

Post-retirement Healthcare Plans

We have post-retirement healthcare and other benefits plans that are available to certain of our employees who satisfy certain age and service requirements. These plans are unfunded and provide differing levels of healthcare benefits dependent upon hire date and work location. Not all of our employees are covered by these plans as of December 31, 2020.

The following table sets forth the changes in the benefit obligation and plan assets of our post-retirement healthcare plans for the years ended Dec

	Years Ended	
	2020	
	(In the	
Change in plans' benefit obligation		
Post-retirement plans' benefit obligation - beginning of year	\$	31,273
Sonneborn acquisition		—
Service cost		1,616
Interest cost		870
Benefits paid		(1,766)
Actuarial loss		1,131
Foreign currency exchange rate changes		354
Post-retirement plans' benefit obligation - end of year	\$	33,478
Change in plan assets		
Fair value of plan assets - beginning of year	\$	—
Employer contributions		1,742
Participant contributions		24
Benefits paid		(1,766)
Fair value of plan assets - end of year	\$	—
Funded status		
Under-funded balance	\$	(33,478)
Amounts recognized in consolidated balance sheets		
Accrued liabilities	\$	(1,946)
Other long-term liabilities		(31,532)
	\$	(33,478)
Amounts recognized in accumulated other comprehensive income		
Cumulative actuarial loss	\$	(1,523)
Prior service credit		18,511
Total	\$	16,988

Benefit payments, which reflect expected future service, are expected to be paid as follows: \$1.9 million in 2021; \$1.9 million in 2022; \$1.9 million in 2023; \$1.9 million in 2024; \$1.9 million in 2025; and \$9.2 million in 2026 through 2030.

The weighted average assumptions used to determine end of period benefit obligations:

	December 31,
	2020
Discount rate	1.88%-2.60%
Current health care trend rate	5.50%-6.00%
Ultimate health care trend rate	4.50%-5.00%
Year rate reaches ultimate trend rate	2022-2023

Net periodic post-retirement credit consisted of the following components:

	Years Ended December	
	2020	2019
	(In thousands)	
Service cost – benefit earned during the year	\$ 1,616	\$ 1,58
Interest cost on projected benefit obligations	870	1,02
Amortization of prior service credit	(3,481)	(3,48
Amortization of gain	(83)	(10
Net periodic post-retirement credit	\$ (1,078)	\$ (97

The components, other than service cost, of our net periodic post-retirement credit are recorded in Other, net in our consolidated statements of income. These components are amortized over the average remaining effective period to obtain full benefit eligibility for participants.

Retirement Restoration Plan

We have an unfunded retirement restoration plan that provides for additional payments from us so that total retirement plan benefits for certain employees are at the levels provided in the retirement plan before the application of Internal Revenue Code limitations. We expensed \$0.1 million for each of the years ended December 31, 2020, 2019 and 2018 in connection with this plan. The accrued liability reflected in the consolidated balance sheets was \$2.5 million and \$2.4 million as of December 31, 2020 and 2019, respectively. As of December 31, 2020, the projected benefit obligation under this plan was \$2.5 million. Annual benefit payments of \$0.1 million are to be paid through 2030, which reflect expected future service.

Defined Contribution Plans

We have defined contribution plans that cover substantially all qualified employees in the U.S., Canada and the Netherlands. Our contributions are based on eligible compensation and years of service. We also partially match our employees' contributions. We expensed \$43.3 million, \$30.3 million and \$28.3 million for the years ended December 31, 2020, 2019 and 2018, respectively, in connection with these plans.

Contingencies And Contractual Commitments

**12 Months Ended
Dec. 31, 2020**

[Commitments and Contingencies Disclosure](#)

[\[Abstract\]](#)

[Contingencies and Contractual](#) Contingencies and Contractual Commitments

[Commitments](#)

We are a party to various litigation and legal proceedings which we believe, based on advice of counsel, will not either individually or in the aggregate have a materially adverse effect on our financial condition, results of operations or cash flows.

We filed a business interruption claim with our insurance carriers related to a loss at our Woods Cross Refinery that occurred in the first quarter 2018. During the year ended December 31, 2020, we reached a final settlement agreement regarding the amounts owed to us pursuant to our business interruption coverage, and we recognized a gain of \$81.0 million, which is reflected in our Corporate and Other segment.

During 2017, 2018 and 2019, the EPA granted the Cheyenne Refinery and Woods Cross Refinery each a one-year small refinery exemption from the RFS program requirements for the 2016, 2017 and 2018, respectively, calendar years. As a result, the Cheyenne Refinery's and Woods Cross Refinery's gasoline and diesel production are not subject to the RVO for the respective years. Upon each exemption granted, we increased our inventory of RINs and reduced our cost of products sold.

Various subsidiaries of HollyFrontier are currently intervenors in three lawsuits brought by renewable fuel interest groups against the EPA in federal courts alleging violations of the RFS under the Clean Air Act and challenging the EPA's handling of small refinery exemptions. We intervened to vigorously defend the EPA's position on small refinery exemptions because we believe the EPA correctly applied applicable law to the matters at issue. On January 24, 2020, in the first of these lawsuits, the U.S. Court of Appeals for the Tenth Circuit vacated the small refinery exemptions granted to two of our refineries for 2016 and remanded the case to the EPA for further proceedings. On April 15, 2020, the Tenth Circuit entered its mandate, remanding the matter back to the EPA. On September 4, 2020, various subsidiaries of HollyFrontier filed a Petition for a Writ of Certiorari with the U.S. Supreme Court appealing the Tenth Circuit decision. On January 8, 2021, the U.S. Supreme Court granted HollyFrontier's petition. We anticipate a decision from the Supreme Court in June 2021. We expect that we will not know what steps the EPA will take with respect to our 2016 small refinery exemptions, or how the case will impact future small refinery exemptions until after the Supreme Court's decision in this matter. The second lawsuit is before the Tenth Circuit. The matter is fully briefed and remains pending before that court. The third lawsuit is before the DC Circuit. Briefing of the issues before the court commenced on December 7, 2020; however, in light of the Supreme Court's decision to hear HollyFrontier's appeal of the Tenth Circuit decision, this case was stayed pending a decision from the Supreme Court. In December 2020, various subsidiaries of HollyFrontier also filed a petition for review in the DC Circuit challenging the EPA's denial of small refinery exemption petitions for years prior to 2016. The petition was consolidated with petitions from eight other refining companies challenging the same decision. In light of the Supreme Court's decision to hear HollyFrontier's appeal of the Tenth Circuit decision, this case was stayed pending a decision from the Supreme Court. We are unable to estimate the costs we may incur, if any, at this time. It is too early to assess

how the matter currently on appeal to the U.S. Supreme Court will impact future small refinery exemptions or whether the remaining cases are expected to have any impact on us.

We have been party to multiple proceedings before the Federal Energy Regulatory Commission (“FERC”) challenging the rates charged by SFPP, L.P. (“SFPP”) on its East Line pipeline facilities from El Paso, Texas to Phoenix, Arizona. In March 2018, FERC ruled that SFPP, as a master limited partnership, was prohibited from including an allowance for investor income taxes in the cost of service underlying its East Line rates. We reached a negotiated settlement with SFPP that provides for a payment to us of \$51.5 million. FERC approved the settlement on December 31, 2020 subject to a rehearing period that resulted in a settlement effective date of February 2, 2021. Under the terms of the settlement agreement, SFPP made the \$51.5 million payment to us on February 10, 2021. As of December 31, 2020, we had no enforceable right to collect any of the settlement. Accordingly, recognition of a gain occurred when the uncertainties were resolved, and we held an enforceable right to collect on February 2, 2021.

Contractual Commitments

We have various long-term agreements (entered in the normal course of business) to purchase crude oil, natural gas, feedstocks and other resources to ensure we have adequate supplies to operate our refineries. The substantial majority of our purchase obligations are based on market prices or rates. These contracts expire in 2021 through 2025.

We also have long-term agreements with third parties for the transportation and storage of crude oil, natural gas and feedstocks to our refineries and for terminal and storage services that expire in 2021 through 2039. At December 31, 2020, the minimum future transportation and storage fees under transportation agreements having terms in excess of one year are as follows:

	(In thousands)
2021	\$ 129,661
2022	113,288
2023	113,360
2024	112,884
2025	113,669
Thereafter	580,889
Total	<u>\$ 1,163,751</u>

Transportation and storage costs incurred under these agreements totaled \$139.0 million, \$144.8 million and \$143.3 million for the years ended December 31, 2020, 2019 and 2018, respectively. These amounts do not include contractual commitments under our long-term transportation agreements with HEP, as all transactions with HEP are eliminated in these consolidated financial statements.

Segment Information

12 Months Ended
Dec. 31, 2020

[Segment Reporting](#)

[\[Abstract\]](#)

[Segment Information](#)

Segment Information

Our operations are organized into three reportable segments: Refining, Lubricants and Specialty Products and HEP. Our operations that are not reportable 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 the Corporate, Other and Eliminations.

The Refining segment represents the operations of the El Dorado, Tulsa, Navajo and Woods Cross Refineries and HFC Asphalt (aggregated). Refining activities involve the purchase and refining of crude oil and wholesale and branded marketing of refined products, such as gasoline, diesel and other petroleum products are primarily marketed in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. HFC Asphalt asphalt terminals in Arizona, New Mexico and Oklahoma. The Refining segment also included the operations of the Cheyenne Refinery until it permanently closed its refining operations during the third quarter of 2020.

The Lubricants and Specialty Products segment involves PCLI's production operations, located in Mississauga, Ontario, that includes lubricants, white oils, specialty products and finished lubricants, and the operations of our Petro-Canada Lubricants business that includes the marketing of lubricants through 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. Red Giant Oil, one of the largest suppliers of locomotive engine oil in North America. Also, effective with our acquisition that closed February 2020, the Specialty Products segment includes Sonneborn, a producer of specialty hydrocarbon chemicals such as white oils, petrolatums and waxes with operations in the United States and Europe.

The HEP segment includes all of the operations of HEP, which owns and operates logistics and refinery assets consisting of petroleum products, terminals, tankage, loading rack facilities and refinery processing units in the Mid-Continent, Southwest and Rocky Mountain geographic regions. The HEP segment also includes a 75% ownership interest in UNEV (a consolidated subsidiary of HEP) and 50% ownership interest in each of the Osage Pipeline and Cushing Connect. Revenues from the HEP segment are earned through transactions with unaffiliated parties for pipeline transportation operations as well as revenues relating to pipeline transportation services provided for our refining operations. Due to certain basis differences, the HEP segment may not agree to amounts reported in HEP's periodic public filings.

The accounting policies for our segments are the same as those described in the summary of significant accounting policies (see Note 1).

	Refining	Lubricants and Specialty Products	HEP	Corporate, Other Eliminations ⁽²⁾
(In thousands)				
Year Ended December 31, 2020				
Sales and other revenues:				
Revenues from external customers	\$ 9,286,658	\$ 1,792,745	\$ 98,039	\$
Intersegment revenues	252,531	10,465	399,809	(66,000)
	\$ 9,539,189	\$ 1,803,210	\$ 497,848	\$ (66,000)
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 8,439,680	\$ 1,271,287	\$ —	\$ (55,000)
Lower of cost or market inventory valuation adjustment	\$ 82,214	\$ —	\$ —	\$ (1,000)
Operating expenses	\$ 988,045	\$ 216,068	\$ 147,692	\$ (5,000)
Selling, general and administrative expenses	\$ 127,298	\$ 157,816	\$ 9,989	\$ 1,000
Depreciation and amortization	\$ 324,617	\$ 80,656	\$ 95,445	\$ 2,000
Goodwill and long-lived asset impairments ⁽¹⁾	\$ 241,760	\$ 286,575	\$ 16,958	\$
Income (loss) from operations	\$ (664,425)	\$ (209,192)	\$ 227,764	\$ (8,000)
Earnings of equity method investments	\$ —	\$ —	\$ 6,647	\$
Capital expenditures	\$ 152,726	\$ 32,473	\$ 59,283	\$ 8,000
Total assets	\$ 6,203,847	\$ 1,864,313	\$ 2,198,478	\$ 1,240,000

	Refining	Lubricants and Specialty Products	HEP	Corporate, Other Eliminations
(In thousands)				
Year Ended December 31, 2019				
Sales and other revenues:				
Revenues from external customers	\$ 15,284,110	\$ 2,081,221	\$ 121,027	\$
Intersegment revenues	312,678	11,307	411,750	(735,733)
	\$ 15,596,788	\$ 2,092,528	\$ 532,777	\$ (735,733)
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)				
Lower of cost or market inventory valuation adjustment	\$ (119,775)	\$ —	\$ —	\$ (642,733)
Operating expenses	\$ 1,095,488	\$ 231,523	\$ 161,996	\$ (94,733)
Selling, general and administrative expenses	\$ 120,518	\$ 168,595	\$ 10,251	\$ 54,733
Depreciation and amortization	\$ 309,932	\$ 88,781	\$ 96,706	\$ 14,733
Goodwill impairment	\$ —	\$ 152,712	\$ —	\$
Income (loss) from operations	\$ 1,210,119	\$ (129,119)	\$ 263,824	\$ (67,733)
Earnings of equity method investments	\$ —	\$ —	\$ 5,180	\$
Capital expenditures	\$ 199,002	\$ 40,997	\$ 30,112	\$ 2,733
Total assets	\$ 7,189,094	\$ 2,223,418	\$ 2,205,437	\$ 54,733
Year Ended December 31, 2018				
Sales and other revenues:				
Revenues from external customers	\$ 15,806,304	\$ 1,799,506	\$ 108,412	\$
Intersegment revenues	370,259	13,197	397,808	(781,733)
	\$ 16,176,563	\$ 1,812,703	\$ 506,220	\$ (780,733)
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)				
Lower of cost or market inventory valuation adjustment	\$ 136,305	\$ —	\$ —	\$ (691,733)
Operating expenses	\$ 1,055,209	\$ 167,820	\$ 146,430	\$ (83,733)
Selling, general and administrative expenses	\$ 113,641	\$ 143,750	\$ 11,041	\$ 2,733
Depreciation and amortization	\$ 284,439	\$ 43,255	\$ 98,492	\$ 1,733
Income (loss) from operations	\$ 1,336,120	\$ 76,338	\$ 250,257	\$ (38,733)
Earnings of equity method investments	\$ —	\$ —	\$ 5,825	\$
Capital expenditures	\$ 202,791	\$ 37,448	\$ 54,141	\$ 10,733
Total assets	\$ 6,465,155	\$ 1,506,209	\$ 2,142,027	\$ 88,733

(1) The results of our HEP reportable segment for the year ended December 31, 2020 include a long-lived asset impairment charge attributed to HEP's logistics as

(2) For the year ended December 31, 2020, Corporate and Other includes \$3.9 million of operating expenses and \$65.1 million of capital expenditures related to the diesel units. Also, for the year ended December 31, 2020, Corporate and Other includes \$14.0 million of decommissioning and other shutdown costs related to the diesel units. In addition, for the year ended December 31, 2020, Corporate and Other includes \$11.4 million in other operating costs related to our Cheyenne facility.

Quarterly Information
(Unaudited)

[Quarterly Financial
Information Disclosure
\[Abstract\]](#)
[Quarterly Information
\(Unaudited\)](#)

12 Months Ended
Dec. 31, 2020

Quarterly Information (Unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
(In thousands, except per share data)				
Year Ended December 31, 2020				
Sales and other revenues	\$ 3,400,545	\$ 2,062,930	\$ 2,819,400	\$ 2,900,768
Operating costs and expenses	\$ 3,810,847	\$ 2,252,906	\$ 2,846,618	\$ 3,007,013
Loss from operations ⁽¹⁾⁽²⁾	\$ (410,302)	\$ (189,976)	\$ (27,218)	\$ (106,244)
Income (loss) before income taxes	\$ (455,452)	\$ (181,318)	\$ 27,918	\$ (138,194)
Net loss attributable to HollyFrontier stockholders	\$ (304,623)	\$ (176,677)	\$ (2,401)	\$ (117,747)
Net loss per share - basic	\$ (1.88)	\$ (1.09)	\$ (0.01)	\$ (0.73)
Net loss per share - diluted	\$ (1.88)	\$ (1.09)	\$ (0.01)	\$ (0.73)
Dividends per common share	\$ 0.35	\$ 0.35	\$ 0.35	\$ 0.35
Average number of shares of common stock outstanding:				
Basic	161,873	161,889	162,015	162,151
Diluted	161,873	161,889	162,015	162,151
Year Ended December 31, 2019				
Sales and other revenues	\$ 3,897,247	\$ 4,782,615	\$ 4,424,828	\$ 4,381,888
Operating costs and expenses	\$ 3,507,906	\$ 4,450,874	\$ 3,998,049	\$ 4,252,703
Income from operations ⁽³⁾⁽⁴⁾	\$ 389,341	\$ 331,741	\$ 426,779	\$ 129,185
Income before income taxes	\$ 363,991	\$ 306,153	\$ 401,001	\$ 100,355
Net income attributable to HollyFrontier stockholders	\$ 253,055	\$ 196,915	\$ 261,813	\$ 60,603
Net income per share - basic	\$ 1.48	\$ 1.16	\$ 1.60	\$ 0.37
Net income per share - diluted	\$ 1.47	\$ 1.15	\$ 1.58	\$ 0.37
Dividends per common share	\$ 0.33	\$ 0.33	\$ 0.33	\$ 0.33
Average number of shares of common stock outstanding:				
Basic	170,851	169,356	163,676	161,398
Diluted	172,239	170,547	165,011	162,898

(1) For 2020, loss from operations reflects non-cash lower of cost or market inventory valuation charges of \$560.5 million for the first quarter, and benefits of \$149.2 million for the second, third and fourth quarters, respectively.

(2) For 2020, loss from operations reflects non-cash long-lived asset impairment charges of \$436.9 million in the second quarter and goodwill and long-lived asset impairment charges of \$108.4 million in the fourth quarter.

(3) For 2019, income from operations reflects non-cash lower of cost or market inventory valuation benefits of \$232.3 million for the first quarter, and charges of \$30.7 million for the second, third and fourth quarters, respectively.

(4) For 2019, income from operations reflects goodwill impairment charges of \$152.7 million in the second quarter.

**Description of Business and
Summary of Significant
Accounting Policies (Policies)**

12 Months Ended

Dec. 31, 2020

**Organization, Consolidation
and Presentation of
Financial Statements**
[Abstract]

Description of Business

Description of Business: References herein to HollyFrontier Corporation (“HollyFrontier”) include HollyFrontier and its consolidated subsidiaries. In accordance with the Securities and Exchange Commission’s (“SEC”) “Plain English” guidelines, this Annual Report on Form 10-K has been written in the first person. In these financial statements, the words “we,” “our,” “ours” and “us” refer only to HollyFrontier and its consolidated subsidiaries or to HollyFrontier or an individual subsidiary and not to any other person, with certain exceptions. Generally, the words “we,” “our,” “ours” and “us” include Holly Energy Partners, L.P. (“HEP”) and its subsidiaries as consolidated subsidiaries of HollyFrontier, unless when used in disclosures of transactions or obligations between HEP and HollyFrontier or its other subsidiaries. These financial statements contain certain disclosures of agreements that are specific to HEP and its consolidated subsidiaries and do not necessarily represent obligations of HollyFrontier. When used in descriptions of agreements and transactions, “HEP” refers to HEP and its consolidated subsidiaries.

We are an independent petroleum refiner and marketer that produces high-value light products such as gasoline, diesel fuel, jet fuel, specialty lubricant products and specialty and modified asphalt. We own and operate petroleum refineries that serve markets throughout the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States. In addition, we produce base oils and other specialized lubricants in the United States, Canada and the Netherlands, with retail and wholesale marketing of our products through a global sales network with locations in Canada, the United States, Europe, China and Latin America.

As of December 31, 2020, we:

- owned and operated a petroleum refinery in El Dorado, Kansas (the “El Dorado Refinery”), two refinery facilities located in Tulsa, Oklahoma (collectively, the “Tulsa Refineries”), a refinery in Artesia, New Mexico that is operated in conjunction with crude oil distillation and vacuum distillation and other facilities situated 65 miles away in Lovington, New Mexico (collectively, the “Navajo Refinery”) and a refinery in Woods Cross, Utah (the “Woods Cross Refinery”);
- owned a facility in Cheyenne, Wyoming, which operated as a petroleum refinery until early August 2020, at which time its assets began to be converted to renewable diesel production (the “Cheyenne Refinery”);
- owned and operated Petro-Canada Lubricants Inc. (“PCLI”) located in Mississauga, Ontario, which produces base oils and other specialty lubricant products;
- owned and operated Sonneborn (as defined below) with manufacturing facilities in Petrolia, Pennsylvania and the Netherlands, which produce specialty lubricant products, such as white oils, petrolatums and waxes;

- owned and operated Red Giant Oil Company LLC (“Red Giant Oil”), which supplies locomotive engine oil and has storage and distribution facilities in Iowa and Wyoming, along with a blending and packaging facility in Texas;
- owned and operated HollyFrontier Asphalt Company LLC (“HFC Asphalt”), which operates various asphalt terminals in Arizona, New Mexico and Oklahoma; and
- owned a 57% limited partner interest and a non-economic general partner interest in HEP, a variable interest entity (“VIE”). HEP owns and operates logistic assets consisting of petroleum product and crude oil pipelines, terminals, tankage, loading rack facilities and refinery processing units that principally support our refining and marketing operations in the Mid-Continent, Southwest and Rocky Mountain geographic regions of the United States.

In the third quarter of 2020, we permanently ceased petroleum refining operations at our Cheyenne Refinery and subsequently began converting certain assets at our Cheyenne Refinery to renewable diesel production. This decision was primarily based on a positive outlook in the market for renewable diesel and the expectation that future free cash flow generation at our Cheyenne Refinery would be challenged due to lower gross margins resulting from the economic impact of the COVID-19 pandemic and compressed crude differentials due to dislocations in the crude oil market. Additional factors included uncompetitive operating and maintenance costs forecasted for our Cheyenne Refinery and the anticipated loss of the Environmental Protection Agency’s (“EPA”) small refinery exemption.

During the second quarter of 2020, we recorded long-lived asset impairment charges of \$232.2 million related to our Cheyenne Refinery asset group. In connection with the cessation of petroleum refining operations at our Cheyenne Refinery, we recognized \$24.7 million in decommissioning expense for the year ended December 31, 2020. In addition, for the year ended December 31, 2020, we recorded a reserve of \$9.0 million against our repair and maintenance supplies inventory and \$3.8 million in employee severance costs related to the conversion of our Cheyenne Refinery to renewable diesel production. These decommissioning, inventory reserve and severance costs were recognized in operating expenses, of which \$24.8 million was recorded in our Refining segment and \$12.7 million was recorded in our Corporate and Other segment.

During the second quarter of 2020, we also initiated and completed a corporate restructuring. As a result of this restructuring, we recorded \$3.7 million in employee severance costs, which were recognized primarily as operating expenses in our Refining segment and selling, general and administrative expenses in our Corporate and Other segment.

On November 12, 2018, we entered into an equity purchase agreement to acquire 100% of the issued and outstanding capital stock of Sonneborn US Holdings Inc. and 100% of the membership rights in Sonneborn Coöperatief U.A. (collectively, “Sonneborn”). The acquisition closed on February 1, 2019.

On July 10, 2018, we entered into a definitive agreement to acquire Red Giant Oil, a privately-owned lubricants company. The acquisition closed on August 1, 2018.

See Note 2 for additional information on these acquisitions.

[Principles of Consolidation](#)

Principles of Consolidation: Our consolidated financial statements include our accounts and the accounts of partnerships and joint ventures that we control through an ownership interest greater than 50% or through a controlling financial

interest with respect to variable interest entities. All significant intercompany transactions and balances have been eliminated.

Variable Interest Entity

Variable Interest Entities: HEP is a VIE as defined under U.S. generally accepted accounting principles (“GAAP”). A VIE is a legal entity whose equity owners do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support or, as a group, the equity holders lack the power, through voting rights, to direct the activities that most significantly impact the entity's financial performance, the obligation to absorb the entity's expected losses or rights to expected residual returns. As the general partner of HEP, we have the sole ability to direct the activities of HEP that most significantly impact HEP's financial performance, and therefore as HEP's primary beneficiary, we consolidate HEP.

In 2019, HEP Cushing LLC, a wholly-owned subsidiary of HEP, and Plains Marketing, L.P., a wholly-owned subsidiary of Plains All American Pipeline, L.P. (“Plains”), formed a 50/50 joint venture, Cushing Connect Pipeline & Terminal LLC. Cushing Connect Pipeline & Terminal LLC and its two subsidiaries, Cushing Connect Pipeline and Cushing Connect Terminal, are each VIE's because they do not have sufficient equity at risk to finance their activities without additional financial support. HEP is the primary beneficiary of two of these entities as HEP is constructing and will operate the Cushing Connect Pipeline, and HEP has more ability to direct the activities that most significantly impact the financial performance of Cushing Connect Pipeline & Terminal LLC and Cushing Connect Pipeline. Therefore, HEP consolidates these two entities. HEP is not the primary beneficiary of Cushing Connect Terminal, which HEP accounts for using the equity method of accounting.

Use of Estimates

Use of Estimates: The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash Equivalents

Cash Equivalents: We consider all highly liquid instruments with a maturity of three months or less at the date of purchase to be cash equivalents. Cash equivalents are stated at cost, which approximates market value and are primarily invested in highly-rated instruments issued by government or municipal entities with strong credit standings.

Balance Sheet Offsetting

Balance Sheet Offsetting: We purchase and sell inventories of crude oil with certain same-parties that are net settled in accordance with contractual net settlement provisions. Our policy is to present such balances on a net basis since it presents our accounts receivables and payables consistent with our contractual settlement provisions.

Accounts Receivable

Accounts Receivable: Our accounts receivable consist of amounts due from customers that are primarily companies in the petroleum industry. Credit is extended based on our evaluation of the customer's financial condition, and in certain circumstances collateral, such as letters of credit or guarantees, is required. We reserve for doubtful accounts based on our historical loss experience as well as expected credit losses from current economic conditions and management's expectations of future economic conditions. Credit losses are charged to the allowance for doubtful accounts when an account is deemed uncollectible. Our allowance for doubtful accounts was \$3.4 million at December 31, 2020 and \$4.5 million at December 31, 2019.

Accounts receivable attributable to crude oil resales generally represent the sale of excess crude oil to other purchasers and / or users in cases when our crude oil supplies are in excess of our immediate needs as well as certain reciprocal buy / sell exchanges of crude oil. At times we enter into such buy / sell exchanges to facilitate the delivery of quantities to certain locations. In many

cases, we enter into net settlement agreements relating to the buy / sell arrangements, which may mitigate credit risk.

Inventories

Inventories: Inventories related to our refining operations are stated at the lower of cost, using the last-in, first-out (“LIFO”) method for crude oil and unfinished and finished refined products, or market. Cost, consisting of raw material, transportation and conversion costs, is determined using the LIFO inventory valuation methodology and market is determined using current replacement costs. Under the LIFO method, the most recently incurred costs are charged to cost of sales and inventories are valued at the earliest acquisition costs. In periods of rapidly declining prices, LIFO inventories may have to be written down to market value due to the higher costs assigned to LIFO layers in prior periods. In addition, the use of the LIFO inventory method may result in increases or decreases to cost of sales in years that inventory volumes decline as the result of charging cost of sales with LIFO inventory costs generated in prior periods. An actual valuation of inventory under the LIFO method is made at the end of each year based on the inventory levels at that time. Accordingly, interim LIFO calculations are based on management’s estimates of expected year-end inventory levels and are subject to the final year-end LIFO inventory valuation.

Inventories of our Petro-Canada Lubricants and Sonneborn businesses are stated at the lower of cost, using the first-in, first-out (“FIFO”) method, or net realizable value.

Inventories consisting of process chemicals, materials and maintenance supplies and renewable identification numbers (“RINs”) are stated at the lower of weighted-average cost or net realizable value.

Leases: Effective January 1, 2019, we adopted Accounting Standards Update (“ASU”) 2016-02, “Leases” (Topic 842). At inception, we determine if an arrangement is or contains a lease. Right-of-use (“ROU”) assets represent our right to use an underlying asset for the lease term and lease liabilities represent our payment obligation under the leasing arrangement. ROU assets and lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. We use our estimated incremental borrowing rate (“IBR”) to determine the present value of lease payments as most of our leases do not contain an implicit rate. Our IBR represents the interest rate which we would pay to borrow, on a collateralized basis, an amount equal to the lease payments over a similar term in a similar economic environment. We use the implicit rate when readily determinable.

Operating leases are recorded in operating lease right-of-use assets and current and noncurrent operating lease liabilities on our consolidated balance sheet. Finance leases are included in properties, plants and equipment and accrued liabilities and other long-term liabilities on our consolidated balance sheet.

Our lease term includes an option to extend the lease when it is reasonably certain that we will exercise that option. Leases with a term of 12 months or less are not recorded on our balance sheet. For certain equipment leases, we apply a portfolio approach for the operating lease ROU assets and liabilities. Also, as a lessee, we separate non-lease components that are identifiable and exclude them from the determination of net present value of lease payment obligations. In addition, HEP, as a lessor, does not separate the non-lease (service) component in contracts in which the lease component is the dominant component. HEP treats these combined components as an operating lease.

Derivative Instruments

Derivative Instruments: All derivative instruments are recognized as either assets or liabilities in our consolidated balance sheets and are measured at fair value. Changes in the derivative

instrument's fair value are recognized in earnings unless specific hedge accounting criteria are met. See Note 14 for additional information.

Properties, plants and equipment

Properties, Plants and Equipment: Properties, plants and equipment are stated at cost.

Depreciation is provided by the straight-line method over the estimated useful lives of the assets, primarily 15 to 32 years for refining, pipeline and terminal facilities, 10 to 40 years for buildings and improvements, 5 to 30 years for other fixed assets and 5 years for vehicles.

Asset Retirement Obligations

Asset Retirement Obligations: We record legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development and / or the normal operation of long-lived assets. The fair value of the estimated cost to retire a tangible long-lived asset is recorded as a liability with the associated retirement costs capitalized as part of the asset's carrying amount in the period in which it is incurred and when a reasonable estimate of the fair value of the liability can be made. If a reasonable estimate cannot be made at the time the liability is incurred, we record the liability when sufficient information is available to estimate the liability's fair value. Certain of our refining assets have no recorded liability for asset retirement obligations since the timing of any retirement and related costs are currently indeterminable. Our asset retirement obligations were \$42.6 million and \$35.9 million at December 31, 2020 and 2019, respectively, which are included in "Other long-term liabilities" in our consolidated balance sheets. Accretion expense was insignificant for the years ended December 31, 2020, 2019 and 2018.

Intangibles and Goodwill

Intangibles, Goodwill and Long-lived Assets: Intangible assets are assets (other than financial assets) that lack physical substance, and goodwill represents the excess of the cost of an acquired entity over the fair value of the assets acquired and liabilities assumed. Goodwill acquired in a business combination and intangibles with indefinite useful lives are not amortized, whereas intangible assets with finite useful lives are amortized on a straight-line basis. Goodwill and intangible assets that are not subject to amortization are tested for impairment annually or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Our goodwill impairment testing first entails either a quantitative assessment or an optional qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If we determine that based on the qualitative factors that it is more likely than not that the carrying amount of the reporting unit is greater than its fair value, a quantitative test is performed in which we estimate the fair value of the related reporting unit. If the carrying amount of a reporting unit exceeds its fair value, the goodwill of that reporting unit is impaired, and we measure goodwill impairment as the excess of the carrying amount of the reporting unit over the related fair value. The carrying amount of our intangible assets and goodwill may fluctuate from period to period due to the effects of foreign currency translation adjustments on goodwill and intangible assets assigned to our Lubricants and Specialty Products segment.

For purposes of long-lived asset impairment evaluation, we have grouped our long-lived assets as follows: (i) our refinery asset groups, which include certain HEP logistics assets, (ii) our Lubricants and Specialty Products asset groups and (iii) our HEP asset groups, which comprises HEP assets not included in our refinery asset groups. These asset groups represent the lowest level for which independent cash flows can be identified. Our long-lived assets are evaluated for impairment by identifying whether indicators of impairment exist and if so, assessing whether the long-lived assets are recoverable from estimated future undiscounted cash flows. The actual amount of impairment loss measured, if any, is equal to the amount by which the asset group's carrying value exceeds its fair value.

See Note 11 for additional information regarding our goodwill and long-lived assets including impairment charges recorded during the years ended December 31, 2020 and 2019.

Investments in Joint Ventures

Equity Method Investments: We account for investments in which we have a noncontrolling interest, yet have significant influence over the entity, using the equity method of accounting, whereby we record our pro-rata share of earnings and contributions to and distributions from joint ventures as adjustments to our investment balance. HEP has a 50% interest in Osage Pipe Line Company, LLC, the owner of a pipeline running from Cushing, Oklahoma to El Dorado, Kansas (the “Osage Pipeline”) and a 50% interest in Cheyenne Pipeline, LLC, the owner of a pipeline running from Fort Laramie, Wyoming to Cheyenne, Wyoming (the “Cheyenne Pipeline”). HEP also accounts for Cushing Connect Terminal, a subsidiary of the Cushing Connect Pipeline & Terminal LLC joint venture, using the equity method of accounting, as HEP does not have the ability to direct the activities that most significantly impact the entity. As of December 31, 2020, HEP's underlying equity and recorded investment balances in the joint ventures are \$93.2 million and \$120.5 million respectively. The differences are being amortized as adjustments to HEP's pro-rata share of earnings in the joint ventures.

Revenue Recognition

Revenue Recognition: Revenues on refined product and excess crude oil sales are recognized when delivered (via pipeline, in-tank or rack) and the customer obtains control of such inventory, which is typically when title passes and the customer is billed. All revenues are reported inclusive of shipping and handling costs billed and exclusive of any taxes billed to customers. Shipping and handling costs incurred are reported as cost of products sold.

Our lubricants and specialty products business has sales agreements with marketers and distributors that provide certain rights of return or provisions for the repurchase of products previously sold to them. Under these agreements, revenues and cost of revenues are deferred until the products have been sold to end customers. Our lubricants and specialty products business also has agreements that create an obligation to deliver products at a future date for which consideration has already been received and recorded as deferred revenue. This revenue is recognized when the products are delivered to the customer.

HEP recognizes revenues as products are shipped through its pipelines and terminals and as other services are rendered. Additionally, HEP has certain throughput agreements that specify minimum volume requirements, whereby HEP bills a customer for a minimum level of shipments in the event a customer ships below their contractual requirements. If there are no future performance obligations, HEP recognizes these deficiency payments as revenue. In certain of these throughput agreements, a customer may later utilize such shortfall billings as credit towards future volume shipments in excess of its minimum levels within its respective contractual shortfall make-up period. Such amounts represent an obligation to perform future services, which may be initially deferred and later recognized as revenue based on estimated future shipping levels, including the likelihood of a customer's ability to utilize such amounts prior to the end of the contractual shortfall make-up period. HEP recognizes the service portion of these deficiency payments as revenue when HEP does not expect it will be required to satisfy these performance obligations in the future based on the pattern of rights exercised by the customer. Payment terms under our contracts with customers are consistent with industry norms and are typically payable within 30 days of the date of invoice.

Cost Classifications

Cost Classifications: Costs of products sold include the cost of crude oil, other feedstocks, blendstocks and purchased finished products, inclusive of transportation costs. We purchase crude oil that at times exceeds the supply needs of our refineries. Quantities in excess of our needs are

sold at market prices to purchasers of crude oil that are recorded on a gross basis with the sales price recorded as revenues and the corresponding acquisition cost as cost of products sold. Additionally, we enter into buy / sell exchanges of crude oil with certain parties to facilitate the delivery of quantities to certain locations that are netted at cost. Operating expenses include direct costs of labor, maintenance materials and services, utilities and other direct operating costs. Selling, general and administrative expenses include compensation, professional services and other support costs.

Deferred Maintenance Costs

Deferred Maintenance Costs: Our refinery units require regular major maintenance and repairs which are commonly referred to as “turnarounds.” Catalysts used in certain refinery processes also require regular “change-outs.” The required frequency of the maintenance varies by unit and by catalyst, but generally is every two to five years. Turnaround costs are deferred and amortized over the period until the next scheduled turnaround. Other repairs and maintenance costs are expensed when incurred. Deferred turnaround and catalyst amortization expense was \$158.4 million, \$141.9 million and \$110.9 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Environmental Costs

Environmental Costs: Environmental costs are charged to operating expenses if they relate to an existing condition caused by past operations and do not contribute to current or future revenue generation. We have ongoing investigations of environmental matters at various locations and routinely assess our recorded environmental obligations, if any, with respect to such matters. Liabilities are recorded when site restoration and environmental remediation, cleanup and other obligations are either known or considered probable and can be reasonably estimated. Such estimates are undiscounted and require judgment with respect to costs, time frame and extent of required remedial and clean-up activities and are subject to periodic adjustments based on currently available information. Recoveries of environmental costs through insurance, indemnification arrangements or other sources are included in other assets to the extent such recoveries are considered probable.

Contingencies

Contingencies: We are subject to proceedings, lawsuits and other claims related to environmental, labor, product and other matters. We are required to assess the likelihood of any adverse judgments or outcomes to these matters as well as potential ranges of probable losses. We accrue for contingencies when it is probable that a loss has occurred and when the amount of that loss is reasonably estimable. A determination of the amount of reserves required, if any, for these contingencies is made after careful analysis of each individual issue. The required reserves may change in the future due to new developments in each matter or changes in approach such as a change in settlement strategy in dealing with these matters.

Foreign Currency Translation

Foreign Currency Translation: Assets and liabilities recorded in foreign currencies are translated into U.S. dollars using exchange rates in effect as of the balance sheet date. Revenue and expense accounts are translated using the weighted-average exchange rates during the period presented. Foreign currency translation adjustments are recorded as a component of accumulated other comprehensive income.

In connection with our PCLI acquisition, we issued intercompany notes to initially fund certain of our foreign businesses. Remeasurement adjustments resulting from the conversion of such intercompany financing amounts to functional currencies are recorded as gains and losses as a component of other income (expense) in the income statement. Such adjustments are not recorded to the Lubricants and Specialty Products segment operations, but to Corporate and Other. See Note 20 for additional information on our segments.

[Income Taxes](#)

Income Taxes: Provisions for income taxes include deferred taxes resulting from temporary differences in income for financial and tax purposes, using the liability method of accounting for income taxes. The liability method requires the effect of tax rate changes on deferred income taxes to be reflected in the period in which the rate change was enacted. The liability method also requires that deferred tax assets be reduced by a valuation allowance unless it is more likely than not that the assets will be realized.

Potential interest and penalties related to income tax matters are recognized in income tax expense. We believe we have appropriate support for the income tax positions taken and to be taken on our income tax returns and that our accruals for tax liabilities are adequate for all open years based on an assessment of many factors, including past experience and interpretations of tax law applied to the facts of each matter.

[Inventory Repurchase Obligations](#)

Inventory Repurchase Obligations: We periodically enter into same-party sell / buy transactions, whereby we sell certain refined product inventory and subsequently repurchase the inventory in order to facilitate delivery to certain locations. Such sell / buy transactions are accounted for as inventory repurchase obligations under which proceeds received under the initial sell is recognized as inventory repurchase obligations that are subsequently reversed when the inventories are repurchased. For the years ended December 31, 2020, 2019 and 2018, we received proceeds of \$44.9 million, \$52.1 million and \$51.2 million and subsequently repaid \$46.4 million, \$49.2 million and \$52.5 million, respectively, under these sell / buy transactions.

[New Accounting Pronouncements](#)

Accounting Pronouncements - Recently Adopted

Income Tax Accounting

In December 2019, ASU 2019-12, "Simplifying the Accounting for Income Taxes," was issued which eliminates some exceptions to the general approach in ASC Topic 740 "Income Taxes" and also provides clarification of other aspects of ASC 740. We adopted this standard effective January 1, 2020 on a prospective basis, and it did not have a material affect on our financial condition, results of operations or cash flows for the periods presented.

Fair Value Measurements

In August 2018, ASU 2018-13, "Changes to the Disclosure Requirements for Fair Value Measurement," was issued which removed, modified and added certain disclosures for fair value measurements. We adopted this standard effective January 1, 2020, and it did not affect our financial condition, results of operations or cash flows.

Defined Benefit Plans

In August 2018, ASU 2018-14, "Changes to the Disclosure Requirements for Defined Benefit Plans," was issued which removed disclosure requirements for (i) the amounts in accumulated other comprehensive income expected to be recognized as components of net periodic benefit cost over the next fiscal year and (ii) the effects of a one-percentage-point change in assumed health care cost trend rates on the aggregate of the service and interest cost components of net periodic benefit costs and the benefit obligation for postretirement health care benefits. Additionally, a new disclosure required under this standard is an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. We adopted this standard effective December 31, 2020 with the updated disclosures in Note 18. The adoption of this standard had no impact on our financial condition, results of operations or cash flows.

Credit Losses Measurement

In June 2016, ASU 2016-13, "Measurement of Credit Losses on Financial Instruments," was issued requiring measurement of all expected credit losses for certain types of financial

instruments, including trade receivables, held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. We adopted this standard effective January 1, 2020, at which time our review of historic and expected credit losses resulted in a decrease of \$3.2 million in our reserve for doubtful accounts. Based upon our assessment of the potential impact of current and forecasted conditions, we increased our reserve for doubtful accounts by \$2.1 million during the the year ended December 31, 2020. Assumptions about the potential effects of the COVID-19 pandemic on our estimate of expected credit losses are inherently subjective and difficult to forecast. However, we believe that our current estimate of allowance for doubtful accounts to be reasonable based upon current information and forecasts.

Fair Value Measurement

Our financial instruments measured at fair value on a recurring basis consist of derivative instruments.

Fair value measurements are derived using inputs (assumptions that market participants would use in pricing an asset or liability, including assumptions about risk). GAAP categorizes inputs used in fair value measurements into three broad levels as follows:

- (Level 1) Quoted prices in active markets for identical assets or liabilities.
- (Level 2) Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, similar assets and liabilities in markets that are not active or can be corroborated by observable market data.
- (Level 3) Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. This includes valuation techniques that involve significant unobservable inputs.

Acquisitions (Tables)

12 Months Ended
Dec. 31, 2020

[Business Combinations](#)

[\[Abstract\]](#)

[Schedule of Business](#)

[Combination Proforma Results](#)

The proforma effects on consolidated HFC revenue and operating income are not material.

	Years Ended December 31,	
	2019	2018
	(In thousands)	
Sales and other revenues	\$ 2,124,778	\$ 2,195,690
Operating income ⁽¹⁾	\$ (116,254)	\$ 99,371

(1) The year ended December 31, 2019, includes goodwill impairment of \$152.7 million from the PCLI reporting unit of our Lubri Specialty Products segment. See Note 11 for additional information on this goodwill impairment.

Leases (Tables)

12 Months Ended
Dec. 31, 2020

[Leases \[Abstract\]](#)
[Schedule of Supplemental
Balance Sheet Information](#)

The following table presents the amounts and balance sheet locations of our operating and financing leases recorded on our consolidated balance sheet as of December 31, 2020.

	December 31,	
	2020	
	(In thousands)	
Operating leases:		
Operating lease right-of-use assets	\$	350,548 \$
Operating lease liabilities		97,937
Noncurrent operating lease liabilities		285,785
Total operating lease liabilities	\$	383,722 \$
Finance leases:		
Properties, plants and equipment, at cost	\$	24,321 \$
Accumulated amortization		(5,713)
Properties, plants and equipment, net	\$	18,608 \$
Accrued liabilities	\$	1,916 \$
Other long-term liabilities		5,097
Total finance lease liabilities	\$	7,013 \$

Supplemental balance sheet information related to our leases was as follows:

	December 31,	
	2020	
Weighted average remaining lease term (in years)		
Operating leases		7.2
Finance leases		3.3
Weighted average discount rate		
Operating leases		4.1 %
Finance leases		5.3 %

[Schedule of Components of
Lease Expense and
Supplemental Cash Flow
Information](#)

The components of lease expense were as follows:

	Years Ended Decem	
	2020	
	(In thousands)	
Operating lease expense	\$	121,608 \$
Finance lease expense:		
Amortization of right-of-use assets		4,400
Interest on lease liabilities		415
Variable lease cost		3,580
Total lease expense	\$	130,003 \$

Supplemental cash flow information related to leases was as follows:

	Years Ended Decem	
	2020	
	(In thousands)	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$	126,313 \$
Operating cash flows from finance leases	\$	415 \$
Financing cash flows from finance leases	\$	2,995 \$
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	\$	18,823 \$
Finance leases	\$	4,085 \$

[Schedule of Operating and Finance Lease Maturities](#)

As of December 31, 2020, minimum future lease payments of our operating and finance lease obligations were as follows:

	Operating	
	(In thousands)	
2021	\$	109,756 \$
2022		91,172
2023		75,878
2024		51,859
2025		12,871
2025 and thereafter		116,502
Future minimum lease payments		458,038
Less: imputed interest		74,316
Total lease obligations		383,722
Less: current obligations		97,937
Long-term lease obligations	\$	285,785 \$

[Schedule of Lease Income Recognized](#)

Lease income recognized was as follows:

	Years Ended Decem	
	2020	
	(In thousands)	
Operating lease revenues	\$	22,636 \$
Gain on sales-type leases	\$	33,834 \$
Sales-type lease interest income	\$	1,928 \$
Lease revenues relating to variable lease payments not included in measurement of the sales-type lease receivable	\$	1,690 \$

[Schedule of Minimum Undiscounted Lease Payments](#)

Annual minimum undiscounted lease payments in which HEP is a lessor to third-party contracts as of December 31, 2020 were as follows:

	Operating		Sales-type	
	(In thousands)			
2021	\$	11,586	\$	
2022		9,128		
2023		9,000		
2024		9,000		
2025		2,512		
Thereafter		—		
Total lease payment receipts	\$	41,226		
Less: imputed interest				
Unguaranteed residual assets at end of leases				
Net investment in leases			\$	

[Schedule of Net Investments in Operating Leases](#)

Net investment in sales-type leases recorded on our consolidated balance sheet was composed of the following:

December 31, 20

(In thousands)

Lease receivables

\$

Unguaranteed residual assets

Net investment in leases

\$

Revenues (Tables)

12 Months Ended
Dec. 31, 2020

[Revenue from Contract with Customer \[Abstract\]](#)
[Schedule of Disaggregated Revenues](#)

Disaggregated revenues were as follows:

	Years Ended December	
	2020	2019
	(In thousands)	
Revenues by type		
Refined product revenues		
Transportation fuels ⁽¹⁾	\$ 7,825,625	\$ 12,952,899
Specialty lubricant products ⁽²⁾	1,657,344	1,864,450
Asphalt, fuel oil and other products ⁽³⁾	672,371	1,025,663
Total refined product revenues	10,155,340	15,843,012
Excess crude oil revenues ⁽⁴⁾	884,248	1,470,148
Transportation and logistic services	98,039	121,027
Other revenues ⁽⁵⁾	46,016	52,391
Total sales and other revenues	\$ 11,183,643	\$ 17,486,578

	Years Ended December	
	2020	2019
	(In thousands)	
Refined product revenues by market		
United States		
Mid-Continent	\$ 5,096,268	\$ 8,424,191
Southwest	2,310,432	3,621,273
Rocky Mountains	1,311,416	2,208,541
Northeast	552,069	578,932
Canada	616,683	721,169
Europe, Asia and Latin America	268,472	288,906
Total refined product revenues	\$ 10,155,340	\$ 15,843,012

- (1) Transportation fuels consist of gasoline, diesel and jet fuel. For the year ended December 31, 2020, \$1.6 million is reported in our Corporate segment.
- (2) Specialty lubricant products consist of base oil, waxes, finished lubricants and other specialty fluids.
- (3) Asphalt, fuel oil and other products revenue include revenues attributable to our Refining, Lubricants and Specialty Products and Corporate segments. For the year ended December 31, 2020, \$533.5 million, \$135.4 million and \$3.5 million respectively, for the year ended December 31, 2019, \$533.5 million, \$135.4 million and \$3.5 million respectively, for the year ended December 31, 2018.
- (4) Excess crude oil revenues represent sales of purchased crude oil inventory that at times exceeds the supply needs of our refineries.
- (5) Other revenues are principally attributable to our Refining segment.

[Schedule of Changes to Contract Liabilities](#)

The following table presents changes to contract liabilities for the years ended December 31, 2020 and 2019:

	Years Ended December 31,	
	2020	2019
	(In thousands)	
Balance at January 1	\$ 4,652	\$ 132
Sonneborn acquisition	—	6,463
Increase	28,746	26,751
Recognized as revenue	(26,660)	(28,694)
Balance at December 31	\$ 6,738	\$ 4,652

[Schedule of Aggregate Minimum Volumes Expected](#)

Aggregate minimum volumes expected to be sold (future performance obligations) under our long-term product sales contracts are as follows:

[to be Sold Under Long-term Sales Contracts](#)

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>There</u>
			(In thousands)	
Refined product sales volumes (barrels)	19,318	13,771	12,795	

Additionally, HEP has long-term contracts with third-party customers that specify minimum volumes of product to be transported through its pipeline. These contracts result in fixed-minimum annual revenues through 2025. Annual minimum revenues attributable to HEP's third-party contracts as of December 31, 2021, 2022, and 2023 are as follows:

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>There</u>
			(In thousands)	
HEP contractual minimum revenues	\$ 22,041	\$ 11,053	\$ 9,000	\$

**Fair Value Measurements
(Tables)**

**12 Months Ended
Dec. 31, 2020**

[Fair Value Disclosures](#)

[\[Abstract\]](#)

[Schedule of Carrying Amounts of Derivative Instruments](#) The carrying amounts of derivative instruments at December 31, 2020 and 2019 were as follows:

Financial Instrument	Carrying Amount	Fair Value by Input	
		Level 1	Level 2
(In thousands)			
December 31, 2020			
Assets:			
Commodity forward contracts	\$ 275	\$ —	\$ 275
Total assets	<u>\$ 275</u>	<u>\$ —</u>	<u>\$ 275</u>
Liabilities:			
NYMEX futures contracts	\$ 418	\$ 418	\$ —
Commodity price swaps	359	—	359
Commodity forward contracts	196	—	196
Foreign currency forward contracts	23,005	—	23,005
Total liabilities	<u>\$ 23,978</u>	<u>\$ 418</u>	<u>\$ 23,560</u>
Financial Instrument	Carrying Amount	Fair Value by Input	
		Level 1	Level 2
(In thousands)			
December 31, 2019			
Assets:			
Commodity price swaps	\$ 13,455	\$ —	\$ 13,455
Commodity forward contracts	4,133	—	4,133
Total assets	<u>\$ 17,588</u>	<u>\$ —</u>	<u>\$ 17,588</u>
Liabilities:			
NYMEX futures contracts	\$ 2,578	\$ 2,578	\$ —
Commodity price swaps	1,230	—	1,230
Commodity forward contracts	3,685	—	3,685
Foreign currency forward contracts	6,722	—	6,722
Total liabilities	<u>\$ 14,215</u>	<u>\$ 2,578</u>	<u>\$ 11,637</u>

Earnings Per Share (Tables)

12 Months Ended
Dec. 31, 2020

[Earnings Per Share](#)

[\[Abstract\]](#)

[Schedule of Basic and Diluted per Share Computations for Net Income \(Loss\)](#) The following is a reconciliation of the denominators of the basic and diluted per share computations for net income (loss) attributable to HollyFrontier stockholders:

	Years Ended December 31	
	2020	2019
	(In thousands, except per share)	
Net income (loss) attributable to HollyFrontier stockholders	\$ (601,448)	\$ 772,388
Participating securities' share in earnings	1,811	1,034
Net income (loss) attributable to common shares	\$ (603,259)	\$ 771,354
Average number of shares of common stock outstanding	161,983	166,287
Effect of dilutive variable restricted stock units and performance share units ⁽¹⁾	—	1,098
Average number of shares of common stock outstanding assuming dilution	161,983	167,385
Basic earnings (loss) per share	\$ (3.72)	\$ 4.64
Diluted earnings (loss) per share	\$ (3.72)	\$ 4.61
(1) Excludes anti-dilutive restricted and performance share units of:	1,082	302

**Stock-Based Compensation
(Tables)**

**12 Months Ended
Dec. 31, 2020**

[Share-based Payment
Arrangement, Noncash
Expense \[Abstract\]](#)

[Schedule of Restricted Stock
Activity](#)

A summary of restricted stock unit activity during the year ended December 31, 2020 is presented below:

Restricted Stock Units	Grants	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2020	1,101,781	\$ 53.30
Granted	1,574,929	\$ 22.20
Vested	(549,144)	\$ 51.40
Forfeited	(89,971)	\$ 53.66
Converted from performance share units	19,450	\$ 38.13
Outstanding at December 31, 2020	<u>2,057,045</u>	\$ 29.76

[Schedule Of Performance
Share Unit Activity](#)

A summary of performance share unit activity and changes during the year ended December 31, 2020 is presented below:

Performance Share Units	Grants
Outstanding at January 1, 2020	375,588
Granted	434,378
Vested	(124,303)
Forfeited	(31,009)
Converted to restricted stock units	(19,450)
Outstanding at December 31, 2020	<u>635,204</u>

Inventories (Tables)

**12 Months Ended
Dec. 31, 2020**

[Inventory, Net \[Abstract\]](#)
[Schedule of Inventory](#)
[Components](#)

Inventory consists of the following components:

	2020
	(In thousands)
Crude oil	\$ 451,967
Other raw materials and unfinished products ⁽¹⁾	260,495
Finished products ⁽²⁾	572,258
Lower of cost or market reserve	(318,862)
Process chemicals ⁽³⁾	35,006
Repairs and maintenance supplies and other ⁽⁴⁾	172,612
Total inventory	\$ 1,173,476

- (1) Other raw materials and unfinished products include feedstocks and blendstocks, other than crude.
- (2) Finished products include gasolines, jet fuels, diesels, lubricants, asphalts, LPG's and residual fuels.
- (3) Process chemicals include additives and other chemicals.
- (4) Includes RINs

**Properties, Plants and
Equipment (Tables)**

**12 Months Ended
Dec. 31, 2020**

[Property, Plant and
Equipment \[Abstract\]](#)
[Schedule of components of
property, plants and equipment](#)

The components of properties, plants and equipment are as follows:

	Decem
	2020
	(In th
Land, buildings and improvements	\$ 517,829
Refining facilities	4,202,524
Pipelines and terminals	1,786,279
Transportation vehicles	26,715
Other fixed assets	400,159
Construction in progress	366,011
	<u>7,299,517</u>
Accumulated depreciation	(2,726,378)
	<u>\$ 4,573,139</u>

**Goodwill, Long-lived Asset
and Intangibles (Tables)**

**12 Months Ended
Dec. 31, 2020**

[Goodwill \[Abstract\]](#)
[Schedule of Goodwill by
Segment](#)

The following is a summary of our goodwill by segment:

	Refining	Lubricants and Specialty Products	HEP	Total
(In thousands)				
Balance at December 31, 2019				
Goodwill	\$ 2,042,790	\$ 480,274	\$ 312,873	\$ 2,835,937
Accumulated impairment losses	(309,318)	(152,712)	—	(462,030)
	<u>1,733,472</u>	<u>327,562</u>	<u>312,873</u>	<u>2,373,907</u>
Foreign currency translation adjustment	—	1,895	—	1,895
Current year impairment losses	—	(81,867)	—	(81,867)
	<u>—</u>	<u>(81,867)</u>	<u>—</u>	<u>(81,867)</u>
Balance at December 31, 2020				
Goodwill	2,042,790	482,169	312,873	2,837,832
Accumulated impairment losses	(309,318)	(234,579)	—	(543,897)
	<u>\$ 1,733,472</u>	<u>\$ 247,590</u>	<u>\$ 312,873</u>	<u>\$ 2,293,935</u>

[Schedule of Intangible Assets
Carrying Amounts](#)

The carrying amounts of our intangible assets presented in "Intangibles and other" in our consolidated balance sheet are as follows:

	Useful Life	Decem 2020
(In thousands)		
Customer relationships	10 - 20 years	\$ 239,773
Transportation agreements	30 years	59,933
Trademarks, patents and other	10 - 20 years	157,120
		<u>456,826</u>
Accumulated amortization		(122,024)
Total intangibles, net		<u>\$ 334,802</u>

Debt (Tables)

12 Months Ended
Dec. 31, 2020

[Debt Disclosure \[Abstract\]](#)
[Schedule of Long-Term Debt](#)
[Carrying Amounts](#)

The carrying amounts of long-term debt are as follows:

	Decem 2020
	(In th
HollyFrontier	
2.625% Senior Notes	\$ 350,000
5.875% Senior Notes	1,000,000
4.500% Senior Notes	400,000
	1,750,000
Unamortized discount and debt issuance costs	(12,885)
Total HollyFrontier long-term debt	1,737,115
HEP	
HEP Credit Agreement	913,500
5.00% Senior Notes	500,000
6.00% Senior Notes	—
	500,000
Unamortized discount and debt issuance costs	(7,897)
Total HEP long-term debt	1,405,603
Total long-term debt	\$ 3,142,718

The fair values of the senior notes are as follows:

	Decem 2020
	(In th
HollyFrontier Senior Notes	\$ 1,903,867
HEP Senior Notes	\$ 506,540

These fair values are based on a Level 2 input. See Note 6 for additional information on Level 2 inputs.

Principal maturities of long-term debt as of December 31, 2020 are as follows:

[Schedule of Principal](#)
[Maturities of Long-Term Debt](#)

Years Ending December 31,	(In thousands)
2021	\$ —
2022	913,500
2023	350,000
2024	—
2025	—
Thereafter	1,900,000
Total	\$ 3,163,500

Derivative Instruments and Hedging Activities (Tables)

**12 Months Ended
Dec. 31, 2020**

[Derivative Instruments and Hedging Activities Disclosure \[Abstract\]](#)
[Schedule of Net Unrealized Gain \(Loss\) Recognized in OCI and Gain \(Loss\) Reclassified into Earnings](#)

The following table presents the pre-tax effect on other comprehensive income (“OCI”) and earnings due to fair value adjustments and maturities under hedge accounting:

Derivatives Designated as Cash Flow Hedging Instruments	Net Unrealized Gain (Loss) Recognized in OCI			Income Statement Location	Gain (Loss) Reclassified into Earnings	
	Years Ended December 31,				Years Ended	
	2020	2019	2018		2020	2019
(In thousands)						
Commodity contracts	\$ (4,871)	\$ (5,349)	\$ 11,221	Sales and other revenues	\$ (5,168)	\$ (8,117)
				Cost of products sold	4,281	
				Operating expenses	(1,717)	
Total	\$ (4,871)	\$ (5,349)	\$ 11,221		\$ (2,604)	\$ (8,117)

[Schedule of Gain \(Loss\) Recognized in Earnings](#)

The following table presents the pre-tax effect on income due to maturities and fair value adjustments of our economic hedges:

Derivatives Not Designated as Hedging Instruments	Income Statement Location	Gain (Loss) Recognized in Earnings	
		2020	2019
(In thousands)			
Commodity contracts	Cost of products sold	\$ 18,646	\$ (8,117)
	Interest expense	(4,250)	(6,300)
Foreign currency contracts	Gain on foreign currency transactions	(7,300)	(17,300)
	Total	\$ 7,096	\$ (32,717)

[Schedule of Notional Amounts of Outstanding Derivatives Serving as Economic Hedges](#)

As of December 31, 2020, we have the following notional contract volumes related to outstanding derivative instruments (all maturing in 2021):

	Total Outstanding Notional	Unit of Measure
Derivatives designated as hedging instruments:		
Natural gas price swaps - long	1,800,000	MMBTU
Derivatives not designated as hedging instruments:		
NYMEX futures (WTI) - short	160,000	Barrels
Forward gasoline and diesel contracts - long	195,000	Barrels
Foreign currency forward contracts	418,192,532	U. S. dollar
Forward commodity contracts (platinum)	40,867	Troy ounces

[Schedule of Derivative Instruments in Statement of Financial Position, Fair Value](#)

The following table presents the fair value and balance sheet locations of our outstanding derivative instruments. These amounts are presented on a net basis to reflect the net settlement balances that reconcile to a net asset or liability position in our consolidated balance sheets. We present on a net basis to reflect the net settlement balances in accordance with provisions of our master netting arrangements.

	Derivatives in Net Asset Position			Derivatives in Net Liabilities	
	Gross Assets	Gross Liabilities Offset in Balance Sheet	Net Assets Recognized in Balance Sheet	Gross Liabilities	Gross Assets Offset in Balance Sheet
(In thousands)					
December 31, 2020					
<i>Derivatives designated as cash flow hedging instruments:</i>					
Commodity price swap contracts	\$ —	\$ —	\$ —	\$ 359	\$ —
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 359</u>	<u>\$ —</u>
<i>Derivatives not designated as cash flow hedging instruments:</i>					
NYMEX futures contracts	\$ —	\$ —	\$ —	\$ 418	\$ —
Commodity forward contracts	275	—	275	196	—
Foreign currency forward contracts	—	—	—	23,005	—
	<u>\$ 275</u>	<u>\$ —</u>	<u>\$ 275</u>	<u>\$ 23,619</u>	<u>\$ —</u>
Total net balance			<u>\$ 275</u>		
Balance sheet classification:	Prepayment and other		<u>\$ 275</u>	Accrued liabilities	

	Derivatives in Net Asset Position			Derivatives in Net Liabilities	
	Gross Assets	Gross Liabilities Offset in Balance Sheet	Net Assets Recognized in Balance Sheet	Gross Liabilities	Gross Assets Offset in Balance Sheet
(In thousands)					
December 31, 2019					
<i>Derivatives designated as cash flow hedging instruments:</i>					
Commodity price swap contracts	\$ 7,526	\$ (1,784)	\$ 5,742	\$ 1,230	\$ —
	<u>\$ 7,526</u>	<u>\$ (1,784)</u>	<u>\$ 5,742</u>	<u>\$ 1,230</u>	<u>\$ —</u>
<i>Derivatives not designated as cash flow hedging instruments:</i>					
NYMEX futures contracts	\$ —	\$ —	\$ —	\$ 2,578	\$ —
Commodity price swap contracts	7,713	—	7,713	—	—
Commodity forward contracts	4,133	—	4,133	3,685	—
Foreign currency forward contracts	—	—	—	6,722	—
	<u>\$ 11,846</u>	<u>\$ —</u>	<u>\$ 11,846</u>	<u>\$ 12,985</u>	<u>\$ —</u>
Total net balance			<u>\$ 17,588</u>		
Balance sheet classification:	Prepayments and other		<u>\$ 17,588</u>	Accrued liabilities	
				Other long-term liabilities	
			<u>\$ 17,588</u>		

Income Taxes (Tables)

12 Months Ended
Dec. 31, 2020

[Income Tax Disclosure](#)
[\[Abstract\]](#)
[Schedule of Provision For](#)
[Income Taxes](#)

The provision for income taxes is comprised of the following:

	Years Ended December	
	2020	2019
	(In thousands)	
Current		
Federal	\$ (59,452)	\$ 187,134
State	(5,391)	29,547
Foreign	9,423	3,805
Deferred		
Federal	(64,836)	77,916
State	(52,872)	26,073
Foreign	(59,019)	(25,323)
	<u>\$ (232,147)</u>	<u>\$ 299,152</u>

[Schedule of Effective Tax Rate](#)
[to Income Tax Expense](#)
[\(Benefit\)](#)

The statutory federal income tax rate applied to pre-tax book income reconciles to income tax expense (benefit) as follows:

	Years Ended December	
	2020	2019
	(In thousands)	
Tax computed at statutory rate	\$ (156,880)	\$ 246,013
Effect of the Tax Cuts and Jobs Act	—	—
State income taxes, net of federal tax benefit	(41,566)	47,259
Noncontrolling interest in net income	(21,799)	(25,494)
CARES Act benefits	(19,837)	—
Foreign rate differential	(14,294)	—
Effect of nondeductible goodwill impairment charge	16,573	32,069
Other	5,656	(695)
	<u>\$ (232,147)</u>	<u>\$ 299,152</u>

[Schedule of Deferred Income](#)
[Tax Assets And Liabilities](#)

Our deferred income tax assets and liabilities as of December 31, 2020 and 2019 are as follows:

	December 31, 2020	
	Assets	Liabilities
	(In thousands)	
Deferred income taxes		
Properties, plants and equipment (due primarily to tax in excess of book depreciation)	\$ —	\$ (712,339)
Lease obligation	94,447	—
Accrued employee benefits	21,819	—
Accrued post-retirement benefits	11,646	—
Accrued environmental costs	27,200	—
Hedging instruments	—	(903)
Inventory differences	—	(24,271)
Deferred turnaround costs	—	(85,326)
Net operating loss and tax credit carryforwards	51,227	—
Investment in HEP	—	(94,982)
Valuation allowance	—	(8,577)
Other	6,356	—
Total	<u>\$ 212,695</u>	<u>\$ (926,398)</u>

	December 31, 2019	
	Assets	Liabilities
	(In thousands)	
Deferred income taxes		
Properties, plants and equipment (due primarily to tax in excess of book depreciation)	\$ —	\$ (809,966)
Lease obligation	120,435	—
Accrued employee benefits	13,635	—
Accrued post-retirement benefits	11,027	—
Accrued environmental costs	28,708	—
Hedging instruments	—	(2,439)
Inventory differences	—	(43,500)
Deferred turnaround costs	—	(135,920)
Net operating loss and tax credit carryforwards	22,912	—
Investment in HEP	—	(95,037)
Valuation allowance	—	(4,600)
Other	5,475	—
Total	\$ 202,192	\$ (1,091,462)

[Schedule of Unrecognized Tax Benefits](#) A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	Years Ended December	
	2020	2019
	(In thousands)	
Balance at January 1	\$ 56,621	\$ 53,755
Additions for tax positions of prior years	6	2,899
Reductions for tax positions of prior years	(1,500)	(2,899)
Lapse of statute of limitations	(228)	—
Balance at December 31	\$ 54,899	\$ 56,621

**Stockholders' Equity
(Tables)**

**12 Months Ended
Dec. 31, 2020**

[Stockholders' Equity Note
\[Abstract\]](#)

[Schedules Shares of Common
Stock Outstanding Activity](#)

Shares of our common stock outstanding and activity for the years ended December 31, 2020, 2019 and 2018 are presented below:

	Years Ended December	
	2020	2019
Common shares outstanding at January 1	161,846,525	172,121,491
Vesting of performance units	296,801	592,602
Vesting of restricted stock with performance feature	553,381	412,465
Forfeitures of restricted stock	—	(13,807)
Purchase of treasury stock ⁽¹⁾	(283,047)	(11,266,226)
Common shares outstanding at December 31	162,413,660	161,846,525

(1) Includes 283,047, 415,466 and 369,255 shares, respectively, withheld under the terms of stock-based compensation agreements to provide funds for income taxes due at the vesting of share-based awards, as well as other stock repurchases under separate authority from our Board of Directors.

**Other Comprehensive
Income (Loss) (Tables)**

**12 Months Ended
Dec. 31, 2020**

[Other Comprehensive
Income \(Loss\), before Tax
\[Abstract\]](#)

[Schedule of Components and
Allocated Tax Effects of OCI](#)

The components and allocated tax effects of other comprehensive income are as follows:

	Before-Tax	Tax Expense (Benefit)
		(In thousands)
Year Ended December 31, 2020		
Net change in foreign currency translation adjustment	\$ 6,226	\$ 1,35
Net unrealized loss on hedging instruments	(4,871)	(1,22
Net change in pension and other post-retirement benefit obligations	(3,461)	(92
Other comprehensive loss attributable to HollyFrontier stockholders	<u>\$ (2,106)</u>	<u>\$ (79</u>
Year Ended December 31, 2019		
Net change in foreign currency translation adjustment	\$ 13,337	\$ 2,84
Net unrealized loss on hedging instruments	(5,349)	(1,36
Net change in pension and other post-retirement benefit obligations	(7,207)	(1,85
Other comprehensive income attributable to HollyFrontier stockholders	<u>\$ 781</u>	<u>\$ (37</u>
Year Ended December 31, 2018		
Net change in foreign currency translation adjustment	\$ (38,227)	\$ (8,06
Net unrealized gain on hedging instruments	11,221	2,85
Net change in pension and other post-retirement benefit obligations	(1,507)	(37
Other comprehensive loss attributable to HollyFrontier stockholders	<u>\$ (28,513)</u>	<u>\$ (5,58</u>

[Schedule of Income Statement
Line Items Effects Out of
AOI](#)

The following table presents the income statement line item effects for reclassifications out of accumulated other comprehensive income ("AOI")

AOCI Component	Gain (Loss) Reclassified From AOCI			Income Statement Component
	Years Ended December 31,			
	2020	2019	2018	
(In thousands)				
Hedging instruments:				
Commodity price swaps	\$ (5,168)	\$ (1,799)	\$ (5,093)	Sales and other revenue
	4,281	22,876	—	Cost of products sold
	(1,717)	(1,364)	(962)	Operating expenses
	(2,604)	19,713	(6,055)	
	(664)	5,027	(1,544)	Income tax expense
	(1,940)	14,686	(4,511)	Net of tax
Other post-retirement benefit obligations:				
Pension obligations	422	—	—	Other, net
	108	—	—	Income tax expense
	314	—	—	Net of tax
Post-retirement healthcare obligations	3,564	3,587	3,481	Other, net
	909	915	888	Income tax expense
	2,655	2,672	2,593	Net of tax
Retirement restoration plan	(22)	(6)	(27)	Other, net
	(6)	(2)	(7)	Income tax benefit
	(16)	(4)	(20)	Net of tax
Total reclassifications for the period	\$ 1,013	\$ 17,354	\$ (1,938)	

[Schedule of AOCI in Equity](#)

Accumulated other comprehensive income in the equity section of our consolidated balance sheets includes:

	Years Ended
	2020
	(In thousands)
Foreign currency translation adjustment	\$ 2,681
Unrealized loss on pension obligations	(248)
Unrealized gain on post-retirement benefit obligations	11,311
Unrealized gain (loss) on hedging instruments	(281)
Accumulated other comprehensive income	\$ 13,463

**Pension and Post-retirement
Plans (Tables)**

**12 Months Ended
Dec. 31, 2020**

[Pension and Other
Postretirement Benefits Cost
\(Reversal of Cost\) \[Abstract\]
Schedule of Changes in
Benefit Obligation and Plan
Assets to PCLI Pension Plans](#)

The following table sets forth the changes in the benefit obligation and plan assets of our PCLI pension plans for the years ended December 31, 2020 and for the period February 1, 2019 to December 31, 2019 and for the year ended December 31, 2020:

	Years Ended Decem	
	2020	
	(In thousands)	
Change in plans' benefit obligations		
Pension plans benefit obligation - beginning of period	\$	110,410 \$
Acquisition of Sonneborn		—
Service cost		3,929
Interest cost		2,772
Actuarial loss		8,391
Benefits paid		(1,558)
Curtailment		(4,078)
Contractual termination benefits		915
Transfer from other plans		479
Foreign currency exchange rate changes		5,360
Pension plans benefit obligation - end of year	\$	126,620 \$
Change in pension plans assets		
Fair value of plans assets - beginning of period	\$	105,358 \$
Acquisition of Sonneborn		—
Return on plans assets		10,936
Employer contributions		3,487
Benefits paid		(1,558)
Transfer payments		479
Foreign currency exchange rate changes		5,248
Fair value of plans assets - end of year	\$	123,950 \$
Funded status		
Under-funded balance	\$	(2,670) \$
Amounts recognized in consolidated balance sheets		
Other long-term liabilities	\$	(2,670) \$
Amounts recognized in accumulated other comprehensive income		
Cumulative actuarial loss	\$	1,658 \$

[Schedule of Projected Benefit
Obligation in Excess of Fair
Value](#)

The following tables provide information regarding pension plans with a projected benefit obligation and accumulated benefit obligation in excess of plan assets:

	December 31,	
	2020	2019
	(In thousands)	
Projected benefit obligation	\$ 79,866	\$ 100,000
Fair value of plan assets	\$ 77,035	\$ 100,000

[Schedule of Accumulated Benefit Obligation in Excess of Fair Value](#)

	December 31,	
	2020	2019
	(In thousands)	
Accumulated benefit obligation	\$ 41,654	\$ 36,001
Fair value of plan assets	\$ 39,105	\$ 33,509

The following tables provide information regarding pension plans with a projected benefit obligation and accumulated benefit obligation in excess of plan assets:

	December 31,	
	2020	2019
	(In thousands)	
Projected benefit obligation	\$ 79,866	\$ 100,000
Fair value of plan assets	\$ 77,035	\$ 100,000

	December 31,	
	2020	2019
	(In thousands)	
Accumulated benefit obligation	\$ 41,654	\$ 36,001
Fair value of plan assets	\$ 39,105	\$ 33,509

[Schedule of Net Periodic Pension Expense](#)

Net periodic pension expense consisted of the following components:

	Years Ended December 31,		
	2020	2019	2018
	(In thousands)		
Service cost - benefit earned during the period	\$ 3,929	\$ 4,135	\$ 4,135
Interest cost on projected benefit obligations	2,772	3,026	3,026
Expected return on plans assets	(4,578)	(3,840)	(3,840)
Amortization of gain	(422)	—	—
Curtailement	(137)	—	—
Contractual termination benefits	915	—	—
Net periodic pension expense	<u>\$ 2,479</u>	<u>\$ 3,321</u>	<u>\$ 3,321</u>

[Schedule of Pension Plan Assets](#)

At December 31, 2020 and 2019, PCLI's pension plans assets were allocated as follows:

Asset Category	Percentage of Plan Assets at Year End	
	December 31, 2020	December 31, 2019
Canadian equities	42 %	47 %
Fixed income	57 %	29 %
Real estate and infrastructure	— %	14 %
Other	1 %	9 %
Cash	— %	1 %
Total	<u>100 %</u>	<u>100 %</u>

[Schedule of Changes in Benefit Obligation and Plan Assets to Post-Retirement Healthcare Plans](#)

The following table sets forth the changes in the benefit obligation and plan assets of our post-retirement healthcare plans for the years ended Dec

	Years Ended	
	2020	
	(In thousands)	
Change in plans' benefit obligation		
Post-retirement plans' benefit obligation - beginning of year	\$	31,273
Sonneborn acquisition		—
Service cost		1,616
Interest cost		870
Benefits paid		(1,766)
Actuarial loss		1,131
Foreign currency exchange rate changes		354
Post-retirement plans' benefit obligation - end of year	\$	33,478
Change in plan assets		
Fair value of plan assets - beginning of year	\$	—
Employer contributions		1,742
Participant contributions		24
Benefits paid		(1,766)
Fair value of plan assets - end of year	\$	—
Funded status		
Under-funded balance	\$	(33,478)
Amounts recognized in consolidated balance sheets		
Accrued liabilities	\$	(1,946)
Other long-term liabilities		(31,532)
	\$	(33,478)
Amounts recognized in accumulated other comprehensive income		
Cumulative actuarial loss	\$	(1,523)
Prior service credit		18,511
Total	\$	16,988

[Schedule of Weighted Average Assumptions Used to Determine Benefit Obligations](#) The weighted average assumptions used to determine end of period benefit obligations:

	December 31,	
	2020	
Discount rate	1.88%-2.60%	
Current health care trend rate	5.50%-6.00%	
Ultimate health care trend rate	4.50%-5.00%	
Year rate reaches ultimate trend rate	2022-2023	

[Schedule of Net Periodic Post-Retirement Credit](#) Net periodic post-retirement credit consisted of the following components:

	Years Ended December	
	2020	2019
	(In thousands)	
Service cost – benefit earned during the year	\$ 1,616	\$ 1,581
Interest cost on projected benefit obligations	870	1,021
Amortization of prior service credit	(3,481)	(3,481)
Amortization of gain	(83)	(100)
Net periodic post-retirement credit	\$ (1,078)	\$ (979)

**Contingencies And
Contractual Commitments
(Tables)**

12 Months Ended

Dec. 31, 2020

**Commitments and
Contingencies Disclosure
[Abstract]**

**Schedule of Future Minimum
Transportation and Storage
Fees Under Agreement**

At December 31, 2020, the minimum future transportation and storage fees under transportation agreements having terms in excess of one year are as follows:

	(In thousands)
2021	\$ 129,661
2022	113,288
2023	113,360
2024	112,884
2025	113,669
Thereafter	580,889
Total	<u>\$ 1,163,751</u>

**Segment Information
(Tables)**

[Segment Reporting
\[Abstract\]](#)
[Schedule of Segment
Reporting Information](#)

**12 Months Ended
Dec. 31, 2020**

The accounting policies for our segments are the same as those described in the summary of significant accounting policies (see Note 1).

	Refining	Lubricants and Specialty Products	HEP	Corporate, Other Eliminations ⁽²⁾
	(In thousands)			
Year Ended December 31, 2020				
Sales and other revenues:				
Revenues from external customers	\$ 9,286,658	\$ 1,792,745	\$ 98,039	\$ —
Intersegment revenues	252,531	10,465	399,809	(66,000)
	\$ 9,539,189	\$ 1,803,210	\$ 497,848	\$ (66,000)
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)				
	\$ 8,439,680	\$ 1,271,287	\$ —	\$ (5,000)
Lower of cost or market inventory valuation adjustment	82,214	—	—	(1,000)
Operating expenses	988,045	216,068	147,692	(5,000)
Selling, general and administrative expenses	127,298	157,816	9,989	(1,000)
Depreciation and amortization	324,617	80,656	95,445	(2,000)
Goodwill and long-lived asset impairments ⁽¹⁾	241,760	286,575	16,958	(8,000)
Income (loss) from operations	\$ (664,425)	\$ (209,192)	\$ 227,764	\$ (8,000)
Earnings of equity method investments	\$ —	\$ —	\$ 6,647	\$ —
Capital expenditures	\$ 152,726	\$ 32,473	\$ 59,283	\$ (8,000)
Total assets	\$ 6,203,847	\$ 1,864,313	\$ 2,198,478	\$ 1,240,000

	Refining	Lubricants and Specialty Products	HEP	Corporate, Other Eliminations
(In thousands)				
Year Ended December 31, 2019				
Sales and other revenues:				
Revenues from external customers	\$ 15,284,110	\$ 2,081,221	\$ 121,027	\$
Intersegment revenues	312,678	11,307	411,750	(735,432)
	\$ 15,596,788	\$ 2,092,528	\$ 532,777	\$ (735,432)
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)				
Lower of cost or market inventory valuation adjustment	\$ (119,775)	\$ —	\$ —	\$ (642,800)
Operating expenses	\$ 1,095,488	\$ 231,523	\$ 161,996	\$ (94,000)
Selling, general and administrative expenses	\$ 120,518	\$ 168,595	\$ 10,251	\$ 54,000
Depreciation and amortization	\$ 309,932	\$ 88,781	\$ 96,706	\$ 14,000
Goodwill impairment	\$ —	\$ 152,712	\$ —	\$ —
Income (loss) from operations	\$ 1,210,119	\$ (129,119)	\$ 263,824	\$ (67,000)
Earnings of equity method investments	\$ —	\$ —	\$ 5,180	\$ —
Capital expenditures	\$ 199,002	\$ 40,997	\$ 30,112	\$ 2,000
Total assets	\$ 7,189,094	\$ 2,223,418	\$ 2,205,437	\$ 54,000
Year Ended December 31, 2018				
Sales and other revenues:				
Revenues from external customers	\$ 15,806,304	\$ 1,799,506	\$ 108,412	\$
Intersegment revenues	370,259	13,197	397,808	(781,000)
	\$ 16,176,563	\$ 1,812,703	\$ 506,220	\$ (781,000)
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)				
Lower of cost or market inventory valuation adjustment	\$ 136,305	\$ —	\$ —	\$ (691,000)
Operating expenses	\$ 1,055,209	\$ 167,820	\$ 146,430	\$ (83,000)
Selling, general and administrative expenses	\$ 113,641	\$ 143,750	\$ 11,041	\$ 2,000
Depreciation and amortization	\$ 284,439	\$ 43,255	\$ 98,492	\$ 1,000
Income (loss) from operations	\$ 1,336,120	\$ 76,338	\$ 250,257	\$ (38,000)
Earnings of equity method investments	\$ —	\$ —	\$ 5,825	\$ —
Capital expenditures	\$ 202,791	\$ 37,448	\$ 54,141	\$ 1,000
Total assets	\$ 6,465,155	\$ 1,506,209	\$ 2,142,027	\$ 88,000

(1) The results of our HEP reportable segment for the year ended December 31, 2020 include a long-lived asset impairment charge attributed to HEP's logistics as

(2) For the year ended December 31, 2020, Corporate and Other includes \$3.9 million of operating expenses and \$65.1 million of capital expenditures related to the diesel units. Also, for the year ended December 31, 2020, Corporate and Other includes \$14.0 million of decommissioning and other shutdown costs related to the diesel units. In addition, for the year ended December 31, 2020, Corporate and Other includes \$11.4 million in other operating costs related to our Cheyenne facility.

Quarterly Information
(Unaudited) (Tables)

[Quarterly Financial
Information Disclosure
\[Abstract\]
Schedule Of Quarterly
Information](#)

12 Months Ended
Dec. 31, 2020

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
(In thousands, except per share data)				
Year Ended December 31, 2020				
Sales and other revenues	\$ 3,400,545	\$ 2,062,930	\$ 2,819,400	\$ 2,900,768
Operating costs and expenses	\$ 3,810,847	\$ 2,252,906	\$ 2,846,618	\$ 3,007,011
Loss from operations ⁽¹⁾⁽²⁾	\$ (410,302)	\$ (189,976)	\$ (27,218)	\$ (106,247)
Income (loss) before income taxes	\$ (455,452)	\$ (181,318)	\$ 27,918	\$ (138,194)
Net loss attributable to HollyFrontier stockholders	\$ (304,623)	\$ (176,677)	\$ (2,401)	\$ (117,747)
Net loss per share - basic	\$ (1.88)	\$ (1.09)	\$ (0.01)	\$ (0.73)
Net loss per share - diluted	\$ (1.88)	\$ (1.09)	\$ (0.01)	\$ (0.73)
Dividends per common share	\$ 0.35	\$ 0.35	\$ 0.35	\$ 0.35
Average number of shares of common stock outstanding:				
Basic	161,873	161,889	162,015	162,151
Diluted	161,873	161,889	162,015	162,151
Year Ended December 31, 2019				
Sales and other revenues	\$ 3,897,247	\$ 4,782,615	\$ 4,424,828	\$ 4,381,888
Operating costs and expenses	\$ 3,507,906	\$ 4,450,874	\$ 3,998,049	\$ 4,252,703
Income from operations ⁽³⁾⁽⁴⁾	\$ 389,341	\$ 331,741	\$ 426,779	\$ 129,185
Income before income taxes	\$ 363,991	\$ 306,153	\$ 401,001	\$ 100,359
Net income attributable to HollyFrontier stockholders	\$ 253,055	\$ 196,915	\$ 261,813	\$ 60,602
Net income per share - basic	\$ 1.48	\$ 1.16	\$ 1.60	\$ 0.38
Net income per share - diluted	\$ 1.47	\$ 1.15	\$ 1.58	\$ 0.37
Dividends per common share	\$ 0.33	\$ 0.33	\$ 0.33	\$ 0.33
Average number of shares of common stock outstanding:				
Basic	170,851	169,356	163,676	161,398
Diluted	172,239	170,547	165,011	162,898

(1) For 2020, loss from operations reflects non-cash lower of cost or market inventory valuation charges of \$560.5 million for the first quarter, and benefits of \$149.2 million for the second, third and fourth quarters, respectively.

(2) For 2020, loss from operations reflects non-cash long-lived asset impairment charges of \$436.9 million in the second quarter and goodwill and long-lived asset impairment charges of \$108.4 million in the fourth quarter.

(3) For 2019, income from operations reflects non-cash lower of cost or market inventory valuation benefits of \$232.3 million for the first quarter, and charges of \$30.7 million for the second, third and fourth quarters, respectively.

(4) For 2019, income from operations reflects goodwill impairment charges of \$152.7 million in the second quarter.

Description of Business and Summary of Significant Accounting Policies (Details) \$ in Millions	3 Months Ended		12 Months Ended			
	Jan. 01, 2020 USD (\$)	Jun. 30, 2020 USD (\$)	Dec. 31, 2020 USD (\$) Petroleum_Refineries mi	Dec. 31, 2019 USD (\$)	Dec. 31, 2018 USD (\$)	Nov. 12, 2018
Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]						
Number of refineries located in Tulsa, Oklahoma Petroleum_Refineries			2			
Refinery distance from main city (miles) mi			65			
Impairment of long-lived assets	\$ 232.2					
Decommissioning expense			\$ 24.7			
Severance costs	\$ 3.7		3.8			
Allowance for doubtful accounts			3.4	\$ 4.5		
Asset retirement obligation			42.6	35.9		
Equity in joint ventures			93.2			
Investment in joint venture			120.5			
Deferred turnaround and amortization expense			158.4	141.9	\$ 110.9	
Proceeds from inventory repurchase agreements			44.9	52.1	51.2	
Payments under inventory repurchase agreements			46.4	\$ 49.2	\$ 52.5	
Increase (decrease) in reserve for doubtful accounts	\$ 3.2		2.1			
Business Combination Acquiree Sonneborn						
Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]						
Equity method investment, ownership percentage						100.00%
Corporate Segment						
Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]						
Restructuring and related costs recorded to segments			12.7			
Refining						
Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]						
Restructuring and related costs recorded to segments			24.8			
Inventories						

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Reserve against repair and maintenance inventory \$ 9.0
Transportation vehicles

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Estimated useful life of assets 5 years
Cheyenne

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Equity method investment, ownership percentage 50.00%
Osage Pipeline

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Equity method investment, ownership percentage 50.00%
HEP

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Percentage of ownership in variable interest entity 57.00%
Minimum

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Frequency of maintenance (in years) 2 years
Minimum | Refining Pipeline And Terminal Facilities

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Estimated useful life of assets 15 years
Minimum | Buildings and Improvements

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Estimated useful life of assets 10 years
Minimum | Other fixed assets

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Estimated useful life of assets 5 years
Maximum

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Frequency of maintenance (in years)

5 years

Maximum | Refining Pipeline And Terminal Facilities

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Estimated useful life of assets

32 years

Maximum | Buildings and Improvements

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Estimated useful life of assets

40 years

Maximum | Other fixed assets

Schedule of Organization, Consolidation and Presentation of Financial Statements Disclosure and Significant Accounting Policies [Line Items]

Estimated useful life of assets

30 years

Acquisitions (Details) - USD (\$) \$ in Thousands			11	12 Months Ended				
	Feb. 01, 2019	Aug. 01, 2018	Feb. 01, 2018	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018	Nov. 12, 2018
<u>Business Acquisition [Line Items]</u>								
<u>Goodwill</u>				\$ 2,373,907	\$ 2,293,935	\$ 2,373,907		
<u>Revenues</u>				340,300		2,124,778	\$ 2,195,690	
<u>Income before income taxes</u>				5,100		(116,254)	99,371	
<u>Goodwill impairment</u>					81,867	152,712		
<u>Acquisition incremental direct integration and regulatory costs</u>				\$ 24,200	\$ 2,000	\$ 24,200	\$ 3,600	
<u>Red Giant Oil</u>								
<u>Business Acquisition [Line Items]</u>								
<u>Gross payments to acquire business</u>								
<u>Current assets</u>								
<u>Properties, plants and equipment</u>								
<u>Goodwill</u>								
<u>Current liabilities</u>								
<u>Intangible assets</u>								
<u>Business Combination Acquiree</u>								
<u>Sonneborn</u>								
<u>Business Acquisition [Line Items]</u>								
<u>Percent of capital stock purchased in acquisition</u>								100.00%
<u>Acquisition considerations</u>				\$ 701,600				
<u>Gross payments to acquire business</u>				\$ 662,700				
<u>Cash and cash equivalents</u>								
<u>Current assets</u>								
<u>Properties, plants and equipment</u>								
<u>Goodwill</u>								
<u>Intangibles and other noncurrent assets</u>								
<u>Current liabilities</u>								
<u>Deferred income tax and other long-term liabilities</u>								
<u>Intangibles value in acquisition</u>								

Intangibles amortization period (in years) 12 years

Leases - Narrative (Details) - USD (\$) \$ in Thousands	3 Months Ended	12 Months Ended			
	Jun. 30, 2020	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018	Mar. 31, 2021
Lessee, Lease, Description [Line Items]					
Estimated future lease payments		\$ 7,861			
Gain on sales-type leases	\$ 33,800	\$ 33,834	\$ 0	\$ 0	
Minimum					
Lessee, Lease, Description [Line Items]					
Operating lease term (in years)		1 year			
Maximum					
Lessee, Lease, Description [Line Items]					
Operating lease term (in years)		59 years			
Operating lease extension option (in years)		10 years			
Subsequent Event Forecast					
Lessee, Lease, Description [Line Items]					
Lease not yet commenced, term (in years)					2 years
Estimated future lease payments					\$ 2,600

Leases - Supplemental Balance Sheet Schedule (Details) - USD (\$) \$ in Thousands	Dec. 31, 2020	Dec. 31, 2019
Operating leases:		
Operating lease right-of-use assets	\$ 350,548	\$ 467,109
Operating lease liabilities	97,937	104,415
Noncurrent operating lease liabilities	285,785	364,420
Total operating lease liabilities	383,722	468,835
Finance leases:		
Properties, plants and equipment, at cost	24,321	13,406
Accumulated amortization	\$ (5,713)	\$ (6,233)
Finance Lease, Right-of-Use Asset, Statement of Financial Position [Extensible List]	us-gaap:PropertyPlantAndEquipmentAndFinanceLeaseRightOfUseAssetAfterAccumulatedDepreciationAndAmortization	us-gaap:PropertyPlantAndEquipmentAndFinanceLeaseRightOfUseAssetAfterAccumulatedDepreciationAndAmortization
Properties, plants and equipment, net	\$ 18,608	\$ 7,173
Finance Lease, Liability, Current, Statement of Financial Position [Extensible List]	us-gaap:AccountsPayableAndAccruedLiabilitiesCurrent	us-gaap:AccountsPayableAndAccruedLiabilitiesCurrent
Accrued liabilities	\$ 1,916	\$ 1,567
Operating Lease, Liability, Noncurrent, Statement of Financial Position [Extensible List]	us-gaap:OtherLiabilitiesNoncurrent	us-gaap:OtherLiabilitiesNoncurrent
Other long-term liabilities	\$ 5,097	\$ 5,163
Total finance lease liabilities	\$ 7,013	\$ 6,730
Weighted average remaining lease term (in years)		
Operating leases (in years)	7 years 2 months 12 days	7 years 2 months 12 days
Finance Leases (in years)	3 years 3 months 18 days	8 years 1 month 6 days
Weighted average discount rate		
Operating leases (as a percent)	4.10%	4.00%
Finance leases (as a percent)	5.30%	5.20%

Leases - Components of Lease Expense Schedule (Details) - USD (\$) \$ in Thousands	12 Months Ended	
	Dec. 31, 2020	Dec. 31, 2019
<u>Leases [Abstract]</u>		
<u>Operating lease expense</u>	\$ 121,608	\$ 112,770
<u>Finance lease expense:</u>		
<u>Amortization of right-of-use assets</u>	4,400	1,543
<u>Interest on lease liabilities</u>	415	334
<u>Variable lease cost</u>	3,580	4,449
<u>Total lease expense</u>	\$ 130,003	\$ 119,096

**Leases - Supplemental Cash
Flow Information (Details) -
USD (\$)
\$ in Thousands**

12 Months Ended

	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
--	--------------------------	--------------------------	--------------------------

Cash paid for amounts included in the measurement of lease liabilities:

<u>Operating cash flows from operating leases</u>	\$ 126,313	\$ 116,980	
<u>Operating cash flows from finance leases</u>	415	334	
<u>Financing cash flows from finance leases</u>	2,995	1,551	\$ 0
<u>Operating leases</u>	18,823	121,750	
<u>Finance leases</u>	\$ 4,085	\$ 2,096	

**Leases - Schedule of
Operating and Finance
Lease Maturities (Details) - Dec. 31, 2020 Dec. 31, 2019
USD (\$)
\$ in Thousands**

Operating

<u>2021</u>	\$ 109,756	
<u>2022</u>	91,172	
<u>2023</u>	75,878	
<u>2024</u>	51,859	
<u>2025</u>	12,871	
<u>2025 and thereafter</u>	116,502	
<u>Future minimum lease payments</u>	458,038	
<u>Less: imputed interest</u>	74,316	
<u>Total operating lease liabilities</u>	383,722	\$ 468,835
<u>Less: current obligations</u>	97,937	104,415
<u>Noncurrent operating lease liabilities</u>	285,785	364,420

Finance

<u>2021</u>	2,220	
<u>2022</u>	1,651	
<u>2023</u>	1,686	
<u>2024</u>	1,209	
<u>2025</u>	746	
<u>2025 and thereafter</u>	349	
<u>Future minimum lease payments</u>	7,861	
<u>Less: imputed interest</u>	848	
<u>Total finance lease liabilities</u>	7,013	6,730
<u>Less: current obligations</u>	1,916	1,567
<u>Long-term lease obligations</u>	\$ 5,097	\$ 5,163

**Leases - Schedule of Lease
Income (Details) - USD (\$)
\$ in Thousands**

3 Months Ended	12 Months Ended		
Jun. 30, 2020	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018

Leases [Abstract]

Operating lease revenues

\$ 22,636 \$ 33,242

Gain on sales-type leases

\$ 33,800 33,834 0 \$ 0

Sales-type lease interest income

1,928 0

Lease revenues relating to variable lease payments not included in
measurement of the sales-type lease receivable

\$ 1,690 \$ 0

**Leases - Schedule of
Minimum Undiscounted
Lease Payments (Details)
\$ in Thousands**

**Dec. 31, 2020
USD (\$)**

Operating

<u>2021</u>	\$ 11,586
<u>2022</u>	9,128
<u>2023</u>	9,000
<u>2024</u>	9,000
<u>2025</u>	2,512
<u>Thereafter</u>	0
<u>Total lease payment receipts</u>	41,226

Sales-type

<u>2021</u>	2,955
<u>2022</u>	2,955
<u>2023</u>	2,955
<u>2024</u>	2,955
<u>2025</u>	2,955
<u>Thereafter</u>	27,335
<u>Total lease payment receipts</u>	42,110
<u>Less: imputed interest</u>	(32,262)
<u>Sales-type Lease, Lease Receivable</u>	9,848
<u>Unguaranteed residual assets at end of leases</u>	25,182
<u>Net investment in leases</u>	\$ 35,030

**Leases - Schedule of Net
Investments (Details)
\$ in Thousands**

**Dec. 31, 2020
USD (\$)**

Leases [Abstract]

<u>Lease receivables</u>	\$ 26,045
<u>Unguaranteed residual assets</u>	8,985
<u>Net investment in leases</u>	\$ 35,030

Holly Energy Partners - Narrative (Details) \$/ shares in Units, \$ in Thousands	Jan. 01, 2021 USD (\$)	Feb. 06, 2018 USD (\$)			1	12 Months Ended		
			Jan. 25, 2018 \$/ shares shares	Oct. 31, 2017 USD (\$) shares	Oct. 31, 2019 USD (\$) bbl	Dec. 31, 2020 USD (\$) Customers shares	Dec. 31, 2019 USD (\$) Customers	Dec. 31, 2018 USD (\$) Customers
Schedule of Equity Method Investments [Line Items]								
Number of significant customers Customers						0	0	0
Concentration risk, percentage of total revenues						80.00%		
Barrels of crude oil per day bbl					160,000			
Barrels of crude oil value bbl					1,500,000			
Accrued and unpaid capital expenditures					\$ 65,000	\$ 73,867	\$ 19,752	\$ 28,066
Distributions received (in shares) shares				37,250,000				
Limited partner cash distributions waived				\$ 2,500				
Common units sold under agreement (in shares) shares			3,700,000					
Shares price of shares sold under agreement (in USD per share) \$ / shares			\$ 29.73					
Proceeds received under agreement		\$ 110,000						
Common shares issued under offering program (in shares) shares						2,413,153		
Proceeds from issuance of common shares under issuance program						\$ 82,300		
HEP								
Schedule of Equity Method Investments [Line Items]								
Percentage of ownership interest				2.00%				
Maximum								
Schedule of Equity Method Investments [Line Items]								
Maximum value of limited partner interests available to						\$ 200,000		

[issue and sell under offering program](#)

[UNEV Pipeline](#)

[Schedule of Equity Method Investments \[Line Items\]](#)

[Equity method investment, ownership percentage](#)

75.00%

[Frontier Pipeline](#)

[Schedule of Equity Method Investments \[Line Items\]](#)

[Equity method investment, ownership percentage](#)

50.00%

[HEP](#)

[Schedule of Equity Method Investments \[Line Items\]](#)

[Percentage of ownership in variable interest entity](#)

57.00%

[Number of significant customers | Customers](#)

2

[Minimum annualized payments under agreement](#)

\$ 351,100

[HEP | Subsequent Event](#)

[Schedule of Equity Method Investments \[Line Items\]](#)

[Minimum annualized payments under agreement](#)

\$
341,900

Revenues - Disaggregated (Details) - USD (\$) \$ in Thousands	3 Months Ended							12 Months Ended			
	Dec. 31, 2020	Sep. 30, 2020	Jun. 30, 2020	Mar. 31, 2020	Dec. 31, 2019	Sep. 30, 2019	Jun. 30, 2019	Mar. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>	\$ 2,900,768	\$ 2,819,400	\$ 2,062,930	\$ 3,400,545	\$ 4,381,888	\$ 4,424,828	\$ 4,782,615	\$ 3,897,247	\$ 11,183,643	\$ 17,486,578	\$ 17,714,666
<u>Mid-Continent</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									5,096,268	8,424,191	8,427,200
<u>Southwest</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									2,310,432	3,621,273	3,772,278
<u>Rocky Mountains</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									1,311,416	2,208,541	2,476,044
<u>Northeast</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									552,069	578,932	339,407
<u>Canada</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									616,683	721,169	732,321
<u>Europe, Asia and Latin America</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									268,472	288,906	201,497
<u>Transportation Fuels</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									7,825,625	12,952,899	13,326,654
<u>Specialty Lubricant Products</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									1,657,344	1,864,450	1,636,859
<u>Asphalt, Fuel, Oil And Other Products</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									672,371	1,025,663	985,234
<u>Refined Product</u>											
Disaggregation of Revenue											
[Line Items]											
<u>Revenues from external customers</u>									10,155,340	15,843,012	15,948,747

Crude Oil			
<u>Disaggregation of Revenue</u>			
<u>[Line Items]</u>			
<u>Revenues from external customers</u>	884,248	1,470,148	1,597,321
<u>Transportation and logistic services</u>			
<u>Disaggregation of Revenue</u>			
<u>[Line Items]</u>			
<u>Revenues from external customers</u>	98,039	121,027	108,412
<u>Other Revenues, Products Of Petroleum And Coal</u>			
<u>Disaggregation of Revenue</u>			
<u>[Line Items]</u>			
<u>Revenues from external customers</u>	46,016	52,391	60,186
<u>Other Segments Asphalt, Fuel, Oil And Other Products</u>			
<u>Disaggregation of Revenue</u>			
<u>[Line Items]</u>			
<u>Revenues from external customers</u>	135,400	216,800	162,600
<u>Corporate and Other Transportation Fuels</u>			
<u>Disaggregation of Revenue</u>			
<u>[Line Items]</u>			
<u>Revenues from external customers</u>	1,600		
<u>Corporate and Other Asphalt, Fuel, Oil And Other Products</u>			
<u>Disaggregation of Revenue</u>			
<u>[Line Items]</u>			
<u>Revenues from external customers</u>	3,500		
<u>Refining Asphalt, Fuel, Oil And Other Products</u>			
<u>Disaggregation of Revenue</u>			
<u>[Line Items]</u>			
<u>Revenues from external customers</u>	\$ 533,500	\$ 808,900	\$ 822,600

**Revenues - Changes to
Contract (Details) - USD (\$)
\$ in Thousands**

**12 Months Ended
Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018**

Revenue from Contract with Customer [Abstract]

<u>Balance at beginning of period</u>	\$ 4,652	\$ 132	\$ 179
<u>Sonneborn acquisition</u>	0	6,463	0
<u>Increase</u>	28,746	26,751	6,748
<u>Recognized as revenue</u>	(26,660)	(28,694)	(6,795)
<u>Balance at end of period</u>	\$ 6,738	\$ 4,652	\$ 132

**Revenues - Future
Performance Obligations
(Details)
\$ in Thousands**

12 Months Ended
Dec. 31, **Dec. 31,** **Dec. 31,**
2020 **2019** **2018**
USD (\$) **Customers** **Customers**
Customers

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

<u>Remaining performance obligation revenues</u>	\$ 57,582		
<u>Concentration risk, number of significant customers Customers</u>	0	0	0
<u>Third-Party Customer</u>			

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

<u>Remaining performance obligation revenues</u>	\$ 53,606		
<u>Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction, Start Date [Axis]: 2021-01-01</u>			

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

<u>Remaining performance obligation revenues</u>	\$ 19,318		
<u>Satisfaction period</u>	1 year		
<u>Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction, Start Date [Axis]: 2021-01-01 Third-Party Customer</u>			

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

<u>Remaining performance obligation revenues</u>	\$ 22,041		
<u>Satisfaction period</u>	1 year		
<u>Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction, Start Date [Axis]: 2022-01-01</u>			

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

<u>Remaining performance obligation revenues</u>	\$ 13,771		
<u>Satisfaction period</u>	1 year		
<u>Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction, Start Date [Axis]: 2022-01-01 Third-Party Customer</u>			

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

<u>Remaining performance obligation revenues</u>	\$ 11,053		
<u>Satisfaction period</u>	1 year		
<u>Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction, Start Date [Axis]: 2023-01-01</u>			

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

<u>Remaining performance obligation revenues</u>	\$ 12,795		
<u>Satisfaction period</u>	1 year		
<u>Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction, Start Date [Axis]: 2023-01-01 Third-Party Customer</u>			

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

Remaining performance obligation revenues \$ 9,000

Satisfaction period 1 year

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction, Start Date [Axis]: 2024-01-01

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

Remaining performance obligation revenues \$ 11,698

Satisfaction period

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction, Start Date [Axis]: 2024-01-01 | Third-Party Customer

Revenue, Remaining Performance Obligation, Expected Timing of Satisfaction [Line Items]

Remaining performance obligation revenues \$ 11,512

Satisfaction period

Fair Value Measurements
(Details) - USD (\$)
\$ in Thousands

Dec. 31, 2020 **Dec. 31, 2019**

Carrying Value

Debt Instrument [Line Items]

Financial Instruments Assets \$ 275 \$ 17,588

Financial Instruments Liabilities 23,978 14,215

Level 1

Debt Instrument [Line Items]

Financial Instruments Assets 0 0

Financial Instruments Liabilities 418 2,578

Level 2

Debt Instrument [Line Items]

Financial Instruments Assets 275 17,588

Financial Instruments Liabilities 23,560 11,637

Level 3

Debt Instrument [Line Items]

Financial Instruments Assets 0 0

Financial Instruments Liabilities 0 0

NYMEX futures contracts | Carrying Value

Debt Instrument [Line Items]

Financial Instruments Liabilities 418 2,578

NYMEX futures contracts | Level 1

Debt Instrument [Line Items]

Financial Instruments Liabilities 418 2,578

NYMEX futures contracts | Level 2

Debt Instrument [Line Items]

Financial Instruments Liabilities 0 0

NYMEX futures contracts | Level 3

Debt Instrument [Line Items]

Financial Instruments Liabilities 0 0

Commodity contracts | Carrying Value

Debt Instrument [Line Items]

Financial Instruments Assets 275 13,455

Financial Instruments Liabilities 359 1,230

Commodity contracts | Level 1

Debt Instrument [Line Items]

Financial Instruments Assets 0 0

Financial Instruments Liabilities 0 0

Commodity contracts | Level 2

Debt Instrument [Line Items]

Financial Instruments Assets 275 13,455

Financial Instruments Liabilities 359 1,230

Commodity contracts | Level 3

Debt Instrument [Line Items]

Financial Instruments Assets 0 0

Financial Instruments Liabilities 0 0

Forward gasoline and diesel contracts - long | Carrying Value

Debt Instrument [Line Items]

Financial Instruments Assets 4,133

Financial Instruments Liabilities 196 3,685

Forward gasoline and diesel contracts - long | Level 1

Debt Instrument [Line Items]

Financial Instruments Assets 0

Financial Instruments Liabilities 0 0

Forward gasoline and diesel contracts - long | Level 2

Debt Instrument [Line Items]

Financial Instruments Assets 4,133

Financial Instruments Liabilities 196 3,685

Forward gasoline and diesel contracts - long | Level 3

Debt Instrument [Line Items]

Financial Instruments Assets 0

Financial Instruments Liabilities 0 0

Foreign currency forward contracts | Carrying Value

Debt Instrument [Line Items]

Financial Instruments Liabilities 23,005 6,722

Foreign currency forward contracts | Level 1

Debt Instrument [Line Items]

Financial Instruments Liabilities 0 0

Foreign currency forward contracts | Level 2

Debt Instrument [Line Items]

Financial Instruments Liabilities 23,005 6,722

Foreign currency forward contracts | Level 3

Debt Instrument [Line Items]

Financial Instruments Liabilities \$ 0 \$ 0

Earnings Per Share - Schedule Of Earnings Per Share (Details) - USD (\$) \$/ shares in Units, shares in Thousands, \$ in Thousands	3 Months Ended								12 Months Ended		
	Dec. 31, 2020	Sep. 30, 2020	Jun. 30, 2020	Mar. 31, 2020	Dec. 31, 2019	Sep. 30, 2019	Jun. 30, 2019	Mar. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
<u>Earnings Per Share</u>											
<u>[Abstract]</u>											
<u>Net income (loss) attributable to HollyFrontier stockholders</u>	\$ (117,747)	\$ (2,401)	\$ (176,677)	\$ (304,623)	\$ 60,605	\$ 261,813	\$ 196,915	\$ 253,055	\$ (601,448)	\$ 772,388	\$ 1,097,960
<u>Participating securities' share in earnings</u>									1,811	1,034	3,714
<u>Net income (loss) attributable to common shares</u>									\$ (603,259)	\$ 771,354	\$ 1,094,246
<u>Average number of shares of common stock outstanding</u>	162,151	162,015	161,889	161,873	161,398	163,676	169,356	170,851	161,983	166,287	175,009
<u>Effect of dilutive variable restricted shares and performance share units</u>									0	1,098	1,652
<u>Average number of shares of common stock outstanding assuming dilution</u>	162,151	162,015	161,889	161,873	162,898	165,011	170,547	172,239	161,983	167,385	176,661
<u>Basic earnings (loss) per share (in USD per share)</u>	\$ (0.73)	\$ (0.01)	\$ (1.09)	\$ (1.88)	\$ 0.38	\$ 1.60	\$ 1.16	\$ 1.48	\$ (3.72)	\$ 4.64	\$ 6.25
<u>Diluted earnings (loss) per share (in USD per share)</u>	\$ (0.73)	\$ (0.01)	\$ (1.09)	\$ (1.88)	\$ 0.37	\$ 1.58	\$ 1.15	\$ 1.47	\$ (3.72)	\$ 4.61	\$ 6.19
<u>Excludes anti-dilutive restricted and performance share units (in shares)</u>									1,082	302	238

**Stock-Based Compensation -
Narrative (Details) - USD (\$)**
\$ / shares in Units, \$ in
Millions

12 Months Ended

**Dec. 31, 2020 Dec. 31,
2019 Dec. 31,
2018**

Share-based Compensation Arrangement by Share-based Payment

Award [Line Items]

<u>Compensation cost attributable to share-based compensation plans</u>	\$ 29.7	\$ 41.5	\$ 39.0
<u>Payment equal to stock award value</u>	\$ 1.3	\$ 1.7	\$ 0.1
<u>Restricted stock purchased (in shares)</u>	55,222	32,648	2,481

Restricted Stock

Share-based Compensation Arrangement by Share-based Payment

Award [Line Items]

<u>Grant date fair value of restricted stock vested</u>	\$ 28.2	\$ 30.9	\$ 30.0
<u>Weighted average grant date fair value</u>	\$ 51.40		
<u>Unrecognized compensation cost related to non-vested grants</u>	\$ 40.4		
<u>Unrecognized compensation cost, weighted-average period of recognition (in years)</u>	1 year 8 months 12 days		
<u>Grant date fair value (in USD per share)</u>	\$ 29.76	\$ 53.30	

Restricted Stock Units (RSUs)

Share-based Compensation Arrangement by Share-based Payment

Award [Line Items]

<u>Weighted average grant date fair value</u>		\$ 52.62	\$ 64.96
<u>Performance Shares</u>			

Share-based Compensation Arrangement by Share-based Payment

Award [Line Items]

<u>Grant date fair value of restricted stock vested</u>		\$ 7.3	\$ 8.8
<u>Unrecognized compensation cost related to non-vested grants</u>	\$ 14.5		
<u>Unrecognized compensation cost, weighted-average period of recognition (in years)</u>	2 years 6 months		
<u>Common stock issued (in shares)</u>	296,801		
<u>Percent payout on vested shares</u>	150.00%		
<u>Common stock fair value on grant date</u>	\$ 6.2		
<u>Grant date fair value (in USD per share)</u>	\$ 35.45		

Minimum | Performance Shares

Share-based Compensation Arrangement by Share-based Payment

Award [Line Items]

<u>Percentage of target</u>	0.00%		
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Maximum | Restricted Stock

Share-based Compensation Arrangement by Share-based Payment

Award [Line Items]

<u>Stock vesting period (in years)</u>	3 years		
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Maximum | Performance Shares

Share-based Compensation Arrangement by Share-based Payment

Award [Line Items]

<u>Stock vesting period (in years)</u>	3 years		
<u>Percentage of target</u>	200.00%		
<u>HEP</u>			
<u>Share-based Compensation Arrangement by Share-based Payment Award [Line Items]</u>			
<u>Compensation cost attributable to share-based compensation plans</u>	\$ 2.2	\$ 2.5	\$ 3.2

**Stock-Based Compensation -
Summary Of Restricted
Stock Activity (Details) -
Restricted Stock
\$ / shares in Units, \$ in
Thousands**

**12 Months
Ended
Dec. 31, 2020
USD (\$)
\$ / shares
shares**

Share-based Compensation Arrangement by Share-based Payment Award [Line Items]

<u>Shares at beginning of period (in shares) shares</u>	1,101,781
<u>Granted (in shares) shares</u>	1,574,929
<u>Vested (in shares) shares</u>	(549,144)
<u>Forfeited (in shares) shares</u>	(89,971)
<u>Converted from performance shares (in shares) shares</u>	19,450
<u>Shares at end of period (in shares) shares</u>	2,057,045
<u>Weighted average grant date fair value of restricted stock at beginning of period (in USD per share) \$ / shares</u>	\$ 53.30
<u>Weighted average grant date fair value of restricted stock granted (in USD per share) \$ / shares</u>	22.20
<u>Weighted average grant date fair value of restricted stock vested (in USD per share) \$ / shares</u>	51.40
<u>Weighted average grant date fair value of restricted stock forfeited (in USD per share) \$ / shares</u>	53.66
<u>Weighted average grant date fair value of restricted stock converted from performance shares (in USD per share) \$ / shares</u>	38.13
<u>Weighted average grant date fair value of restricted stock at end of period (in USD per share) \$ / shares</u>	\$ 29.76
<u>Aggregate intrinsic value of restricted stock \$</u>	\$ 53,175

**Stock-Based Compensation -
Summary Of Performance
Share Unit Activity (Details)
- Performance Shares**

**12 Months Ended
Dec. 31, 2020
shares**

Share-based Compensation Arrangement by Share-based Payment Award [Line Items]

<u>Shares at beginning of period (in shares)</u>	375,588
<u>Granted (in shares)</u>	434,378
<u>Vested (in shares)</u>	(124,303)
<u>Forfeited (in shares)</u>	(31,009)
<u>Converted from restricted shares (in shares)</u>	(19,450)
<u>Shares at end of period (in shares)</u>	635,204

**Inventories - Inventory
Components Schedule
(Details) - USD (\$)
\$ in Thousands**

Dec. 31, 2020 Dec. 31, 2019

Inventory, Net [Abstract]

<u>Crude oil</u>	\$ 451,967	\$ 489,169
<u>Other raw materials and unfinished products</u>	260,495	394,045
<u>Finished products</u>	572,258	639,938
<u>Lower of cost or market reserve</u>	(318,862)	(240,363)
<u>Process chemicals</u>	35,006	36,786
<u>Repairs and maintenance supplies and other</u>	172,612	154,627
<u>Total inventory</u>	\$ 1,173,476	\$ 1,474,202

Inventories - Narrative (Details) - USD (\$) \$ in Thousands	3 Months Ended						12 Months Ended				
	Dec. 31, 2020	Sep. 30, 2020	Jun. 30, 2020	Sep. 30, 2019	Mar. 31, 2019	Jun. 30, 2018	Mar. 31, 2018	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2017
<u>Inventory, Net [Abstract]</u>											
<u>Inventory valuation reserves</u>	\$							\$	\$		
	318,862							318,862	240,363		
<u>Lower of cost or market inventory valuation adjustment</u>	\$	\$	\$		\$			78,499	\$	\$	
	149,200	62,800	269,900		232,300			(119,775)	136,305		
<u>Increase (decrease) in costs of products sold</u>				\$		\$	\$	\$			\$
				36,600		25,300	33,800	36,900			37,900

**Properties, Plants and
Equipment - Components Of
Property, Plants And
Equipment (Details) - USD
(\$)**

Dec. 31, 2020 Dec. 31, 2019

\$ in Thousands

Property, Plant and Equipment [Line Items]

Properties, plants and equipment, at cost \$ 7,299,517 \$ 7,237,297

Accumulated depreciation (2,726,378) (2,414,585)

Properties, plants and equipment, net 4,573,139 4,822,712

Land, buildings and improvements

Property, Plant and Equipment [Line Items]

Properties, plants and equipment, at cost 517,829 447,547

Refining facilities

Property, Plant and Equipment [Line Items]

Properties, plants and equipment, at cost 4,202,524 4,258,764

Pipelines and terminals

Property, Plant and Equipment [Line Items]

Properties, plants and equipment, at cost 1,786,279 1,775,657

Transportation vehicles

Property, Plant and Equipment [Line Items]

Properties, plants and equipment, at cost 26,715 27,214

Other fixed assets

Property, Plant and Equipment [Line Items]

Properties, plants and equipment, at cost 400,159 540,953

Construction in progress

Property, Plant and Equipment [Line Items]

Properties, plants and equipment, at cost \$ 366,011 \$ 187,162

**Properties, Plants and
Equipment - Narrative
(Details) - USD (\$)
\$ in Millions**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Property, Plant and Equipment [Abstract]

<u>Capitalized interest</u>	\$ 4.1	\$ 2.5	\$ 4.8
<u>Depreciation expense</u>	\$ 333.0	\$ 334.2	\$ 309.0

**Goodwill, Long-lived Asset
and Intangibles - Schedule
Segments Of Goodwill
(Details) - USD (\$)
\$ in Thousands**

**12 Months Ended
Dec. 31, 2020 Dec. 31, 2019**

Goodwill [Line Items]

<u>Goodwill</u>	\$ 2,837,832	\$ 2,835,937
<u>Accumulated impairment losses</u>	(543,897)	(462,030)
<u>Total goodwill</u>	2,293,935	2,373,907
<u>Foreign currency translation adjustment</u>	1,895	
<u>Current year impairment losses</u>	(81,867)	(152,712)

HEP

Goodwill [Line Items]

<u>Goodwill</u>	312,873	312,873
<u>Accumulated impairment losses</u>	0	0
<u>Total goodwill</u>	312,873	312,873
<u>Foreign currency translation adjustment</u>	0	
<u>Current year impairment losses</u>	0	

Refining

Goodwill [Line Items]

<u>Goodwill</u>	2,042,790	2,042,790
<u>Accumulated impairment losses</u>	(309,318)	(309,318)
<u>Total goodwill</u>	1,733,472	1,733,472
<u>Foreign currency translation adjustment</u>	0	
<u>Current year impairment losses</u>	0	

Lubricants and Specialty Products

Goodwill [Line Items]

<u>Goodwill</u>	482,169	480,274
<u>Accumulated impairment losses</u>	(234,579)	(152,712)
<u>Total goodwill</u>	247,590	\$ 327,562
<u>Foreign currency translation adjustment</u>	1,895	
<u>Current year impairment losses</u>	\$ (81,867)	

**Goodwill, Long-lived Asset
and Intangibles - Schedule of
Intangible Assets Carrying
Amounts (Details) - USD (\$)
\$ in Thousands**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019

Finite-Lived Intangible Assets [Line Items]

<u>Intangible assets</u>	\$ 456,826	\$ 460,275
<u>Accumulated amortization</u>	(122,024)	(86,768)
<u>Total intangibles, net</u>	334,802	373,507

Customer relationships

Finite-Lived Intangible Assets [Line Items]

<u>Intangible assets</u>	\$ 239,773	245,479
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Customer relationships | Minimum

Finite-Lived Intangible Assets [Line Items]

<u>Useful life (in years)</u>	10 years
-------------------------------	----------

Customer relationships | Maximum

Finite-Lived Intangible Assets [Line Items]

<u>Useful life (in years)</u>	20 years
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Transportation agreements

Finite-Lived Intangible Assets [Line Items]

<u>Intangible assets</u>	\$ 59,933	59,933
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<u>Useful life (in years)</u>	30 years
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Trademarks, patents and other

Finite-Lived Intangible Assets [Line Items]

<u>Intangible assets</u>	\$ 157,120	\$ 154,863
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Trademarks, patents and other | Minimum

Finite-Lived Intangible Assets [Line Items]

<u>Useful life (in years)</u>	10 years
-------------------------------	----------

Trademarks, patents and other | Maximum

Finite-Lived Intangible Assets [Line Items]

<u>Useful life (in years)</u>	20 years
-------------------------------	----------

Goodwill, Long-lived Asset and Intangibles - Narrative (Details) - USD (\$)	3 Months Ended			12 Months Ended		
	Dec. 31, 2020	Jun. 30, 2020	Jun. 30, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Goodwill and Intangible Assets [Line Items]						
<u>Goodwill</u>	\$ 2,293,935,000			\$ 2,293,935,000	\$ 2,373,907,000	
<u>Impairment of long-lived assets</u>		\$ 232,200,000				
<u>Long-lived asset impairment charges</u>	26,500,000					
<u>Goodwill impairment charges</u>	108,400,000	436,900,000	\$ 152,712,000	545,293,000	152,712,000	\$ 0
<u>Amortization expense</u>				34,100,000	33,800,000	\$ 16,600,000
<u>Estimated amortization expense</u>	34,100,000			34,100,000		
<u>Lubricants and Specialty Products</u>						
Goodwill and Intangible Assets [Line Items]						
<u>Goodwill</u>	247,590,000			\$ 247,590,000	\$ 327,562,000	
<u>Goodwill impairment charges</u>	\$ 81,900,000					
<u>Cheyenne</u>						
Goodwill and Intangible Assets [Line Items]						
<u>Impairment of long-lived assets</u>		232,200,000				
<u>Business Combination Acquiree PCLI</u>						
Goodwill and Intangible Assets [Line Items]						
<u>Impairment of long-lived assets</u>		\$ 204,700,000				

**Environmental (Details) -
USD (\$)
\$ in Millions**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Loss Contingencies [Line Items]

Environmental remediation costs \$ 7.1 \$ 11.2 \$ 14.8

Accrued environmental liability \$ 115.0 117.7

Period for environmental remediation (in years) 30 years

Other Noncurrent Liabilities

Loss Contingencies [Line Items]

Accrued environmental liability \$ 94.0 \$ 95.6

Debt - Narrative (Details) - USD (\$)	1 Months Ended		3 Months Ended	12 Months Ended			
	Feb. 05, 2020	Dec. 31, 2018	Mar. 31, 2020	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, Sep. 28, 2020 2018	Feb. 04, 2020
Debt Instrument [Line Items]							
Maximum borrowing capacity under revolving credit agreement				\$			
				1,350,000,000			
Letters of credit amount outstanding				\$			
				5,700,000			
Effective interest rate on debt				2.58%		4.24%	
Senior notes principal amount				\$		\$	
				1,750,000,000		1,000,000,000	
Financing arrangement sale leaseback proceeds		\$					
		32,500,000					
Fair value of financing arrangements					43,900,000	40,000,000.0	
Redemption cost	\$						
	522,500,000						
Loss on early extinguishment of debt			\$				
			25,900,000	(25,915,000)	0		\$ 0
Debt redemption premium			\$				
			22,500,000				
Unamortized discount HEP				12,885,000	6,391,000		\$ 3,400,000
Debt Instrument [Line Items]							
Maximum borrowing capacity under revolving credit agreement					1,400,000,000		
Proceeds from line of credit				258,500,000			
Repayments of lines of credit HEP Credit Agreement				(310,500,000)			
Senior notes principal amount				913,500,000	965,500,000		
Unamortized discount				500,000,000	500,000,000		
Letter of Credit HEP				7,897,000	3,469,000		
Debt Instrument [Line Items]							
Line of credit accordion feature value					300,000,000		
5.875% Senior Notes							
Debt Instrument [Line Items]							
Senior notes principal amount				\$		1,000,000,000	
				1,000,000,000			
Stated interest rate				5.875%			
6.00% Senior Notes							
Debt Instrument [Line Items]							
Effective interest rate on debt							6.00%

Stated interest rate	6.00%		
6.00% Senior Notes HEP			
Debt Instrument [Line Items]			
Senior notes principal amount	\$ 0	500,000,000	\$ 500,000,000.0
5.00% Senior Notes			
Debt Instrument [Line Items]			
Effective interest rate on debt			5.00%
Stated interest rate	5.00%		
Aggregate principal amount of senior note			\$ 500,000,000.0
5.00% Senior Notes HEP			
Debt Instrument [Line Items]			
Senior notes principal amount	\$ 500,000,000 0		
2.625% Senior Notes			
Debt Instrument [Line Items]			
Senior notes principal amount	\$ 350,000,000 0		\$ 350,000,000.0
Stated interest rate	0.02625%		2.625%
4.500% Senior Notes			
Debt Instrument [Line Items]			
Senior notes principal amount	\$ 400,000,000 \$ 0		\$ 400,000,000.0
Stated interest rate	4.50%		4.50%
Maximum Letter of Credit HEP			
Debt Instrument [Line Items]			
Line of credit, maximum capacity available	\$ 50,000,000		
Alternative A Minimum			
Debt Instrument [Line Items]			
Credit agreement interest rate Alternative A Maximum	0.125%		
Debt Instrument [Line Items]			
Credit agreement interest rate Alternative B Minimum	1.00%		
Debt Instrument [Line Items]			
Credit agreement interest rate Alternative B Maximum	1.125%		
Debt Instrument [Line Items]			
Credit agreement interest rate Alternative C Minimum	2.00%		

**Debt Instrument [Line
Items]**

Credit agreement interest rate

1.125%

Alternative C | Maximum

**Debt Instrument [Line
Items]**

Credit agreement interest rate

2.00%

**Debt - Carrying Amounts Of
Long-Term Debt (Details) -
USD (\$)
\$ in Thousands**

Dec. 31, 2020 Sep. 28, 2020 Feb. 04, 2020 Dec. 31, 2019

Debt Instrument [Line Items]

<u>Senior notes principal amount</u>	\$ 1,750,000		\$ 1,000,000
<u>Unamortized discount and debt issuance costs</u>	(12,885)	\$ (3,400)	(6,391)
<u>Total HollyFrontier long-term debt</u>	1,737,115		993,609
<u>Total long-term debt</u>	3,142,718		2,455,640
<u>Senior notes</u>	1,903,867		1,127,610

HEP

Debt Instrument [Line Items]

<u>Senior notes principal amount</u>	500,000		500,000
<u>Unamortized discount and debt issuance costs</u>	(7,897)		(3,469)
<u>HEP Credit Agreement</u>	913,500		965,500
<u>Total long-term debt</u>	1,405,603		1,462,031
<u>Senior notes</u>	506,540		522,045

5.875% Senior Notes

Debt Instrument [Line Items]

<u>Senior notes principal amount</u>	\$ 1,000,000		1,000,000
<u>Stated interest rate</u>	5.875%		

6.00% Senior Notes

Debt Instrument [Line Items]

<u>Stated interest rate</u>	6.00%		
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6.00% Senior Notes | HEP

Debt Instrument [Line Items]

<u>Senior notes principal amount</u>	\$ 0	\$ 500,000	500,000
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2.625% Senior Notes

Debt Instrument [Line Items]

<u>Senior notes principal amount</u>	\$ 350,000	\$ 350,000	0
<u>Stated interest rate</u>	0.02625%	2.625%	

4.500% Senior Notes

Debt Instrument [Line Items]

<u>Senior notes principal amount</u>	\$ 400,000	\$ 400,000	0
<u>Stated interest rate</u>	4.50%	4.50%	

5.00% Senior Notes

Debt Instrument [Line Items]

<u>Stated interest rate</u>	5.00%		
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5.00% Senior Notes | HEP

Debt Instrument [Line Items]

<u>Senior notes principal amount</u>	\$ 500,000		\$ 0
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Debt - Principal Maturities
Of Long-Term Debt (Details) **Dec. 31, 2020**
\$ in Thousands **USD (\$)**

Debt Disclosure [Abstract]

<u>2021</u>	\$ 0
<u>2022</u>	913,500
<u>2023</u>	350,000
<u>2024</u>	0
<u>2025</u>	0
<u>Thereafter</u>	1,900,000
<u>Total</u>	\$ 3,163,500

Derivative Instruments and Hedging Activities- Location of Gain Loss in Income Statement (Details) - USD (\$) \$ in Thousands	3 Months Ended						12 Months Ended				
	Dec. 31, 2020	Sep. 30, 2020	Jun. 30, 2020	Mar. 31, 2020	Dec. 31, 2019	Sep. 30, 2019	Jun. 30, 2019	Mar. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
<u>Derivative Instruments, Gain (Loss) [Line Items]</u>											
<u>Commodity contracts</u>									\$ (4,871)	\$ (5,349)	\$ 11,221
<u>Sales and other revenues</u>	\$ 2,900,768	\$ 2,819,400	\$ 2,062,930	\$ 3,400,545	\$ 4,381,888	\$ 4,424,828	\$ 4,782,615	\$ 3,897,247	11,183,643	17,486,578	17,714,666
<u>Cost of products sold</u>									9,158,805	13,918,384	13,940,782
<u>Operating expenses</u>									1,300,277	1,394,052	1,285,838
<u>Commodity contracts</u>											
<u>Derivative Instruments, Gain (Loss) [Line Items]</u>											
<u>Commodity contracts</u>									(4,871)	(5,349)	11,221
<u>Reclassification out of Accumulated Other Comprehensive Income</u>											
<u>Derivative Instruments, Gain (Loss) [Line Items]</u>											
<u>Total reclassified into earnings</u>									(2,604)	19,713	(6,055)
<u>Reclassification out of Accumulated Other Comprehensive Income Commodity contracts</u>											
<u>Derivative Instruments, Gain (Loss) [Line Items]</u>											
<u>Sales and other revenues</u>									(5,168)	(1,799)	(5,093)
<u>Cost of products sold</u>									4,281	22,876	0
<u>Operating expenses</u>									\$ (1,717)	\$ (1,364)	\$ (962)

**Derivative Instruments and
Hedging Activities - Pre-tax
effect on Income Due to
Maturities and Fair Value
Adjustments of Economic
Hedges (Details) - USD (\$)
\$ in Thousands**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Derivative Instruments, Gain (Loss) [Line Items]

Derivatives not designated as hedging instruments \$ 7,096 \$ (32,332) \$ 58,291

Cost of products sold

Derivative Instruments, Gain (Loss) [Line Items]

Derivatives not designated as hedging instruments 18,646 (8,475) 16,655

Interest expense

Derivative Instruments, Gain (Loss) [Line Items]

Derivatives not designated as hedging instruments (4,250) (6,427) (198)

Gain on foreign currency transactions

Derivative Instruments, Gain (Loss) [Line Items]

Derivatives not designated as hedging instruments \$ (7,300) \$ (17,430) \$ 41,834

**Derivative Instruments and
Hedging Activities - Notional
Contracts by Derivative
Type (Details) - 12 months
ended Dec. 31, 2020
bbl in Thousands, MMBTU
in Millions**

**USD (\$
MMBTU XPT (
bbl)**

[Derivatives designated as hedging instruments: | Natural gas price swaps - long
economic hedges by derivative type \[Line Items\]](#)

[Derivative nonmonetary notional amount \(in MMBTUs\) | MMBTU](#) 1.8

[Derivatives not designated as hedging instruments: | NYMEX futures \(WTI\) - short
economic hedges by derivative type \[Line Items\]](#)

[Derivative nonmonetary notional amount \(in barrels\)](#) 160

[Derivatives not designated as hedging instruments: | Forward gasoline and diesel contracts
- long](#)

[economic hedges by derivative type \[Line Items\]](#)

[Derivative nonmonetary notional amount \(in barrels\)](#) 195

[Derivatives not designated as hedging instruments: | Foreign currency forward contracts
economic hedges by derivative type \[Line Items\]](#)

[Derivative notional amount | \\$](#) \$
418,192,532

[Derivatives not designated as hedging instruments: | Forward commodity contracts
\(platinum\)](#)

[economic hedges by derivative type \[Line Items\]](#)

[Derivative notional amount |](#) 40,867

**Derivative Instruments and
Hedging Activities -
Summary Of Balance Sheet
Locations And Related Fair
Values Of Outstanding
Derivative Instruments
(Details) - USD (\$)
\$ in Thousands**

	Dec. 31, 2020	Dec. 31, 2019
<u>Derivatives in Net Asset Position</u>		
<u>Net Assets Recognized in Balance Sheet</u>	\$ 275	\$ 17,588
<u>Derivatives in Net Liability Position</u>		
<u>Net Liabilities Recognized in Balance Sheet</u>	23,978	14,215
<u>Prepayment and other</u>		
<u>Derivatives in Net Asset Position</u>		
<u>Net Assets Recognized in Balance Sheet</u>	275	17,588
<u>Accrued liabilities</u>		
<u>Derivatives in Net Liability Position</u>		
<u>Net Liabilities Recognized in Balance Sheet</u>	23,978	12,985
<u>Other long-term liabilities</u>		
<u>Derivatives in Net Liability Position</u>		
<u>Net Liabilities Recognized in Balance Sheet</u>		1,230
<u>Derivatives designated as hedging instruments:</u>		
<u>Derivatives in Net Asset Position</u>		
<u>Gross Assets</u>	0	7,526
<u>Gross Liabilities Offset in Balance Sheet</u>	0	(1,784)
<u>Net Assets Recognized in Balance Sheet</u>	0	5,742
<u>Derivatives in Net Liability Position</u>		
<u>Gross Liabilities</u>	359	1,230
<u>Gross Assets Offset in Balance Sheet</u>	0	0
<u>Net Liabilities Recognized in Balance Sheet</u>	359	1,230
<u>Derivatives designated as hedging instruments: Commodity contracts</u>		
<u>Derivatives in Net Asset Position</u>		
<u>Gross Assets</u>	0	7,526
<u>Gross Liabilities Offset in Balance Sheet</u>	0	(1,784)
<u>Net Assets Recognized in Balance Sheet</u>	0	5,742
<u>Derivatives in Net Liability Position</u>		
<u>Gross Liabilities</u>	359	1,230
<u>Gross Assets Offset in Balance Sheet</u>	0	0
<u>Net Liabilities Recognized in Balance Sheet</u>	359	1,230
<u>Derivatives not designated as hedging instruments:</u>		
<u>Derivatives in Net Asset Position</u>		
<u>Gross Assets</u>	275	11,846
<u>Gross Liabilities Offset in Balance Sheet</u>	0	0
<u>Net Assets Recognized in Balance Sheet</u>	275	11,846

Derivatives in Net Liability Position

<u>Gross Liabilities</u>	23,619	12,985
<u>Gross Assets Offset in Balance Sheet</u>	0	0
<u>Net Liabilities Recognized in Balance Sheet</u>	23,619	12,985

Derivatives not designated as hedging instruments: | NYMEX futures contracts

Derivatives in Net Asset Position

<u>Gross Assets</u>	0	0
<u>Gross Liabilities Offset in Balance Sheet</u>	0	0
<u>Net Assets Recognized in Balance Sheet</u>	0	0

Derivatives in Net Liability Position

<u>Gross Liabilities</u>	418	2,578
<u>Gross Assets Offset in Balance Sheet</u>	0	0
<u>Net Liabilities Recognized in Balance Sheet</u>	418	2,578

Derivatives not designated as hedging instruments: | Commodity price swap contracts

Derivatives in Net Asset Position

<u>Gross Assets</u>		7,713
<u>Gross Liabilities Offset in Balance Sheet</u>		0
<u>Net Assets Recognized in Balance Sheet</u>		7,713

Derivatives in Net Liability Position

<u>Gross Liabilities</u>		0
<u>Gross Assets Offset in Balance Sheet</u>		0
<u>Net Liabilities Recognized in Balance Sheet</u>		0

Derivatives not designated as hedging instruments: | Forward gasoline and diesel contracts - long

Derivatives in Net Asset Position

<u>Gross Assets</u>	275	4,133
<u>Gross Liabilities Offset in Balance Sheet</u>	0	0
<u>Net Assets Recognized in Balance Sheet</u>	275	4,133

Derivatives in Net Liability Position

<u>Gross Liabilities</u>	196	3,685
<u>Gross Assets Offset in Balance Sheet</u>	0	0
<u>Net Liabilities Recognized in Balance Sheet</u>	196	3,685

Derivatives not designated as hedging instruments: | Foreign currency forward contracts

Derivatives in Net Asset Position

<u>Gross Assets</u>	0	0
<u>Gross Liabilities Offset in Balance Sheet</u>	0	0
<u>Net Assets Recognized in Balance Sheet</u>	0	0

Derivatives in Net Liability Position

<u>Gross Liabilities</u>	23,005	6,722
<u>Gross Assets Offset in Balance Sheet</u>	0	0
<u>Net Liabilities Recognized in Balance Sheet</u>	\$ 23,005	\$ 6,722

**Derivative Instruments and
Hedging Activities -
Narrative (Details)
\$ in Millions**

**12 Months Ended
Dec. 31, 2020
USD (\$)**

[Derivative Instruments and Hedging Activities Disclosure \[Abstract\]](#)

Pre-tax net unrealized loss

\$ 0.4

Income Taxes - Narrative (Details) - USD (\$) \$ in Thousands	12 Months Ended			
	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2017
<u>Operating Loss Carryforwards [Line Items]</u>				
<u>Net operating losses</u>	\$ 61,800			
<u>Valuation allowance</u>	(8,577)	\$ (4,600)		
<u>Unrecognized tax benefits</u>	54,899	\$ 56,621	\$ 53,752	\$ 53,752
<u>Unrecognized tax benefit from claims filed with IRS</u>	53,700			
<u>KANSAS</u>				
<u>Operating Loss Carryforwards [Line Items]</u>				
<u>Income tax credits</u>	12,800			
<u>Canada</u>				
<u>Operating Loss Carryforwards [Line Items]</u>				
<u>Net operating losses</u>	27,600			
<u>OKLAHOMA</u>				
<u>Operating Loss Carryforwards [Line Items]</u>				
<u>Income tax credits</u>	\$ 5,500			

**Income Taxes - Provision For
Income Taxes (Details) -
USD (\$)
\$ in Thousands**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Income Tax Disclosure [Abstract]

<u>Current federal</u>	\$ (59,452)	\$ 187,134	\$ 239,566
<u>Current state</u>	(5,391)	29,547	40,788
<u>Current foreign</u>	9,423	3,805	(10,080)
<u>Deferred federal</u>	(64,836)	77,916	46,434
<u>Deferred state</u>	(52,872)	26,073	27,845
<u>Deferred foreign</u>	(59,019)	(25,323)	2,690
<u>Income tax provision total</u>	\$ (232,147)	\$ 299,152	\$ 347,243

**Income Taxes -
Reconciliation Of Effective
Tax Rate (Details) - USD (\$)
\$ in Thousands**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Income Tax Disclosure [Abstract]

<u>Tax computed at statutory rate</u>	\$ (156,880)	\$ 246,013	\$ 320,138
<u>Effect of the Tax Cuts and Jobs Act</u>	0	0	(7,800)
<u>State income taxes, net of federal tax benefit</u>	(41,566)	47,259	56,936
<u>Noncontrolling interest in net income</u>	(21,799)	(25,494)	(20,215)
<u>CARES Act benefits</u>	(19,837)	0	0
<u>Foreign rate differential</u>	(14,294)	0	0
<u>Effect of nondeductible goodwill impairment charge</u>	16,573	32,069	0
<u>Other</u>	5,656	(695)	(1,816)
<u>Income tax expense (benefit) total</u>	\$ (232,147)	\$ 299,152	\$ 347,243

**Income Taxes - Deferred Tax
Assets And Liabilities
(Details) - USD (\$)
\$ in Thousands**

Dec. 31, 2020 Dec. 31, 2019

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax assets, gross</u>	\$ 212,695	\$ 202,192
<u>Deferred tax liabilities</u>	(926,398)	(1,091,462)
<u>Valuation allowance</u>	(8,577)	(4,600)
<u>Deferred taxes, net</u>	(713,703)	(889,270)

Property, Plant and Equipment

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax liabilities</u>	(712,339)	(809,966)
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Lease obligation

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax assets, gross</u>	94,447	120,435
<u>Accrued employee benefits</u>		

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax assets, gross</u>	21,819	13,635
<u>Accrued post-retirement benefits</u>		

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax assets, gross</u>	11,646	11,027
<u>Accrued environmental costs</u>		

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax assets, gross</u>	27,200	28,708
<u>Hedging instruments</u>		

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax liabilities</u>	(903)	(2,439)
<u>Inventory differences</u>		

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax liabilities</u>	(24,271)	(43,500)
<u>Deferred turnaround costs</u>		

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax liabilities</u>	(85,326)	(135,920)
<u>Net operating loss and tax credit carryforwards</u>		

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax assets, gross</u>	51,227	22,912
<u>HEP</u>		

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax liabilities</u>	(94,982)	(95,037)
---------------------------------	----------	----------

Other

Deferred Income Taxes Assets Liabilities [Line Items]

<u>Deferred tax assets, gross</u>	\$ 6,356	\$ 5,475
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**Income Taxes -
Reconciliation Of
Unrecognized Tax Benefits
(Details) - USD (\$)
\$ in Thousands**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Reconciliation of Unrecognized Tax Benefits [Roll Forward]

<u>Unrecognized tax benefits, balance at beginning of Period</u>	\$ 56,621	\$ 53,752	\$ 53,752
<u>Additions for tax positions of prior years</u>	6	2,893	0
<u>Reductions for tax positions of prior years</u>	(1,500)	(24)	0
<u>Lapse of statute of limitations</u>	(228)	0	0
<u>Unrecognized tax benefits, balance at end of Period</u>	\$ 54,899	\$ 56,621	\$ 53,752

**Stockholders' Equity -
Changes To Equity (Details)
- shares**

12 Months Ended
Dec. 31, Dec. 31, Dec. 31,
2020 2019 2018

Increase (Decrease) in Common Shares Outstanding [Roll Forward]

<u>Common shares outstanding at beginning of period (in shares)</u>	161,846,525	172,121,491	177,407,622
<u>Vesting of performance units (in shares)</u>	296,801	592,602	115,596
<u>Vesting of restricted stock with performance feature (in shares)</u>	553,381	412,465	543,396
<u>Forfeitures of restricted stock (in shares)</u>	0	(13,807)	(58,497)
<u>Purchase of treasury stock (in shares)</u>	(283,047)	(11,266,226)	(5,886,626)
<u>Common shares outstanding at end of period (in shares)</u>	162,413,660	161,846,525	172,121,491
<u>Shares withheld under terms of agreements (in shares)</u>	283,047	415,466	369,255

**Stockholders' Equity -
Narrative (Details) - USD (\$)
\$ in Millions**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

[Stockholders' Equity Note \[Abstract\]](#)

<u>Authorized share repurchase</u>	\$ 1,000.0		
<u>Value of shares withheld</u>	\$ 7.6	\$ 21.9	\$ 19.6

**Other Comprehensive
Income (Loss) - Components
And Allocated Tax Effects
Of Other Comprehensive
Income (Loss) (Details) -
USD (\$)
\$ in Thousands**

12 Months Ended

	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
<u>Other Comprehensive Income (Loss), before Tax [Abstract]</u>			
<u>Net change in foreign currency translation adjustment before-tax</u>	\$ 6,226	\$ 13,337	\$ (38,227)
<u>Net change in foreign currency translation adjustment tax expense (benefit)</u>	1,357	2,848	(8,064)
<u>Net change in foreign currency translation adjustment after-tax</u>	4,869	10,489	(30,163)
<u>Net unrealized loss on hedging instruments before-tax</u>	(4,871)	(5,349)	11,221
<u>Net unrealized loss on hedging instruments tax expense (benefit)</u>	(1,228)	(1,365)	2,857
<u>Net unrealized loss on hedging instruments after-tax</u>	(3,643)	(3,984)	8,364
<u>Net change in pension and other post-retirement benefit obligations before-tax</u>	(3,461)	(7,207)	(1,507)
<u>Net change in pension and other post-retirement benefit obligations tax expense (benefit)</u>	(923)	(1,853)	(378)
<u>Net change in pension and other post-retirement benefit obligations after-tax</u>	(2,538)	(5,354)	(1,129)
<u>Other comprehensive income (loss) before income taxes</u>	(2,106)	781	(28,513)
<u>Other comprehensive income (loss), tax expense (benefit)</u>	(794)	(370)	(5,585)
<u>Other comprehensive income (loss)</u>	\$ (1,312)	\$ 1,151	\$ (22,928)

**Other Comprehensive
Income (Loss) - Other
Comprehensive Income
(Loss) Amounts Reclassified
to Income Statement
(Details) - USD (\$)
\$ in Thousands**

12 Months Ended

**Dec. 31,
2020 Dec. 31,
2019 Dec. 31,
2018**

Other Comprehensive Income (Loss) Reclassified to Income Statement [Line Items]

<u>Sales and other revenues</u>	\$	\$	\$
	(11,183,643)	(17,486,578)	(17,714,666)
<u>Cost of Goods and Services Sold</u>	(9,158,805)	(13,918,384)	(13,940,782)
<u>Operating expenses</u>	(1,300,277)	(1,394,052)	(1,285,838)
<u>Income tax expense (benefit)</u>	(232,147)	299,152	347,243
<u>Net of tax</u>	(514,899)	872,352	1,177,224

Reclassification out of Accumulated Other Comprehensive Income

Other Comprehensive Income (Loss) Reclassified to Income Statement [Line Items]

<u>Net of tax</u>	1,013	17,354	(1,938)
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Commodity contracts | Reclassification out of Accumulated Other Comprehensive Income

Other Comprehensive Income (Loss) Reclassified to Income Statement [Line Items]

<u>Cost of Goods and Services Sold</u>	(4,281)	(22,876)	0
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Hedging instruments: | Reclassification out of Accumulated Other Comprehensive Income

Other Comprehensive Income (Loss) Reclassified to Income Statement [Line Items]

<u>Before tax</u>	(2,604)	19,713	(6,055)
<u>Income tax expense (benefit)</u>	(664)	5,027	(1,544)
<u>Net of tax</u>	(1,940)	14,686	(4,511)

Hedging instruments: | Commodity contracts | Reclassification out of Accumulated Other Comprehensive Income

Other Comprehensive Income (Loss) Reclassified to Income Statement [Line Items]

<u>Sales and other revenues</u>	(5,168)	(1,799)	(5,093)
<u>Cost of Goods and Services Sold</u>	4,281	22,876	0
<u>Operating expenses</u>	(1,717)	(1,364)	(962)

Other post-retirement benefit obligations: | Reclassification out of Accumulated Other Comprehensive Income | Pension obligations

Other Comprehensive Income (Loss) Reclassified to Income Statement [Line Items]

<u>Income tax expense (benefit)</u>	108	0	0
<u>Net of tax</u>	314	0	0
<u>Other General Expense</u>	422	0	0

Other post-retirement benefit obligations: | Reclassification out of Accumulated Other Comprehensive Income | Post-retirement healthcare obligations

Other Comprehensive Income (Loss) Reclassified to Income Statement [Line Items]

<u>Income tax expense (benefit)</u>	909	915	888
<u>Net of tax</u>	2,655	2,672	2,593
<u>Other General Expense</u>	3,564	3,587	3,481

Other post-retirement benefit obligations: | Reclassification out of Accumulated Other Comprehensive Income | Retirement restoration plan

Other Comprehensive Income (Loss) Reclassified to Income Statement [Line Items]

<u>Income tax expense (benefit)</u>	(6)	(2)	(7)
<u>Net of tax</u>	(16)	(4)	(20)
<u>Other General Expense</u>	\$ (22)	\$ (6)	\$ (27)

**Other Comprehensive
Income (Loss) -
Accumulated Other
Comprehensive Loss In
Equity (Details) - USD (\$)
\$ in Thousands**

Dec. 31, 2020 Dec. 31, 2019

Other Comprehensive Income (Loss), before Tax [Abstract]

<u>Foreign currency translation adjustment</u>	\$ 2,682	\$ (2,187)
<u>Unrealized loss on pension obligations</u>	(248)	(1,733)
<u>Unrealized gain on post-retirement benefit obligations</u>	11,310	15,333
<u>Unrealized gain (loss) on hedging instruments</u>	(282)	3,361
<u>Accumulated other comprehensive income</u>	\$ 13,462	\$ 14,774

**Pension and Post-retirement
Plans - Narrative (Details) -
USD (\$)
\$ in Thousands**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Defined Benefit Plan Disclosure [Line Items]

Employee contribution expense \$ 43,300 \$ 30,300 \$ 19,100

Pension obligations

Defined Benefit Plan Disclosure [Line Items]

Accumulated benefit obligation \$ 119,200 \$ 100,500

Discount rate 2.60% 3.10%

Future compensation annual rate increase (as a percent) 3.00% 3.00%

Expected long-term rate of return on assets 3.00%

Expected contribution in pension plan \$ 3,500

Expected benefit payment in 2021 2,100

Expected benefit payment in 2022 2,500

Expected benefit payment in 2023 3,000

Expected benefit payment in 2024 3,300

Expected benefit payment in 2025 3,800

Expected benefit payment from 2026 to 2030 24,500

Benefit obligation \$ 126,620 \$ 110,410 64,435

Post-retirement healthcare obligations

Defined Benefit Plan Disclosure [Line Items]

Discount rate 1.10% 1.50%

Expected benefit payment in 2021 \$ 1,900

Expected benefit payment in 2022 1,900

Expected benefit payment in 2023 1,900

Expected benefit payment in 2024 1,900

Expected benefit payment in 2025 1,900

Expected benefit payment from 2026 to 2030 9,200

Benefit obligation 33,478 \$ 31,273 \$ 26,880

Retirement restoration plan

Defined Benefit Plan Disclosure [Line Items]

Expected benefit payment in 2021 200

Pension expense 100

Accrued liability 2,500 \$ 2,400

Benefit obligation \$ 2,500

Other | Pension obligations

Defined Benefit Plan Disclosure [Line Items]

Target investment rates 4.00%

Canadian equities | Pension obligations

Defined Benefit Plan Disclosure [Line Items]

Target investment rates 16.00%

Fixed income | Pension obligations

Defined Benefit Plan Disclosure [Line Items]

Target investment rates	75.00%
Real estate and infrastructure Pension obligations	
Defined Benefit Plan Disclosure [Line Items]	
Target investment rates	5.00%

**Pension and Post-retirement
Plans - Changes in Benefit
Obligation and Plan Assets
(Details) - USD (\$)
\$ in Thousands**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Pension obligations

Change in plans' benefit obligations

<u>Pension plan's benefit obligation - beginning of year</u>	\$ 110,410	\$ 64,435	
<u>Sonneborn acquisition</u>	0	31,686	
<u>Service cost</u>	3,929	4,135	\$ 4,420
<u>Interest cost</u>	2,772	3,026	2,249
<u>Actuarial loss</u>	8,391	5,161	
<u>Benefits paid</u>	(1,558)	(1,132)	
<u>Curtailement</u>	(4,078)	0	
<u>Contractual termination benefits</u>	915	0	
<u>Transfer from other plans</u>	479	330	
<u>Foreign currency exchange rate changes</u>	5,360	2,769	
<u>Pension plan's benefit obligation - end of year</u>	126,620	110,410	64,435

Change in pension plans assets

<u>Fair value of plan assets - beginning of year</u>	105,358	62,462	
<u>Acquisition of Sonneborn</u>	0	29,376	
<u>Return on plans assets</u>	10,936	7,947	
<u>Employer contributions</u>	3,487	3,681	
<u>Transfer payments</u>	479	330	
<u>Foreign currency exchange rate changes</u>	5,248	2,694	
<u>Fair value of plan assets - end of year</u>	123,950	105,358	62,462
<u>Under-funded balance</u>	(2,670)	(5,052)	
<u>Accrued post-retirement plan liability</u>	(2,670)	(5,052)	
<u>Cumulative actuarial gain (loss)</u>	(1,658)	(3,155)	

Post-retirement healthcare obligations

Change in plans' benefit obligations

<u>Pension plan's benefit obligation - beginning of year</u>	31,273	26,880	
<u>Sonneborn acquisition</u>	0	877	
<u>Service cost</u>	1,616	1,582	1,648
<u>Interest cost</u>	870	1,029	938
<u>Actuarial loss</u>	1,131	2,412	
<u>Benefits paid</u>	(1,766)	(2,028)	
<u>Foreign currency exchange rate changes</u>	354	521	
<u>Pension plan's benefit obligation - end of year</u>	33,478	31,273	26,880

Change in pension plans assets

<u>Fair value of plan assets - beginning of year</u>	0	0	
<u>Employer contributions</u>	1,742	2,003	
<u>Participant contributions</u>	24	25	
<u>Fair value of plan assets - end of year</u>	0	0	\$ 0

<u>Under-funded balance</u>	(33,478)	(31,273)
<u>Accrued liabilities</u>	(1,946)	(1,817)
<u>Other long-term liabilities</u>	(31,532)	(29,456)
<u>Accrued post-retirement plan liability</u>	(33,478)	(31,273)
<u>Cumulative actuarial gain (loss)</u>	(1,523)	(197)
<u>Prior service credit</u>	(18,511)	(21,992)
<u>Total</u>	\$ 16,988	\$ 21,795

**Pension and Post-retirement
Plans - Projected and
Accumulated Benefit
Obligations (Details) -
Pension obligations - USD
(\$)
\$ in Thousands**

Dec. 31, 2020 Dec. 31, 2019

Defined Benefit Plan Disclosure [Line Items]

<u>Projected benefit obligation</u>	\$ 79,866	\$ 110,410
<u>Fair value of project plan assets</u>	77,035	105,358
<u>Accumulated benefit obligation</u>	41,654	36,001
<u>Fair value of accumulated plan assets</u>	\$ 39,105	\$ 33,509

**Pension and Post-retirement
Plans - Net Periodic Expense**

12 Months Ended

**(Details) - Pension
obligations - USD (\$)
\$ in Thousands**

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

Defined Benefit Plan Disclosure [Line Items]

<u>Service cost</u>	\$ 3,929	\$ 4,135	\$ 4,420
<u>Interest cost</u>	2,772	3,026	2,249
<u>Expected return on plans assets</u>	(4,578)	(3,840)	(3,464)
<u>Amortization of gain</u>	(422)	0	0
<u>Curtailement</u>	(137)	0	0
<u>Contractual termination benefits</u>	915	0	0
<u>Net periodic pension expense</u>	\$ 2,479	\$ 3,321	\$ 3,205

**Pension and Post-retirement
Plans - Defined Benefit plan,
Allocation of Investment
Funds (Details) - Pension
obligations**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019

Defined Benefit Plan, Plan Assets, Allocation [Line Items]

Pension plan percentage by asset category 100.00% 100.00%

Canadian equities

Defined Benefit Plan, Plan Assets, Allocation [Line Items]

Pension plan percentage by asset category 42.00% 47.00%

Fixed income

Defined Benefit Plan, Plan Assets, Allocation [Line Items]

Pension plan percentage by asset category 57.00% 29.00%

Real estate and infrastructure

Defined Benefit Plan, Plan Assets, Allocation [Line Items]

Pension plan percentage by asset category 0.00% 14.00%

Other

Defined Benefit Plan, Plan Assets, Allocation [Line Items]

Pension plan percentage by asset category 1.00% 9.00%

Cash

Defined Benefit Plan, Plan Assets, Allocation [Line Items]

Pension plan percentage by asset category 0.00% 1.00%

**Pension and Post-retirement
Plans - Weighted Average
Assumptions Used to
Determine End of Period
Benefit Obligations (Details)
- Post-retirement healthcare
obligations**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019

Defined Benefit Plan Disclosure [Line Items]

Discount rate 1.10% 1.50%

Minimum

Defined Benefit Plan Disclosure [Line Items]

Discount rate 1.88% 2.94%

Current health care trend rate 5.50% 6.00%

Ultimate health care trend rate 4.50% 4.50%

Year rate reaches ultimate trend rate 2022 2022

Maximum

Defined Benefit Plan Disclosure [Line Items]

Discount rate 2.60% 3.20%

Current health care trend rate 6.00% 6.50%

Ultimate health care trend rate 5.00% 5.00%

Year rate reaches ultimate trend rate 2023 2023

**Pension and Post-retirement
Plans - Net Periodic Credit
(Details) - Post-retirement
healthcare obligations - USD
(\$)**

12 Months Ended

Dec. 31, 2020 Dec. 31, 2019 Dec. 31, 2018

\$ in Thousands

Defined Benefit Plan Disclosure [Line Items]

<u>Service cost</u>	\$ 1,616	\$ 1,582	\$ 1,648
<u>Interest cost</u>	870	1,029	938
<u>Amortization of prior service credit</u>	(3,481)	(3,481)	(3,481)
<u>Amortization of gain</u>	(83)	(106)	0
<u>Net periodic post-retirement credit</u>	\$ (1,078)	\$ (976)	\$ (895)

**Contingencies And
Contractual Commitments**
(Details) - USD (\$)
\$ in Thousands

12 Months Ended

	Feb. 10, 2021	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
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Other Commitments [Line Items]

Gain on business interruption insurance settlement

\$ 81,000 \$ 0 \$ 0

Transportation and storage costs

139,000 \$ 144,800 \$ 143,300

Transportation and Storage Contracts, Fiscal Year

Maturity

2021

129,661

2022

113,288

2023

113,360

2024

112,884

2025

113,669

Thereafter

580,889

Total

\$ 1,163,751

Subsequent Event

Other Commitments [Line Items]

Proceeds from legal settlement

\$ 51,500

**Segment Information -
Narrative (Details)**

**12 Months Ended
Dec. 31, 2020
segment**

Segment Reporting Information [Line Items]

Number of reportable segments 3

UNEV Pipeline

Segment Reporting Information [Line Items]

Equity method investment, ownership percentage 75.00%

Osage Pipeline

Segment Reporting Information [Line Items]

Equity method investment, ownership percentage 50.00%

Segment Information - Schedule Of Segment Reporting Information (Details) - USD (\$)	3 Months Ended						12 Months Ended				
	Dec. 31, 2020	Sep. 30, 2020	Jun. 30, 2020	Mar. 31, 2020	Dec. 31, 2019	Sep. 30, 2019	Jun. 30, 2019	Mar. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Segment Reporting Information [Line Items]											
Revenues from external customers	\$ 2,900,768,000	\$ 2,819,400,000	\$ 2,062,930,000	\$ 3,400,545,000	\$ 4,381,888,000	\$ 4,424,828,000	\$ 4,782,615,000	\$ 3,897,247,000	\$ 11,183,643,000	\$ 17,486,578,000	\$ 17,714,666,000
Intersegment revenues									0	0	0
Revenues									11,183,643,000	17,486,578,000	17,714,666,000
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)									9,158,805,000	13,918,384,000	13,940,782,000
Lower of cost or market inventory valuation adjustment	149,200,000	62,800,000	269,900,000					232,300,000	78,499,000	(119,775,000)	136,305,000
Operating expenses									1,300,277,000	1,394,052,000	1,285,838,000
Selling, general and administrative expenses									313,600,000	354,236,000	290,424,000
Depreciation and amortization									520,912,000	509,925,000	437,324,000
Goodwill and long-lived asset impairments	108,400,000		436,900,000				152,712,000		545,293,000	152,712,000	0
Goodwill impairment									81,867,000	152,712,000	
Income (loss) from operations	(106,247,000)	\$ (27,218,000)	\$ (189,976,000)	\$ (410,302,000)	129,183,000	\$ 426,779,000	\$ 331,741,000	\$ 389,341,000	(733,743,000)	1,277,044,000	1,623,993,000
Earnings of equity method investments									6,647,000	5,180,000	5,825,000
Capital expenditures									330,160,000	293,763,000	311,029,000
Total assets	11,506,864,000				12,164,841,000				11,506,864,000	12,164,841,000	10,994,601,000
Capital expenditures									270,877,000	263,651,000	256,888,000
Refining											
Segment Reporting Information [Line Items]											
Goodwill impairment									0		
Lubricants and Specialty Products											
Segment Reporting Information [Line Items]											
Goodwill and long-lived asset impairments	81,900,000										
Goodwill impairment									81,867,000		
Corporate and Other Cheyenne											
Segment Reporting Information [Line Items]											
Operating expenses									11,400,000		
Decommissioning and other shutdown costs									14,000,000.0		
Corporate and Other Renewable Diesel Unit											
Segment Reporting Information [Line Items]											
Operating expenses									3,900,000		
Capital expenditures									65,100,000		
Operating Segments Refining											
Segment Reporting Information [Line Items]											
Revenues from external customers									9,286,658,000	15,284,110,000	15,806,304,000
Intersegment revenues									252,531,000	312,678,000	370,259,000
Revenues									9,539,189,000	15,596,788,000	16,176,563,000
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)									8,439,680,000	12,980,506,000	13,250,849,000
Lower of cost or market inventory valuation adjustment									82,214,000	(119,775,000)	136,305,000
Operating expenses									988,045,000	1,095,488,000	1,055,209,000
Selling, general and administrative expenses									127,298,000	120,518,000	113,641,000
Depreciation and amortization									324,617,000	309,932,000	284,439,000
Goodwill and long-lived asset impairments									241,760,000		
Goodwill impairment										0	
Income (loss) from operations									(664,425,000)	1,210,119,000	1,336,120,000
Earnings of equity method investments									0	0	0
Capital expenditures									152,726,000	199,002,000	202,791,000
Total assets	6,203,847,000				7,189,094,000				6,203,847,000	7,189,094,000	6,465,155,000

Operating Segments 						
Lubricants and Specialty						
Products						
Segment Reporting						
Information [Line Items]						
Revenues from external				1,792,745,000	2,081,221,000	1,799,506,000
customers						
Intersegment revenues				10,465,000	11,307,000	13,197,000
Revenues				1,803,210,000	2,092,528,000	1,812,703,000
Cost of products sold						
(exclusive of lower of cost or						
market inventory valuation						
adjustment)				1,271,287,000	1,580,036,000	1,381,540,000
Lower of cost or market						
inventory valuation adjustment				0	0	0
Operating expenses				216,068,000	231,523,000	167,820,000
Selling, general and						
administrative expenses				157,816,000	168,595,000	143,750,000
Depreciation and amortization				80,656,000	88,781,000	43,255,000
Goodwill and long-lived asset						
impairments				286,575,000		
Goodwill impairment					152,712,000	
Income (loss) from operations				(209,192,000)	(129,119,000)	76,338,000
Earnings of equity method						
investments				0	0	0
Capital expenditures				32,473,000	40,997,000	37,448,000
Total assets	1,864,313,000		2,223,418,000	1,864,313,000	2,223,418,000	1,506,209,000
Operating Segments HEP						
Segment Reporting						
Information [Line Items]						
Revenues from external				98,039,000	121,027,000	108,412,000
customers						
Intersegment revenues				399,809,000	411,750,000	397,808,000
Revenues				497,848,000	532,777,000	506,220,000
Cost of products sold						
(exclusive of lower of cost or						
market inventory valuation						
adjustment)				0	0	0
Lower of cost or market						
inventory valuation adjustment				0	0	0
Operating expenses				147,692,000	161,996,000	146,430,000
Selling, general and						
administrative expenses				9,989,000	10,251,000	11,041,000
Depreciation and amortization				95,445,000	96,706,000	98,492,000
Goodwill and long-lived asset						
impairments				16,958,000		
Goodwill impairment					0	
Income (loss) from operations				227,764,000	263,824,000	250,257,000
Earnings of equity method						
investments				6,647,000	5,180,000	5,825,000
Capital expenditures				59,283,000	30,112,000	54,141,000
Total assets	2,198,478,000		2,205,437,000	2,198,478,000	2,205,437,000	2,142,027,000
Corporate, Other and						
Eliminations						
Segment Reporting						
Information [Line Items]						
Revenues from external				6,201,000	220,000	444,000
customers						
Intersegment revenues				(662,805,000)	(735,735,000)	(781,264,000)
Revenues				(656,604,000)	(735,515,000)	(780,820,000)
Cost of products sold						
(exclusive of lower of cost or						
market inventory valuation						
adjustment)				(552,162,000)	(642,158,000)	(691,607,000)
Lower of cost or market						
inventory valuation adjustment				(3,715,000)	0	0
Operating expenses				(51,528,000)	(94,955,000)	(83,621,000)
Selling, general and						
administrative expenses				18,497,000	54,872,000	21,992,000
Depreciation and amortization				20,194,000	14,506,000	11,138,000
Goodwill and long-lived asset						
impairments				0		
Goodwill impairment					0	
Income (loss) from operations				(87,890,000)	(67,780,000)	(38,722,000)
Earnings of equity method						
investments				0	0	0
Capital expenditures				85,678,000	23,652,000	16,649,000
Total assets	\$		\$	\$	\$	\$
	1,240,226,000		\$ 546,892,000	1,240,226,000	\$ 546,892,000	\$ 881,210,000

Quarterly Information (Unaudited) (Details) - USD (\$) \$/ shares in Units, shares in Thousands	3 Months Ended						12 Months Ended				
	Dec. 31, 2020	Sep. 30, 2020	Jun. 30, 2020	Mar. 31, 2020	Dec. 31, 2019	Sep. 30, 2019	Jun. 30, 2019	Mar. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Sales and other revenues	\$ 2,900,768,000	\$ 2,819,400,000	\$ 2,062,930,000	\$ 3,400,545,000	\$ 4,381,888,000	\$ 4,424,828,000	\$ 4,782,615,000	\$ 3,897,247,000	\$ 11,183,643,000	\$ 17,486,578,000	\$ 17,714,666,000
Operating costs and expenses	3,007,015,000	2,846,618,000	2,252,906,000	3,810,847,000	4,252,705,000	3,998,049,000	4,450,874,000	3,507,906,000	11,917,386,000	16,209,534,000	16,090,673,000
Income (loss) from operations	(106,247,000)	(27,218,000)	(189,976,000)	(410,302,000)	129,183,000	426,779,000	331,741,000	389,341,000	(733,743,000)	1,277,044,000	1,623,993,000
Income (loss) before income taxes	(138,194,000)	27,918,000	(181,318,000)	(455,452,000)	100,359,000	401,001,000	306,153,000	363,991,000	(747,046,000)	1,171,504,000	1,524,467,000
Net loss attributable to HollyFrontier stockholders	\$ (117,747,000)	\$ (2,401,000)	\$ (176,677,000)	\$ (304,623,000)	\$ 60,605,000	\$ 261,813,000	\$ 196,915,000	\$ 253,055,000	\$ (601,448,000)	\$ 772,388,000	\$ 1,097,960,000
Net income per share - basic (in USD per share)	\$ (0.73)	\$ (0.01)	\$ (1.09)	\$ (1.88)	\$ 0.38	\$ 1.60	\$ 1.16	\$ 1.48	\$ (3.72)	\$ 4.64	\$ 6.25
Net income per share - diluted (in USD per share)	(0.73)	(0.01)	(1.09)	(1.88)	0.37	1.58	1.15	1.47	(3.72)	4.61	6.19
Dividends per common share (in USD per share)	\$ 0.35	\$ 0.35	\$ 0.35	\$ 0.35	\$ 0.35	\$ 0.33	\$ 0.33	\$ 0.33	\$ 1.40	\$ 1.34	
Average number of shares of common stock outstanding - basic (in shares)	162,151	162,015	161,889	161,873	161,398	163,676	169,356	170,851	161,983	166,287	175,009
Average number of shares of common stock outstanding - diluted (in shares)	162,151	162,015	161,889	161,873	162,898	165,011	170,547	172,239	161,983	167,385	176,661
Lower of cost or market inventory valuation adjustment				\$ 560,500,000	\$ 30,700,000	\$ 34,100,000	\$ 47,800,000		\$ 78,499,000	\$ (119,775,000)	\$ 136,305,000
Inventory valuation benefits	\$ (149,200,000)	\$ (62,800,000)	\$ (269,900,000)					\$ (232,300,000)	(78,499,000)	119,775,000	(136,305,000)
Goodwill impairment charges	\$ 108,400,000		\$ 436,900,000				\$ 152,712,000		\$ 545,293,000	\$ 152,712,000	\$ 0

