



2022

Annual Report

MID-CONTINENT

El Dorado Refinery

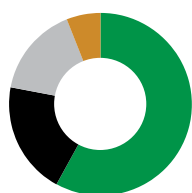
- Located in El Dorado, Kansas
- 135,000 BPD capacity
- Processes domestic sweet, sour and heavy Canadian crude oils into high-value light products
- Distributes to high-margin markets in Colorado and Mid-Continent states

Tulsa Refinery

- Located in Tulsa, Oklahoma
- 125,000 BPD capacity
- Processes predominantly sweet crude oil with up to 10,000 BPD of sour Canadian crude oil
- Distributes to the Mid-Continent states
- Integrated refinery with base oil and lubricant production

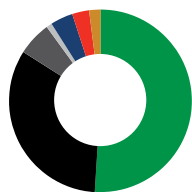
Mid-Continent Sales of Refinery Produced Products 280,800 BPD

The Mid-Continent Region comprises our El Dorado and Tulsa refineries and has a combined crude oil processing capacity of 260,000 BPD.



Crude and Feedstocks

- Sweet crude oil **58%**
- Sour crude oil **20%**
- Heavy sour crude oil **16%**
- Other feedstocks and blends **6%**



Product Mix

- Gasoline **51%**
- Diesel fuels **33%**
- Jet fuels **6%**
- Fuel oil **1%**
- Base oils **4%**
- Asphalt **3%**
- Other **2%**

WEST

Puget Sound Refinery

- Located in Anacortes, Washington
- 149,000 BPD capacity
- Processes mixed sweet and sour Canadian crude oil and Alaskan North Slope crude oil
- Distributes to high-margin markets in Washington, Oregon and British Columbia

Navajo Refinery

- Located in Artesia, New Mexico, and operates in conjunction with a refining facility 65 miles east in Lovington, New Mexico
- 100,000 BPD capacity
- Processes sweet and sour Permian crude oil into high-value light products
- Distributes to high-margin markets in Arizona, New Mexico and West Texas

Parco Refinery

- Located in Sinclair, Wyoming
- 94,000 BPD capacity
- Processes heavy Canadian and Rockies sweet crude oils
- Distributes to high-margin markets in the greater Rocky Mountain region

Woods Cross Refinery

- Located in West Bountiful, Utah (near Salt Lake City)
- 45,000 BPD capacity
- Processes regional sweet and advantaged waxy crude oils
- Distributes to high-margin markets in Utah, Idaho, Nevada, Wyoming and Eastern Washington

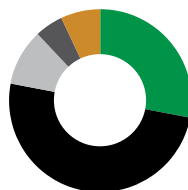
Casper Refinery

- Located in Casper, Wyoming
- 30,000 BPD capacity
- Processes Rockies sweet crude oil
- Distributes to high-margin markets in the greater Rocky Mountain region and Western South Dakota

West Sales of Refinery Produced Products 347,540 BPD

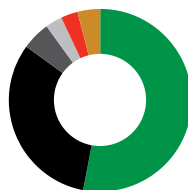
The West Region comprises our Puget Sound, Navajo, Parco, Woods Cross and Casper refineries and has a combined crude oil processing capacity of 418,000 BPD.

In addition, we manufacture and market commodity and modified asphalt products throughout the Southwest states.



Crude and Feedstocks

- Sweet crude oil **28%**
- Sour crude oil **50%**
- Heavy sour crude oil **10%**
- Black wax crude oil **5%**
- Other feedstocks and blends **7%**



Product Mix

- Gasoline **53%**
- Diesel fuels **32%**
- Jet fuels **5%**
- Fuel oil **3%**
- Asphalt **3%**
- Other **4%**

Midstream

HOLLY ENERGY PARTNERS, L.P.

Holly Energy Partners owns and operates substantially all of the refined product pipeline and terminalling assets that support HF Sinclair's refining and marketing operations in the Mid-Continent, Southwest and Northwest regions of the United States.

Approximately 4,400 Miles of Crude Oil and Petroleum Product Pipelines

Approximately 17.8 Million barrels of Refined Product and Crude Oil Storage

19 Terminals and 7 Loading Rack Facilities in 13 Western and Mid-Continent States

Refinery Processing Units in Woods Cross, Utah and El Dorado, Kansas

50% Joint-Venture Interest in Cheyenne Pipeline LLC – the owner of an 87-mile crude oil pipeline from Fort Laramie, Wyoming to Cheyenne, Wyoming

50% Joint Venture Interest in Osage Pipe Line Company, LLC – the owner of a 135-mile crude oil pipeline from Cushing, Oklahoma to El Dorado, Kansas

50% Joint Venture Interest in Cushing Connect Pipeline & Terminal LLC – the owner of a 50-mile, 160,000 barrel per day crude oil pipeline from Cushing, Oklahoma to Tulsa, Oklahoma and 1.5 million barrels of crude oil storage in Cushing, Oklahoma

49.995% Joint Venture Interest in Pioneer Investments Corp. – the owner of a 312-mile, 65,000 barrel per day refined product pipeline from Sinclair, Wyoming to the North Salt Lake Terminal with 655,000 barrels of refined product storage capacity

25.06% Joint Venture Interest in Saddle Butte Pipeline III, LLC – the owner of a 220-mile, 60,000 barrel per day crude oil pipeline from the Powder River Basin in Wyoming to Casper, Wyoming and 160,000 barrels of crude oil storage at the Highland Flats Terminal in Wyoming

Lubricants

HOLLYFRONTIER LUBRICANTS AND SPECIALTY PRODUCTS

Lubricants & Specialty Products (LSP) produces base oils and other specialized lubricants in the United States, Canada and the Netherlands, exporting products to more than 80 countries worldwide. In addition to base oil and specialty products produced at our Tulsa Refinery, LSP includes operations in Mississauga, Ontario, Petrolia, Pennsylvania, Council Bluffs, Iowa and the Netherlands. Products are marketed under the Petro-Canada Lubricants, Sonneborn, Red Giant Oil and HollyFrontier Specialty Products brands.

The Mississauga facility produces automotive, industrial and food grade lubricants, greases, base oils, process oils and specialty fluids. It is one of the largest manufacturers of high quality Group III base oils in North America. These products are marketed worldwide to a diverse customer base, in virtually every industry, through a global sales force and distributor network.

Facilities in Petrolia and the Netherlands produce specialty products such as white oils, petrolatums and waxes for the personal care, cosmetic, plastics, pharmaceutical and food processing industries. Combined with Mississauga, we are one of the world's largest producers of pharmaceutical white oils.

The Council Bluffs facility produces railroad engine oils and offers a range of value-added services and solutions for customers in the railroad industry.

The Tulsa Refinery produces base oils, specialty process oils, horticultural oils, asphalt modifiers and wax. Products are marketed worldwide through strategically located terminals and distributor network in North America providing comprehensive coverage.

One of the largest white oil and Group III base oils producers in North America

34,000 BPD lubricants and specialty product production capacity

9% of North American base oil production

Renewables

RENEWABLE DIESEL UNITS

Sinclair Renewable Diesel Unit

- 10,000 BPD Renewable Diesel Unit co-located at Sinclair, Wyoming refinery
- LCFS program pathways in California and British Columbia

Cheyenne Renewable Diesel Unit

- 6,000 BPD Renewable Diesel Unit
- HF Sinclair converted existing hardware to produce renewable diesel

Artesia Renewable Diesel Unit

- 9,000 BPD Renewable Diesel Unit co-located at Artesia, New Mexico refinery
- Includes rail infrastructure and storage tanks
- Existing hydrogen and utilities provided by the refinery

ARTESIA PRE-TREATMENT UNIT

- Co-located at Artesia, New Mexico refinery
- Provides feedstock flexibility for our Renewable Diesel Units

Marketing

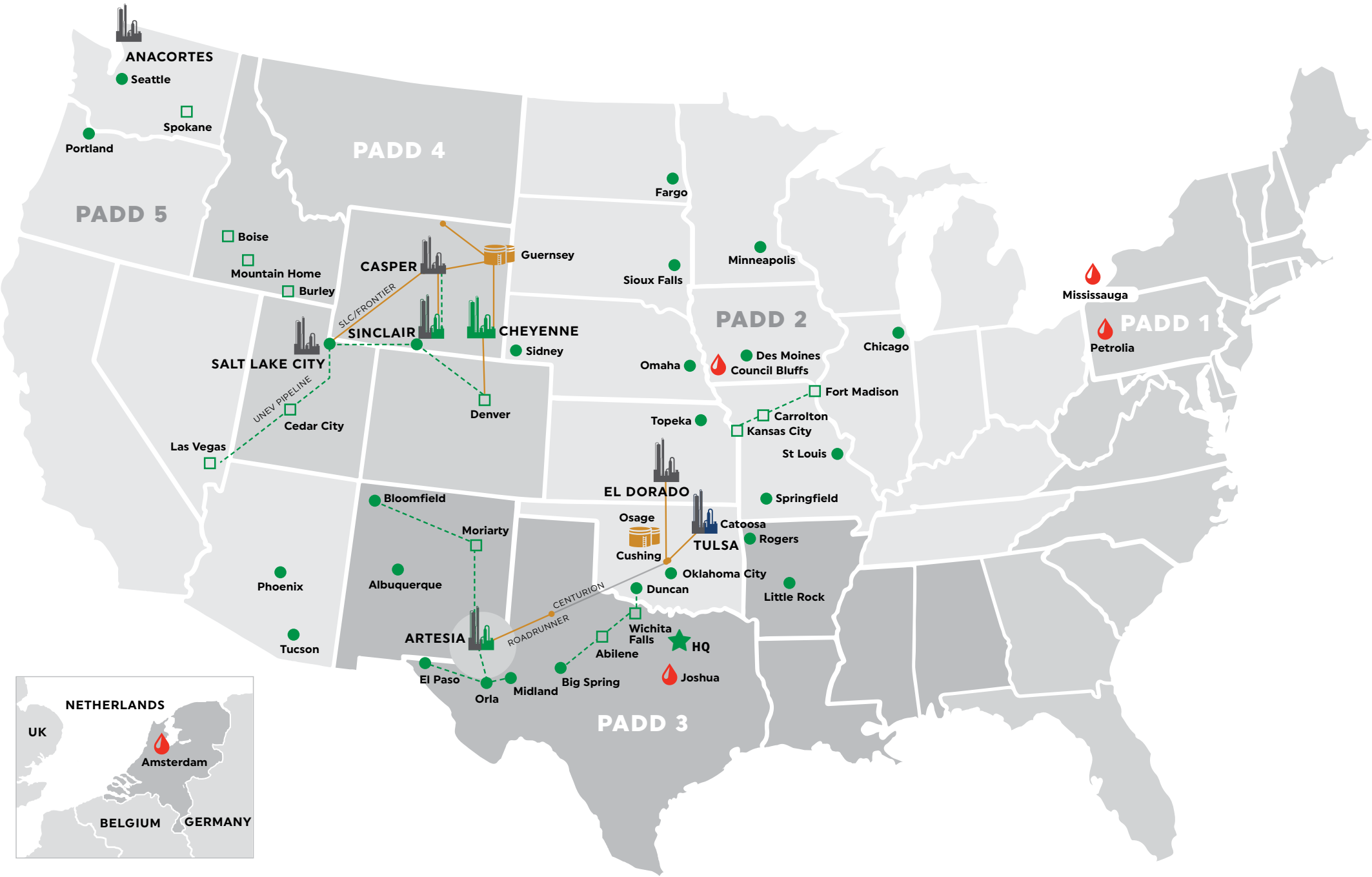
ICONIC DINO BRAND AND CUSTOMER LOYALTY













Over 300 Distributors and Over 1,500 Branded Retail Sites located across the United States

~300 Branded Sites under license program outside of supply footprint

Sinclair Branded Wholesale Business



 HF Sinclair Refinery	 Renewable Diesel Facility	 HF Sinclair Refinery + Lubricants Production	 Lubricants Facility	 HEP Terminal/ HF Sinclair Product Markets
 HF Sinclair Product Markets	 HEP Product Pipelines	 HEP Crude Pipelines	 Crude Hub	 Crude Gathering

SHAREHOLDERS

Dear Fellow Shareholders,

2022 was a pivotal year as we established HF Sinclair Corporation ("HF Sinclair") with the completion of our acquisition of the refining, marketing, renewables and midstream businesses of The Sinclair Companies. Over the course of the year, we executed on our integration plans, moving forward as a more diverse, downward integrated business with increased scale to drive growth and capital returns to shareholders. We have also reinvigorated the teams across our businesses and are already realizing the benefits of the acquisition, as evidenced by our financial and operational results.

Delivering Solid Financial and Operational Results

We continued to execute well in 2022 across our business segments, and I am proud of the work of our talented team. Our integrated platform delivered strong financial results throughout the year, led by exceptional contributions from our Refining and Lubricant & Specialty Products segments. During 2022, supply lines were stretched and many of our customers faced uncertainty over the availability of liquid fuels and lubricants. We met these challenges head-on, safely increasing throughputs and maintaining our commitment to operational excellence to meet and exceed our customers' expectations.

Highlights of the year include:

\$3.8 Billion
Operating Cash Flow

Investment Grade Rating
From S&P (BBB-), Moody's (BAA3), and Fitch (BBB-)

\$1.6 BILLION
Returned to Shareholders



Refining

We saw solid demand growth in the regions we serve, resulting in strong earnings contributions from our Refining segment. Our safe and reliable operations produced record throughput, driving a 48% increase in gasoline and distillate sales volumes year-over-year.



Marketing

We expanded our business segments with the inclusion of the DINO brand. We believe the addition of the branded marketing business provides a consistent sales channel with margin uplift for produced fuels, and we remain focused on growing this segment in our existing geographies.



Renewables

Our Cheyenne, Wyoming renewable diesel unit and Artesia, New Mexico renewable diesel and pre-treatment units were all operational in 2022. We also added a renewable diesel unit in Sinclair, Wyoming to our asset base through the Sinclair acquisition. We are encouraged by strong demand for renewable diesel and solid margins driven by D4 RIN price strength and we are excited about the future of our Renewables business.



Lubricants & Specialty Products

Our Lubricants business reported record earnings, as a result of strong demand for base oils and finished products along with the realization of operational and commercial improvement initiatives.



Holly Energy Partners (HEP)

HEP, which provides petroleum product and crude oil transportation, terminalling, storage and throughput services to the petroleum industry, continued to generate strong cash flow while delivering on its deleveraging strategy.

We remain fully committed to our capital return strategy and long-term payout ratio while maintaining a strong balance sheet and investment-grade credit rating. We returned \$1.6 billion to shareholders through share repurchases and dividends during the year - well ahead of our initial target of returning \$1 billion to shareholders by the end of the first quarter of 2023. In addition, in May 2022, the HF Sinclair Board of Directors reinstated our regular quarterly cash dividend at an increased rate of \$0.40 per share, compared to the first quarter 2021 dividend of \$0.35 per share. More recently, in September 2022, the HF Sinclair Board of Directors authorized a new \$1 billion share repurchase program.



Our ESG Focus

In 2022, we published our 2021 Sustainability Report, highlighting HF Sinclair's ongoing commitment to a long-term positive impact on our planet and the communities where we operate. Our report celebrates our accomplishments and details how we continue to execute on our priorities. We established a new goal of decreasing our greenhouse gas emissions intensity by 25% by 2030 versus 2020 levels. We intend to achieve this target through a combination of reductions in our direct operations emission intensity and offsets from producing and blending lower carbon renewable fuels. Our new emissions reduction target reflects our commitment to managing our environmental impact and creating a sustainable future. We look forward to providing additional updates on our progress in our 2022 Sustainability Report.

We continued to drive our safety culture forward, aspiring toward "Goal Zero," which is our commitment to operating our facilities in a safe manner each and every day. With our emphasis on communication,

root cause analysis and continuous improvement, we achieved a combined Total Recordable Incident Rate of 0.41 for 2022.

We were also recognized by The American Opportunity Index, a corporate scorecard of worker advancement, as the seventh highest rated company in the U.S. in this regard. This places HF Sinclair as the best in our industry at fostering leadership skills and professional development and creating an environment in which all employees have the ability to own and drive their careers.

Beyond the progress we have made for the environment, our employees and the communities where we operate, we also improved our strong governance profile by appointing Rhoman Hardy to our Board of Directors in July 2022. Mr. Hardy brings more than 34 years of experience in the oil and gas industry as well as significant insight in the development of energy infrastructure and extensive technical and operational expertise to HF Sinclair.

Adding Fresh Perspectives and Expertise to Our Management Team

We welcomed Atanas H. Atanasov as Executive Vice President and Chief Financial Officer in September 2022; he brings more than 25 years of financial leadership experience in the energy and petrochemical industries and more than 10 years of CFO experience to HF Sinclair. Mr. Atanasov previously served as CFO for public companies including Kraton Corporation and NGL Energy Partners LP. Mr. Atanasov also served as CFO of Lummus Technology LLC and Empire Petroleum Partners, LLC.

We look forward to achieving new heights and milestones as we continue to advance as a leading, integrated downstream energy company. We remain focused on maintaining safe and reliable operations, and our diverse portfolio of assets provides us the opportunity to generate strong free cash flow through the cycle to create value for our shareholders. On behalf of our Board of Directors and employees, thank you for your investment in HF Sinclair.

Sincerely,

Michael C. Jennings
Chief Executive Officer



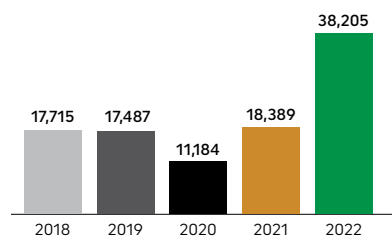
Financial Highlights

\$ in thousands, except per share data

Year Ended December 31	2021	2022
Sales and other revenues	\$18,389,142	\$38,204,839
Income before income taxes	\$787,152	\$3,936,046
Net income attributable to HF Sinclair stockholders	\$558,324	\$2,922,668
Net income per common share - diluted	\$3.39	\$14.28
Cash flows from operating activities	\$406,682	\$3,777,159
Cash flows used for capital expenditures	\$813,409	\$524,007
Total assets	\$12,916,613	\$18,125,483
HF Sinclair stockholders' equity	\$5,687,885	\$9,243,815
Sales of produced refined products - barrels per day ("BPD")	424,100	628,340
Employees	4,208	5,223

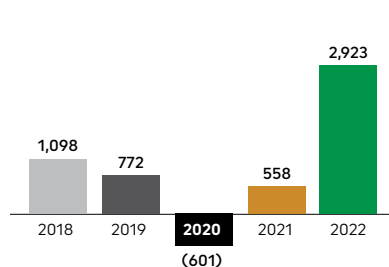
Sales and Other Revenues

\$ in millions



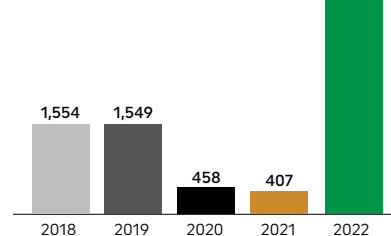
Net Income (Loss) Attributable to HF Sinclair Stockholders

\$ in millions



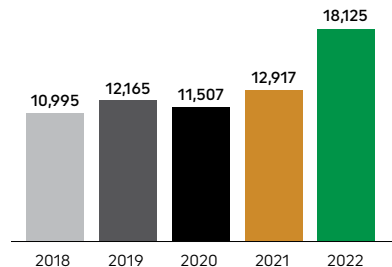
Cash Flows from Operating Activities

\$ in millions



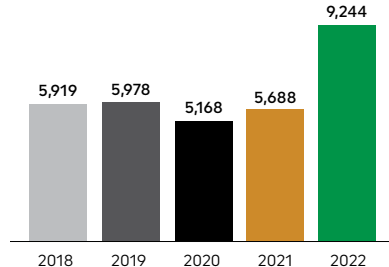
Total Assets

\$ in millions



HF Sinclair Stockholders' Equity

\$ in millions



**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, 2022

OR

☐ 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 001-41325

HF SINCLAIR CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

87-2092143

(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 Section 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	DINO	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 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. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b). ☐

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, 2022, 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 \$7.2 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.)

196,186,461 shares of Common Stock, par value \$.01 per share, were outstanding on February 15, 2023.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for its 2023 annual meeting of stockholders, which proxy statement will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, are incorporated by reference in Part III.

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PART I

FORWARD-LOOKING STATEMENTS

On March 14, 2022 (the “Closing Date”), HollyFrontier Corporation (“HollyFrontier”) and Holly Energy Partners, L.P. (“HEP”) announced the establishment of HF Sinclair Corporation, a Delaware corporation (“HF Sinclair”), as the new parent holding company of HollyFrontier and HEP and their subsidiaries, and the completion of their respective acquisitions (the “Sinclair Transactions”) of Sinclair Oil Corporation (now known as Sinclair Oil LLC, “Sinclair Oil”) and Sinclair Transportation Company LLC (“STC”) from The Sinclair Companies (now known as REH Company and referred to herein as “REH Company”).

References herein to HF Sinclair, “we,” “our,” “ours,” and “us” with respect to time periods prior to March 14, 2022 refer to HollyFrontier and its consolidated subsidiaries and do not include Sinclair Holding LLC, STC or their respective consolidated subsidiaries (collectively, the “Acquired Sinclair Businesses”). References herein to HF Sinclair, “we,” “our,” “ours,” and “us” with respect to time periods from and after March 14, 2022 include the operations of the Acquired Sinclair Businesses. Unless otherwise specified, the financial statements included herein include financial information for HF Sinclair, which for the time period from March 14, 2022 to December 31, 2022 includes the combined business operations of HollyFrontier and its consolidated subsidiaries and the Acquired Sinclair Businesses.

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,” “strategy,” “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:

- our and HEP’s ability to successfully integrate the Acquired Sinclair Businesses with our existing operations and fully realize the expected synergies of the Sinclair Transactions or on the expected timeline;
- our ability to successfully integrate the operation of the Puget Sound refinery with our existing operations;
- the demand for and supply of crude oil and refined products, including uncertainty regarding the effects of the continuing coronavirus (“COVID-19”) pandemic on future demand and increasing societal expectations that companies address climate change;
- 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 reductions in demand, accidents, unexpected leaks or spills, unscheduled shutdowns, infection in the workforce, weather events, civil unrest, expropriation of assets, and other economic, diplomatic, legislative, or political events or developments, terrorism, cyberattacks, or other catastrophes or disruptions affecting our operations, production facilities, machinery, pipelines and other logistics assets, equipment, or information systems, or any of the foregoing of our suppliers, customers, or third-party providers, and any potential asset impairments resulting from, or the failure to have adequate insurance coverage for or receive insurance recoveries from, such actions;
- the effects of current and/or future governmental and environmental regulations and policies, including the effects of current and/or future restrictions on various commercial and economic activities in response to the COVID-19 pandemic and increases in interest rates;
- the availability and cost of our financing;
- the effectiveness of our capital investments and marketing strategies;

- our and HEP's efficiency in carrying out and consummating construction projects, including our ability to complete announced capital projects on time and within capital guidance;
- our and HEP's 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;
- uncertainty regarding the effects and duration of global hostilities, including the Russia-Ukraine war, and any associated military campaigns which may disrupt crude oil supplies and markets for our refined products and create instability in the financial markets that could restrict our ability to raise capital;
- general economic conditions, including uncertainty regarding the timing, pace and extent of an economic recovery in the United States;
- a prolonged economic slowdown due to the COVID-19 pandemic, inflation and labor costs, which could result in an impairment of goodwill and/or long-lived asset impairments; and
- other financial, operational and legal risks and uncertainties detailed from time to time in our and HEP's Securities Exchange Commission 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 "Business and Properties" in Items 1 and 2, "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 HF Sinclair Corporation (“HF Sinclair”) include HF Sinclair and its consolidated subsidiaries. In this document, the words “we,” “our,” “ours” and “us” refer only to HF Sinclair and its consolidated subsidiaries or to HF Sinclair 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 HF Sinclair, 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 HF Sinclair. When used in descriptions of agreements and transactions, “HEP” refers to HEP and its consolidated subsidiaries. References herein to HF Sinclair “we,” “our,” “ours,” and “us” with respect to time periods prior to March 14, 2022 refer to HollyFrontier Corporation (“HollyFrontier”) and its consolidated subsidiaries and do not include Hippo Holding LLC (now known as Sinclair Holding LLC), the parent company of Sinclair Oil LLC, Sinclair Transportation Company LLC or their respective consolidated subsidiaries (collectively, the “Acquired Sinclair Businesses”). References herein to HF Sinclair “we,” “our,” “ours,” and “us” with respect to time periods from and after March 14, 2022 include the operations of the Acquired Sinclair Businesses. Unless otherwise specified, the financial statements included herein include financial information for HF Sinclair, which for the time period from March 14, 2022 to December 31, 2022 includes the combined business operations of HollyFrontier and the Acquired Sinclair Businesses.

We are an independent energy company that produces and markets high-value light products such as gasoline, diesel fuel, jet fuel, renewable diesel and other specialty products. 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.hfsinclair.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, Governance and Social Responsibility Committee Charter, Finance 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 “DINO.”

Sinclair Acquisition

On March 14, 2022 (the “Closing Date”), HollyFrontier and HEP announced the establishment of HF Sinclair as the new parent holding company of HollyFrontier and HEP and their subsidiaries, and the completion of their respective acquisitions of Sinclair Oil Corporation (now known as Sinclair Oil LLC, “Sinclair Oil”) and Sinclair Transportation Company LLC (“STC”) from The Sinclair Companies (now known as REH Company and referred to herein as “REH Company”). On the Closing Date, HF Sinclair completed its previously announced acquisition of Sinclair Oil by effecting (a) a holding company merger with HollyFrontier surviving such merger as a direct wholly owned subsidiary of HF Sinclair (the “HFC Merger”) and (b) immediately following the HFC Merger, a contribution whereby REH Company contributed all of the equity interests of Hippo Holding LLC (now known as Sinclair Holding LLC), the parent company of Sinclair Oil (the “Target Company”) to HF Sinclair in exchange for shares of HF Sinclair, resulting in the Target Company becoming a direct wholly owned subsidiary of HF Sinclair (the “HFC Transactions”). At the effective time of the HFC Merger, all of HollyFrontier’s outstanding shares were automatically converted into equivalent corresponding shares of HF Sinclair, and HF Sinclair became the successor issuer to HollyFrontier pursuant to Rule 12g-3(a) under the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), and replaced HollyFrontier as the public company trading on the New York Stock Exchange (“NYSE”) under the symbol “DINO.”

In connection with the closing of the HFC Transactions, HF Sinclair issued 60,230,036 shares of HF Sinclair common stock, par value \$0.01 per share, to REH Company, representing 27% of the pro forma equity of HF Sinclair with a value of approximately \$2,149 million based on HollyFrontier's fully diluted shares of common stock outstanding and closing stock price on March 11, 2022. Pursuant to that certain Business Combination Agreement, dated as of August 2, 2021 (as amended on March 14, 2022, the "Business Combination Agreement"), REH Company made a \$77.5 million cash payment to HF Sinclair, inclusive of final working capital adjustments, which reduced the aggregate transaction value to approximately \$2,072 million. Of the 60,230,036 shares of HF Sinclair common stock, 2,570,000 shares are currently held in escrow to secure REH Company's renewable identification numbers ("RINs") credit obligations under Section 6.22 of the Business Combination Agreement. Additionally, on the Closing Date, and immediately prior to the consummation of the HFC Transactions, HEP completed its acquisition of STC, REH Company's integrated crude and refined products midstream business, and issued 21,000,000 common limited partner units and paid cash consideration of \$329.0 million, inclusive of final working capital adjustments, to REH Company in exchange for all the outstanding equity interests of STC (the "HEP Transaction" and together with the HFC Transactions, the "Sinclair Transactions"). Of these 21,000,000 common limited partner units, 5,290,000 units are currently held in escrow to secure REH Company's RINs credit obligations to HF Sinclair under Section 6.22 of the Business Combination Agreement. HF Sinclair, and not HEP, would be entitled to the HEP common units held in escrow in the event of REH Company's breach of its RINs credit obligations under the Business Combination Agreement.

HF Sinclair acquired REH Company's refining, branded marketing, renewables, and midstream businesses. The Sinclair branded marketing business supplies high-quality fuels to more than 1,300 Sinclair branded stations and licenses the use of the Sinclair brand at more than 300 additional locations throughout the United States. The renewables business includes the operation of a renewable diesel unit located in Sinclair, Wyoming. The refining business includes two Rocky Mountains-based refineries located in Casper, Wyoming and Sinclair, Wyoming. Under the terms of that certain Contribution Agreement (as amended on March 14, 2022, the "Contribution Agreement"), HEP acquired STC, REH Company's integrated crude and refined products pipelines and terminal assets, including approximately 1,200 miles of integrated crude and refined product pipeline supporting the Sinclair refineries and third parties, eight product terminals and two crude terminals with approximately 4.5 million barrels of operated storage. In addition, HEP acquired STC's interests in three pipeline joint ventures for crude gathering and product offtake including: Saddle Butte Pipeline III, LLC (25.06% non-operated interest); Pioneer Investments Corp. (49.995% non-operated interest); and UNEV Pipeline, LLC ("UNEV") (the 25% non-operated interest not already owned by HEP, resulting in UNEV becoming a wholly owned subsidiary of HEP). The addition of Sinclair Oil and STC to the HollyFrontier business created a combined company with increased scale and ability to diversify and is expected to drive growth through the expanded refining and renewables business. In addition, the HFC Transactions added an integrated branded wholesale distribution network to our business.

Puget Sound Refinery Acquisition

On May 4, 2021, HollyFrontier Puget Sound Refining LLC (now known as HF Sinclair Puget Sound Refining LLC), a wholly owned subsidiary of HollyFrontier, entered into a sale and purchase agreement with Equilon Enterprises LLC d/b/a Shell Oil Products US ("Shell") to acquire Shell's Puget Sound refinery and related assets (the "Puget Sound Refinery"). The acquisition closed on November 1, 2021 for aggregate cash consideration of \$624.3 million. The Puget Sound Refinery is strategically located on approximately 850 acres in Anacortes, Washington. The 149,000 BPD facility is a large, high quality and complex refinery with catalytic cracking and delayed coking units and is well positioned geographically and logistically to source advantaged Canadian and Alaskan North Slope crudes. In addition to refining assets and an on-site cogeneration facility, the transaction included a deep-water marine dock, a light product loading rack, a rail terminal and storage tanks with approximately 5.8 million barrels of crude, product and other hydrocarbon storage capacity, including the on-site cogeneration facility and related logistics assets.

Sale of Real Property

On April 27, 2021, our wholly owned subsidiary, 7037619 Canada Inc., entered into a contract for sale of real property in Mississauga, Ontario for base consideration of \$98.8 million, or CAD 125 million. The transaction closed on September 15, 2021.

Renewable Diesel Construction

In November 2019, we announced our plans to construct a new renewable diesel unit ("RDU") at our Artesia facility. The Artesia RDU was completed and operational in the second quarter of 2022. The Artesia RDU has a production capacity of approximately 135 million gallons a year and allows 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 facility in Cheyenne, Wyoming (the “Cheyenne Refinery”) and subsequently began converting certain assets at the 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. The Cheyenne RDU was mechanically complete in the fourth quarter of 2021 and operational in the first quarter of 2022. The Cheyenne RDU has a production capacity of approximately 90 million gallons a year.

Additionally, we constructed a pre-treatment unit (“PTU”) at our Artesia facility that provides feedstock flexibility for both our Artesia and Cheyenne RDUs. This PTU was completed and operational in the first quarter of 2022.

As of December 31, 2022, we:

- owned and operated a refinery in El Dorado, Kansas (the “El Dorado Refinery”), two refinery facilities located in Tulsa, Oklahoma (collectively, the “Tulsa Refineries”), the Puget Sound Refinery in Anacortes, Washington, 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”), a refinery in West Bountiful, Utah (the “Woods Cross Refinery”), a refinery in Sinclair, Wyoming (the “Parco Refinery,”) and a refinery in Casper, Wyoming (the “Casper Refinery”);
- owned and operated RDUs in Artesia, New Mexico (the “Artesia RDU”), in Cheyenne, Wyoming (the “Cheyenne RDU”) and in Sinclair, Wyoming (the “Sinclair RDU”) and a PTU in Artesia, New Mexico (the “Artesia PTU”);
- owned and operated a manufacturing facility in Mississauga, Ontario, which produces base oils and other specialized lubricant products for our Petro-Canada Lubricants business;
- owned and operated manufacturing facilities in Petrolia, Pennsylvania and the Netherlands, which produce specialty lubricant products for our Sonneborn business, 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 HF Sinclair Asphalt Company LLC (“Asphalt”), which operates various asphalt terminals in Arizona, New Mexico and Oklahoma; and
- owned a 47% limited partner interest and a non-economic general partner interest in HEP. HEP owns and operates logistics and refinery 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 Mountains 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.”

As of December 31, 2022, our operations were organized into five reportable segments, Refining, Renewables, Marketing, Lubricants and Specialty Products and HEP. The Refining segment includes the operations of our El Dorado, Tulsa, Puget Sound, Navajo, Woods Cross, Parco and Casper Refineries and Asphalt. The Renewables segment includes the operations of the Artesia, Cheyenne and Sinclair RDUs and the Artesia PTU. The Marketing segment includes branded fuel sales. The Lubricants and Specialty Products segment includes the operations of our Petro-Canada Lubricants, Red Giant Oil and Sonneborn businesses 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 Mountains extending into the Pacific Northwest geographic regions of the United States. We own and operate seven complex refineries having a combined crude oil processing capacity of 678,000 BPSD. 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.

Products and Customers

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, branded sites, convenience store chains, independent marketers and retailers. Diesel fuel is sold to other refiners, branded sites, 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. For the years ended December 31, 2022 and 2021, we had one customer, Shell, together with certain of its affiliates, that accounted for 10% or more of our total annual revenues at approximately 15% and 13%, respectively. See Note 5 "Revenues" in the Notes to Consolidated Financial Statements for additional information on our customers revenues.

Mid-Continent Region

Facilities

The El Dorado Refinery is a high-complexity coking refinery with a 135,000 BPSD 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 BPSD.

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. The principal processing units at the Tulsa West facility consist of crude and vacuum distillation (with light ends recovery), naphtha hydrodesulfurization, propane deasphalting, 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. 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.

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.

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 Mountains 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, branded sites, 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 refineries' 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.

West Region

Facilities

The Navajo Refinery has a crude oil processing capacity of 100,000 BPSD 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 BPSD and processes regional sweet and black wax crude into high-value light products. On November 1, 2021, we acquired the Puget Sound Refinery, which is a complex refinery with a 149,000 BPSD processing capacity and has the ability to process a variety of light, medium, heavy sweet and sour crudes. On March 14, 2022, we acquired the Parco Refinery, which has a crude oil processing capacity of 94,000 BPSD and has the ability to process heavy and sweet crudes, and the Casper Refinery, which has a crude oil processing capacity of 30,000 BPSD and processes regional sweet crude into high-value light products.

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 in West Bountiful, Utah 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.

The Puget Sound Refinery facility is located on approximately 850 acres in Anacortes, Washington and is a fully integrated refinery. The principal processing units at the Puget Sound Refinery consist of crude and vacuum distillation, FCC, delayed coking, sulfuric alkylation, catalytic reforming, hydrodesulfurization, isomerization, sulfur recovery, cogeneration and product blending. In addition to refining assets and an on-site cogeneration facility, the Puget Sound Refinery also includes a deep-water marine dock, a light product loading rack, a rail terminal and storage tanks with approximately 5.8 million barrels of crude, product and other hydrocarbon storage capacity.

The Parco Refinery facility is located on approximately 420 acres in Sinclair, Wyoming and is a fully integrated refinery. The principal processing units at the Parco Refinery consist of gas oil hydrocracking, gas oil hydrotreating, delayed coking units and associated hydrogen generation.

The Casper Refinery facility is located on approximately 250 acres in Casper, Wyoming and is a fully integrated refinery. The principal processing units at the Casper Refinery consist of crude distillation, FCC, catalytic reforming, hydrodesulfurization, sulfur recovery and product blending. In addition to refining assets, the Casper Refinery also includes a light product loading rack, a heavy oil rail terminal and crude and product storage tanks.

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 this 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 both owned by HEP. Supplies of black wax crude oil are shipped via truck.

The Puget Sound Refinery is well positioned geographically and logistically to source advantaged Canadian and Alaskan North Slope crudes. The Canadian crudes are sourced from Edmonton, Alberta and are supplied directly to the Puget Sound Refinery by the Trans Mountain pipeline system. The Alaskan North Slope crudes are supplied by oil tankers that load the crude from Valdez, Alaska and offload at the Puget Sound Refinery's marine dock. The dock also allows the refinery to receive other crude oil via marine transport.

The Parco Refinery and Casper Refinery purchase much of their crude oil from inland domestic sources, primarily in areas of Wyoming, North Dakota and Colorado, as well as crude oil delivered via pipeline from other regions, including Canada. A long-term agreement with the Express Pipeline allows delivery of up to 40,000 BPD of crude oil from Canada directly to these refineries and affords the optionality between Western Canada Select and Syncrude.

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 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 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.

The Puget Sound Refinery primarily serves the Pacific Northwest market, including Washington, Oregon and British Columbia. It supplies jet fuel for the Seattle-Tacoma, Washington, Portland, Oregon and Vancouver, British Columbia airports. Products are shipped to Seattle, Tacoma, and Portland terminals by the common carrier Olympic Pipeline. Additionally, products are loaded across the Puget Sound Refinery's marine dock to deliver to the same locations in the Pacific Northwest market and to expanded locations in California and Alaska. The Puget Sound Refinery can also load products for export sales across its marine dock.

The Parco Refinery products are primarily distributed by major direct pipelines to Denver, Colorado and to Salt Lake City, Utah connecting to pipelines owned by HEP's joint ventures or third parties, serving an extensive network of terminals or by exchange. The refinery's customers are located in Colorado, Utah, Arizona, Idaho, Nebraska, Nevada, Oregon, South Dakota, Washington and Wyoming.

The Casper Refinery products are primarily distributed by major direct pipelines serving the Rocky Mountain region and western South Dakota through an extensive network of terminals or by exchange. The refinery's customers are located in Colorado, Utah, South Dakota and Wyoming.

HF Sinclair 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 commodity and modified hot asphalt products as well as commodity and modified asphalt emulsions from base asphalt materials provided by our refineries and third-party suppliers. Our Glendale facility manufactures commodity, modified and specialty modified hot asphalt products from base asphalt materials provided by our refineries and third-party suppliers. Our Catoosa facility manufactures commodity, modified and specialty modified hot asphalt products and commodity asphalt products from base asphalts supplied by our refineries. We market these finished 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 private, commercial and government agency projects.

RENEWABLES OPERATIONS

Our renewables business includes the operations of the Cheyenne RDU and the Artesia RDU, our two recently constructed renewable diesel production facilities, and the Sinclair RDU, which we acquired from REH Company in the Sinclair Transactions. Our Cheyenne RDU was mechanically complete in the fourth quarter of 2021 and operational in the first quarter of 2022 and has a production capacity of approximately 90 million gallons a year. Our Artesia RDU, co-located with the Navajo Refinery, was completed and operational in the second quarter of 2022. The Artesia RDU facility also includes rail infrastructure and storage tanks and has a production capacity of approximately 135 million gallons a year. Our Artesia PTU, co-located with the Navajo Refinery, was completed and operational in the first quarter of 2022. The Artesia PTU provides feedstock flexibility for both our Cheyenne and Artesia RDUs. On March 14, 2022, we acquired the Sinclair RDU, co-located with the Parco Refinery. The Sinclair RDU has been operational since 2018 and produces approximately 153 million gallons a year. The Artesia RDU and Sinclair RDU are dependent upon and share certain infrastructure, including a hydrogen plant, with the refineries where they are co-located, respectively.

Our RDUs allow us to process soybean oil and other renewable feedstocks into renewable diesel. Renewable diesel is a cleaner burning fuel with 50% to 80% (results dependent on the feedstock) lower lifecycle greenhouse gas ("GHG") emissions than conventional diesel. The renewable diesel produced by the RDUs is sold to customers in California and Canada where Low Carbon Fuel Standard ("LCFS") credit value can be realized.

MARKETING OPERATIONS

Our marketing operations include branded fuel sales to more than 1,500 branded sites in the United States and licensing fees for the use of the Sinclair brand at more than 300 additional locations throughout the United States. Our marketing operations also include revenues from branded gasoline, diesel and other marketing activities. Our branded sites are located in several states across the United States with the highest concentration of the sites located in our West and Mid-Continent regions.

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 products 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.

Petro-Canada Lubricants Inc. ("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, Texas 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 publicly held master limited partnership that trades on the New York Stock Exchange under the trading symbol "HEP." HEP owns and / or operates logistic and refinery 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 Mountains geographic regions of the United States. Additionally, as of December 31, 2022, HEP owned 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 that runs from Cushing, Oklahoma to our Tulsa Refineries; a 25.06% ownership interest in Saddle Butte Pipeline III, LLC, the owner of a pipeline from the Powder River Basin to Casper, Wyoming (the "Saddle Butte Pipeline"); and a 49.995% ownership interest in Pioneer Investments Corp., the owner of a pipeline from Sinclair, Wyoming to the North Salt Lake City, Utah Terminal (the "Pioneer Pipeline").

HEP 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, by storing and providing other services at its storage tanks and terminals and charging a tolling fee per barrel or thousand standard cubic feet of feedstock throughput in its 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 connects 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 was placed in service at the end of the third quarter of 2021. Long-term commercial agreements have been entered into to support the Cushing Connect assets.

Cushing Connect entered into a contract with an affiliate of HEP to manage the 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 was shared proportionately among the partners. However, HEP was solely responsible for any Cushing Connect Pipeline construction costs that exceeded the budget by more than 10%. HEP's share of the cost of the Cushing Connect Terminal contributed by Plains and Cushing Connect Pipeline construction costs was approximately \$74.0 million.

Acquisition

Sinclair Transportation Company

On August 2, 2021, HEP, REH Company and STC, a wholly owned subsidiary of REH Company, entered into the Contribution Agreement, which closed on March 14, 2022. Pursuant to the Contribution Agreement, HEP acquired all of the outstanding equity interests of STC in exchange for 21,000,000 newly issued common limited partner units of HEP with a value of approximately \$349.0 million based on HEP's fully diluted common limited partner units outstanding and HEP's closing unit price on March 11, 2022, and cash consideration equal to \$329.0 million, inclusive of final working capital adjustments pursuant to the Contribution Agreement, for an aggregate transaction value of \$678.0 million.

As part of HEP's acquisition of STC, HEP acquired STC's interests in three pipeline joint ventures for crude gathering and product offtake including: Saddle Butte Pipeline III, LLC (25.06% non-operated interest); Pioneer Investments Corp. (49.995% non-operated interest); and UNEV (the 25% non-operated interest not already owned by HEP, resulting in UNEV becoming a wholly owned subsidiary of HEP).

HEP's existing senior management team continues to operate HEP. Pursuant to that certain unitholders agreement (the "Unitholders Agreement") by and among HEP, Holly Logistic Services, L.L.C., Navajo Pipeline Co., L.P. and REH Company and their permitted transferees (collectively, the "REH Parties"), REH Company was granted the right to nominate, and has nominated, one director to the HEP Board of Directors at the Closing Date. REH Company's stockholders have also agreed to certain customary lock up restrictions and registration rights for the HEP common limited partner units to be issued to the stockholders of REH Company. HEP will continue to be named Holly Energy Partners, L.P.

Contemporaneous with the closing of the Sinclair Transactions, HEP and HollyFrontier amended certain intercompany agreements, including the master throughput agreement, to include within the scope of such agreements certain of the assets acquired by HEP pursuant to the Contribution Agreement.

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 2023 through 2037. 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. 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, 2022, these agreements required minimum annualized payments to HEP of \$452.6 million.

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

As of December 31, 2022, HEP's assets included:

Pipelines

- approximately 660 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;
- one 205-mile pipeline that transports refined product from our Parco Refinery in Wyoming to our customers in Colorado;
- one 114-mile bi-directional products pipeline that transports finished and intermediate products between our Parco and Casper Refineries in Wyoming;
- one 220-mile refined products pipeline that transports products between Olathe, Kansas and Montrose, Iowa;
- 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 the Marathon Wamsutter system;
- 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 990 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 535 miles of crude oil trunk, gathering and connection pipelines in Wyoming that primarily deliver crude oil to our Parco and Casper Refineries;
- approximately 10 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;
- the UNEV Pipeline, which is a 427-mile, 12-inch refined products pipeline running from Woods Cross, Utah to Las Vegas, Nevada and Cedar City, Utah;
- 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;
- a 50% interest in Cushing Connect Pipeline, a 50-mile crude oil pipeline running from Cushing, Oklahoma to our Tulsa Refineries;
- a 49.995% interest in the Pioneer Pipeline, a 252-mile refined product pipeline running from Sinclair Station in Wyoming to the terminal in North Salt Lake City, Utah. Through connections, this pipeline is also able to deliver refined products to the UNEV refined products pipeline, and
- a 25.06% interest in the Saddle Butte Pipeline, a crude oil pipeline that collects crude oil from the Powder River Basin in Wyoming and primarily delivers into HEP's crude oil pipeline system that supplies our Parco and Casper Refineries.

Refined Product Terminals and Refinery Tankage

- two refined product terminals located in Orla, Texas and Moriarty, New Mexico, with an aggregate capacity of approximately 240,000 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 465,000 barrels, that serves third-party common carrier pipelines;
- one refined product terminal near Mountain Home, Idaho, with a capacity of approximately 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 560,000 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;
- refined product storage capacity at our Parco and Casper Refineries as well as at 7 refined product terminals in Colorado, Idaho and Wyoming serving our Parco and Casper Refineries;
- three refined product terminals in Kansas City, Missouri, Carrollton, Missouri and Montrose, Iowa having an aggregate storage capacity of approximately 845,000 barrels;
- on-site crude oil tankage at our Tulsa, Navajo and Woods Cross Refineries and Cheyenne facility having an aggregate storage capacity of approximately 1,440,000 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 7,770,000 barrels;
- eleven crude oil tanks adjacent to our El Dorado Refinery with a capacity of approximately 1,040,000 barrels that primarily serve our El Dorado Refinery;
- crude oil tankage at five crude oil terminals that primarily serve our Parco and Casper Refineries;
- crude oil tankage with an aggregate storage capacity of approximately 450,000 barrels that primarily serve our Navajo Refinery;
- SLC Pipeline and Frontier Pipeline's tankage with an aggregate capacity of approximately 380,000 barrels;
- the UNEV Pipeline's product terminals near Cedar City, Utah and Las Vegas, Nevada with an aggregate capacity of approximately 650,000 barrels;
- a 50% interest in Cushing Connect Terminal with a capacity of approximately 1,500,000 barrels of crude oil storage in Cushing, Oklahoma;
- a 25.06% interest in Saddle Butte Pipeline III, LLC, which has approximately 60,000 barrels of crude oil storage in Wyoming, and
- a 49.995% ownership interest in Pioneer Investments Corp., which has approximately 60,000 barrels of refined product storage in Wyoming.

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 HF Sinclair Culture” focuses on five key values – safety, integrity, teamwork, ownership and inclusion. 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 them 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. Inclusion reflects our desire to foster a work environment in which employees feel valued and included in decisions, opportunities and challenges.

As of December 31, 2022, we had 5,223 employees located in the following geographies: 4,336 employees in the United States, 654 employees in Canada and 233 employees in Europe and Asia. As of December 31, 2022, 1,384 employees were covered by collective bargaining agreements. The current collective bargaining agreements have various expiration dates ranging between 2023 and 2026. 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 (the “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 HF Sinclair’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 process is designed to provide high level oversight of our strategies related to 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. Of our total employees as of December 31, 2022, approximately 17% identified as female and approximately 83% identified as male. Approximately 22% of our total employees identified as Hispanic or Latino, Black or African American, Asian, American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander, or as two or more races. We are also committed to hiring and retaining veterans and reservists of the U.S. armed forces, who represented approximately 5% of our U.S. workforce as of December 31, 2022.

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, one focused on developing talent at HF Sinclair by fostering relationships through education, networking and leadership development opportunities and the other focused on veterans. In 2021, we formed an Inclusion and Diversity Working Group comprised of employees across our organization to develop and further implement our inclusion and diversity initiatives, to gather and report best practices related to inclusion and diversity and to assist in developing ongoing inclusion and diversity goals and objectives.

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 Environmental, 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.

In an effort 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, 2022, our OSHA total recordable incident rate declined by 45%.

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 HF Sinclair 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. Our suite of programs include: Accelerate, a curated collection of on-demand e-learning for all employees; Refine, interactive, instructor-led workshops focusing on professional development at any career level; Front Line Leadership Development, a series of leadership training for new and existing supervisors; Catalyst, a guided cohort of new leaders learning about leadership styles and executive presence; and Leading the HF Sinclair Way, a deep-dive for our senior leaders on leading through our cultural values and business objectives. We invested \$6.0 million in our employee training and development programs in fiscal 2022.

Governmental Regulation

Our operations are subject to international, federal, state, provincial and local laws and regulations regarding, among other things, the generation, storage, handling, use, transportation and distribution of petroleum and hazardous materials by pipeline, truck, rail, ship and barge, the emission and discharge of materials into the environment, waste management, characteristics and composition of gasoline and diesel fuels, and other matters otherwise relating to the protection of human health and the environment. Permits or other authorizations are required under these laws and regulations for the operation of our refineries, pipelines and related facilities and these permits and authorizations are subject to revocation, modification and renewal, or may require operational changes, which may involve significant costs. Our operations are also subject to various international and domestic laws and regulations relating to occupational health and safety, and failure to appropriately manage occupational health and safety risks associated with our business could adversely impact our employees, communities, stakeholders, reputation and results of operations.

A violation of permit conditions or a failure to comply with applicable 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. There is also the potential for liability for spill response and remediation, natural resource damage claims, and personal and property damage claims if there were to be an oil spill at a facility located near federal or state waters or a release of hazardous or other substances into the environment.

Compliance with applicable environmental laws, regulations and permits or other authorizations and health and safety laws and regulations will continue to have an impact on our operations, the results of our operations and our capital expenditures.

Federal Transportation Rate Regulation - Some of HEP's existing pipelines provide interstate transportation services subject to regulation by the Federal Energy Regulatory Commission ("FERC") pursuant to the Interstate Commerce Act (the "ICA"). The ICA requires that the rates charged by these pipelines (referred to as "interstate liquids pipelines") must be just and reasonable. The ICA also prohibits interstate liquids pipelines from providing services in a manner that unduly discriminates against or confers undue preference upon any shipper. The ICA permits interested persons to challenge newly proposed or changed rates or rules and authorizes the FERC to suspend the effectiveness of such proposed rates or rules for a period of up to seven months, during which the FERC may investigate whether the proposed rate or rules are just and reasonable. Upon completion of an investigation, the FERC may require the interstate liquids pipeline to refund the revenues collected during the pendency of the investigation that are in excess of the amount the FERC determines to be just and reasonable, together with interest. The FERC also may investigate, upon complaint or on its own motion, rates that are already in effect and may order an interstate liquids pipeline to change its rates prospectively. Upon an appropriate showing, a shipper may obtain reparations (including interest) for damages sustained during the two years prior to the filing of a complaint.

As a general matter, interstate liquids pipelines may change their rates within prescribed ceiling levels that are tied to an inflation index that the FERC reviews every five years. 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. When an interstate liquids pipeline adjusts its rates using the index methodology, shippers may challenge rate increases made within the ceiling levels. The FERC's regulations provide that a protest against an index rate increase must allege "reasonable grounds" that the index rate increase is "so substantially in excess of the actual cost increases incurred by the carrier that the rate is unjust and unreasonable."

We believe the transportation rates currently charged by HEP's interstate liquids pipelines are in accordance with the ICA and applicable FERC regulations. However, due to the complexity of rate making, the lawfulness of any rate is never assured. Adverse decisions by the FERC related to HEP's rates could adversely affect our revenue, financial position, results of operations, and cash flows. In addition, if any of HEP's pipelines were found to have provided services or otherwise operated in violation of the ICA, this could result in the imposition of administrative and criminal remedies and civil penalties, as well as a requirement to disgorge charges collected for such services in excess of the rate established by the FERC. Any of the foregoing could adversely affect revenues and cash flow related to the affected assets.

State Transportation Rate Regulation - While the FERC regulates the rates for interstate shipments on HEP's liquids interstate pipelines, the New Mexico Public Regulation Commission regulates the rates for intrastate shipments on HEP's pipelines in New Mexico, the Texas Railroad Commission regulates the rates for intrastate shipments on HEP's pipelines in Texas and the Oklahoma Corporation Commission regulates the rates for intrastate shipments on HEP's pipelines in Oklahoma. Generally, these state agencies have not investigated the rates or practices of intrastate pipelines subject to their jurisdiction in the absence of shipper complaints. However, a state regulatory commission could investigate our rates if such a challenge were filed and any adverse decisions could adversely affect our revenue, financial position, results of operations, and cash flows.

Commodity Regulation - The Federal Trade Commission, the FERC, and the Commodity Futures Trading Commission hold statutory authority to monitor certain segments of the physical and futures energy commodities markets. These agencies have imposed broad regulations prohibiting fraud and manipulation of such markets. With regard to our physical sales of oil or other energy commodities, and any related hedging activities that we undertake, we are required to observe the market-related regulations enforced by these agencies, which hold substantial enforcement authority. Failure to comply with such regulations, as interpreted and enforced, could have a material adverse effect on our business, results of operations and financial condition.

Air Regulations - Our operations are subject to certain requirements of the federal Clean Air Act ("CAA") as well as related state and local laws and regulations, and similar laws in Canada and the Netherlands. Certain CAA regulatory programs applicable to our facilities require capital expenditures for the installation of certain air pollution control devices, operational procedures and expenditures to minimize emissions and to prevent accidental releases of air pollutants, 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. For example, implementation of the revised National Ambient Air Quality Standards ("NAAQS") for ozone could result in stricter permitting requirements, a delay in or the inability to obtain such permits, and increased expenditures for pollution control equipment, the costs of which could be significant. Moreover, an EPA rule became effective in January 2018 that 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; compliance with emissions standards for delayed coking units; and requirements related to air emissions resulting from startup, shutdown and maintenance events. 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.

Fuel Quality Regulations - We are subject to the EPA’s regulations governing fuels and fuel additives used in motor vehicles and non-road equipment. In February 2007, the EPA finalized the 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. Additionally, in April 2014, the EPA finalized the Tier 3 Motor Vehicle Emission and Fuel Standards, which require 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 fuels that meet the applicable requirements. Lastly, in December 2020, the EPA streamlined and consolidated its existing fuel quality regulations that apply across all gasoline and diesel fuel programs, also known as the EPA’s Fuels Regulatory Streamlining Rule at 40 CFR Part 1090. The streamlining rule is intended to improve overall compliance assurance and reduce compliance costs for the industry and the EPA, while maintaining environmental performance.

Renewable Fuel Standard – Pursuant to the Energy Independence and Security Act of 2007 (“EISA”), and the EPA’s corresponding RFS regulations, most refiners are required to blend increasing amounts of biofuels with refined products 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 July 2022, the EPA finalized the RFS targets for 2020 through 2022, which set increasing annual renewable volume obligations (“RVOs”) for conventional (i.e., corn ethanol) renewable fuel, biomass-based diesel, advanced biofuels and cellulosic biofuel. Separately, in December 2022, the EPA proposed annual RVOs and percentage standards for 2023 through 2025 for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel, and requested comment on establishing standards for 2026. The proposal increases renewable fuel obligations in each of the concurrent years. The EPA will not finalize the proposed rule until June 2023, creating some uncertainty regarding our compliance obligations for future years. 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’s implementation of the RFS has historically been subject to numerous court challenges. Lawsuits have been filed by the renewable fuel industry and refining industry challenging the EPA’s decisions on small refinery exemptions. For additional information regarding risks relating to our small refinery exemptions, see Item 1A, “Risk Factors - Compliance with, or developments with respect to, renewable and low carbon fuel blending programs, and other regulations, policies, and standards impacting the demand for low-carbon fuels could have an adverse effect on our financial condition and results of operations.” Legal challenges to 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 RVOs 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.

California Low Carbon Fuel Standard - Under California’s Global Warming Solutions Act of 2006, the California Air Resources Board (“CARB”) was required to undertake a statewide effort to reduce GHG emissions. One of the programs designed to help achieve those reductions is the LCFS program. California’s LCFS program is designed to reduce GHG emissions by decreasing the carbon intensity (“CI”) of transportation fuels consumed in the state. Under this program, each fuel is assigned a CI value, which is intended to represent the GHG emissions associated with the feedstocks from which the fuel was produced, the fuel production and distribution activities, and the use of the finished fuel. Each producer or importer of fuel must demonstrate that the overall mix of fuels it supplies for use in California meets the CI benchmarks for each compliance period. A producer or importer with a fuel mix that is above the CI benchmark must purchase LCFS credits sufficient to meet the CI benchmark. Fuels produced by our Renewables segment have CI scores that are lower than traditional petroleum-based transportation fuels, and we benefit from the demand from other regulated entities for these low-carbon transportation fuels.

Oregon Clean Fuels Program – The Clean Fuels Program (“CFP”) became effective in 2016, with the intended goal of reducing the CI of Oregon’s transportation fuels by establishing annual standards that decrease over time. The baseline year for the program is 2015, and the standard for that year represents 10% ethanol blended with gasoline and 5% biodiesel blended with diesel. The CFP requires a 10% reduction in average CI from 2015 levels by 2025, followed by a 20% reduction by 2030, and a 37% reduction by 2035. Businesses that create fuels with a lower CI than the annual limit generate credits, while higher CI fuels create deficits. Credits and deficits are measured in metric tons of GHG emissions. We import transportation fuels produced at our Puget Sound Refinery into Oregon, and are thereby subject to the CFP, including among other things, the requirement to purchase and retire CFP credits to offset the deficit created through our sale of gasoline and diesel fuel into Oregon.

Washington Clean Fuel Standard – The Clean Fuel Standard (“CFS”) became effective on January 1, 2023, and similar to the low carbon fuel programs in California and Oregon, it is designed to decrease the CI of Washington’s transportation fuels. The CFS requires a 20% reduction in average CI from 2017 levels by 2034. The CFS functions similar to its sister programs in California and Oregon. We sell gasoline and diesel fuel produced at our Puget Sound Refinery into the Washington transportation fuel market, generating deficits under the CFS.

Other Low Carbon Fuel Standards – Many international, federal, state, provincial and local governments have issued, or are considering issuing, low carbon fuel regulations, policies, and standards to reduce GHG emissions and increase the percentage of low-carbon fuels in the transportation fuel mix. While these regulations result in additional costs to our refining business, they have created opportunities to develop our renewables business, and should continue to help drive demand for our renewable diesel products. We believe that our ability to supply low-carbon fuels can play an important role in helping achieve GHG emissions reduction targets.

Blender’s Tax Credit Incentives - The U.S. federal government has enacted tax incentives to encourage the production of low-carbon fuels and/or reduce GHG emissions. For example, Section 6426 of the Internal Revenue Code of 1986, as amended (the “Code”), provides a tax credit (generally referred to as the blender’s tax credit) to blenders of certain renewable fuels to encourage the production and blending of those fuels with traditional petroleum-based transportation fuels. Only blenders that have produced a mixture and either sold or used the fuel mixture as fuel are eligible for the blender’s tax credit. The renewable diesel produced by our Renewables segment is a liquid fuel derived from biomass that meets the EPA’s fuel registration requirements; therefore, renewable diesel that we produce and blend qualifies for this refundable tax credit of one dollar per gallon. The Inflation Reduction Act of 2022 extended this credit through December 31, 2024, but there is no certainty that this legislation authorizing the credit or the amount of the credit will not be revised.

Oregon and Washington Carbon Cap & Trade Programs – In March 2020, the Governor of Oregon signed Executive Order 20-04, (the “Executive Order”), directing state agencies to take actions to reduce and regulate GHG emissions and consider climate change in agency planning. The Executive Order directed the Oregon Environmental Quality Commission (“OEQC”) and the Oregon Department of Environmental Quality (“ODEQ”) to take a variety of actions, including the development of a new program to limit GHG emissions from large stationary sources, transportation fuels, and other liquid and gaseous fuels. In August 2021, ODEQ published a notice of proposed rulemaking with the draft emissions cap and reduction rules for the Climate Protection Program (“CPP”). The OEQC considered and adopted final CPP rules in December 2021, which became effective January 1, 2022. Using a 1990 baseline, the CPP includes GHG reduction goals of 50% by 2035 and 90% by 2050. The authority of OEQC to adopt the CPP rules is being challenged in litigation, including in a lawsuit filed in March 2022 by the Western States Petroleum Association (“WSPA”) with the Court of Appeals of Oregon. Our subsidiary, HF Sinclair Refining & Marketing LLC, became subject to the CPP rules in the second quarter 2022 due to its sale of transportation fuel over the rack in Oregon. As a covered fuel supplier, HF Sinclair Refining & Marketing LLC submitted a CPP permit application to the ODEQ in February 2023 and is required to acquire, and then surrender, compliance instruments (corresponding to each metric ton of CO₂ equivalents imported into Oregon) starting in calendar year 2025, at the end of the first three-year compliance period, which runs from 2022 to 2024, and for each three-year compliance period thereafter to demonstrate compliance with the CPP rules. Similarly, the State of Washington has enacted the Climate Commitment Act (“CCA”), which establishes a comprehensive program that provides an overall limit for GHG emissions from major sources in the state that begins on January 1, 2023 and declines yearly to 95% below 1990 levels by 2050. It is too early to predict the financial and operational impact of the CPP and CCA on our business.

Climate Change - In recent years, various legislative and regulatory measures to address climate change and 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 stationary 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, low carbon fuel standards and renewable fuel requirements. 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.

The EPA has previously issued two rules (the “Clean Power Plan” and the “Affordable Clean Energy Rule”) to reduce carbon dioxide emissions from coal-fired power plants, both of which have been invalidated by courts. The EPA is currently working on a replacement rule, and we do not expect such a rule will directly affect our operations. However, to the extent the EPA fully implements rules 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 these rules 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.

In March 2022, the SEC issued proposed rules that, if adopted, would require public companies to include certain climate-related disclosures in their registration statements and periodic reports, including information about climate-related risks, climate-related financial statement metrics, and GHG emissions. In November 2022, the Biden Administration issued a proposed rule that would require government contractors to publicly disclose their GHG emissions and set “science based” emissions reduction targets, which generally do not allow for the use of carbon offsets, that align with the goals of the Paris Agreement, which could affect us as a government contractor and/or through our contractual and business arrangements with government contractors.

Stakeholder concerns about climate change could also adversely affect demand for the refined petroleum products that we produce. Recently, certain financial institutions, funds and other sources of capital have made pledges to reduce GHGs in their lending portfolios, leading some to restrict or eliminate their investment in oil and natural gas activities. There is also a risk that future government regulations could require financial institutions to adopt policies that have the effect of reducing the funding provided to or investments in the fossil fuel sector altogether or unless certain climate-related standards are met. Ultimately, this could make it more difficult or costly 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.

Climatic events in the areas in which we operate, whether from climate change or otherwise, can cause disruptions and in some cases delays in our production activities or ability to deliver our products to our customers. These events, including but not limited to, drought, winter storms, wildfire, extreme temperatures, tornados, extreme precipitation or flooding, may become more intense or more frequent as a result of climate change and could have an adverse effect on our continued operations as well as the operations of our suppliers and customers. Additionally, changing meteorological conditions, particularly temperature, may result in changes to demand for our products. Our customers or suppliers may also be subject to similar risks, any of which may adversely impact our business, financial condition, or operations.

The Biden Administration has adopted 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 and reduce GHG emissions. 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, in 2021, President Biden issued several executive orders that committed to substantial action on climate change and called for, among other things, the increased use of zero-emission 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. In 2021, EPA announced its intent to reconsider and revise rules related to the oil and gas sector (primarily oil production and natural gas production, distribution and storage) to further reduce GHG emissions, and, on December 6, 2022, the EPA proposed a supplement that would revise and expand the 2021 proposal. If finalized, these new rules could increase the cost of domestic crude oil and natural gas. In addition, the EPA, together with the DOT, implemented GHG emission and corporate average fuel economy standards for vehicles manufactured in the United States, which standards were revised in December 2021 to impose more stringent requirements for emissions reductions. President Biden also reinstated the Interagency Working Group on the Social Cost of Greenhouse Gases in 2021 and directed the group to publish interim estimates of the social cost of carbon dioxide, nitrous oxide, and methane, with a view to using such estimates in federal rulemakings on GHGs, which it did. In November 2022, the EPA published a draft report assigning new and higher social cost values to GHG emissions for use in its rulemaking initiatives.

Internationally, the United Nations-sponsored Paris Agreement requires member countries to submit non-binding, individually determined emissions reduction goals every five years after 2020. The United States initially joined and then withdrew from such agreement in 2020. In 2021, the United States rejoined the Paris Agreement and issued its corresponding “nationally determined contribution” (“NDC”) to reduce economy-wide net GHG emissions to 50-52% below 2005 levels by 2030. While the NDC does not identify specific actions necessary to achieve these reductions, it lists several sectors as pathways for reductions, including the power, transportation, building, industrial, and agricultural sectors. The administration has acknowledged a combination of regulatory actions and legislation will be necessary to achieve the U.S. NDC. In regards to legislation, in November 2021, the United States enacted a nearly \$1 trillion bipartisan infrastructure law, which provided significant funding for electric vehicles and clean energy technologies, and in August 2022 the United States enacted the Inflation Reduction Act of 2022, which allocated \$369 billion to climate change and environmental initiatives, including transportation electrification, fees on and greater regulation of methane emissions, and support for green energy manufacturing programs. Certain of these initiatives are subject to ongoing litigation, and the impacts of these laws and orders, and the terms of any legislation or regulation to implement the United States’ commitment under the Paris Agreement, remain unclear at this time.

In the Netherlands and Canada, increased attention to climate change has led to changes in laws and to new laws, such as the Climate Act (Netherlands) and the Canadian Net-Zero Emissions Accountability Act, and has also led to increased frequency of climate change lawsuits.

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, as well as similar laws in Canada and the Netherlands. 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 became effective on June 22, 2020 and narrowed the regulatory reach of the CWA regulations relative to a prior 2015 rulemaking. However, that rule was vacated by two federal district courts in 2021, and the Biden Administration subsequently announced a proposed rule to revise again the definition of “waters of the United States,” which would generally reinstate the pre-2015 definition of “waters of the United States.” The EPA finalized the rule on January 18, 2023, which will become effective on March 20, 2023. This new rule expands CWA jurisdiction relative to the June 2020 rule and has already been challenged in federal court, creating additional uncertainty. Moreover, the United States Supreme Court is expected to rule in mid-2023 on certain aspects of the definition and the EPA and the Corps have announced an intent to develop a subsequent rule further revising the definition of “waters of the United States.”

Hazardous Substances and Wastes - We generate wastes that may be subject to the Resource Conservation and Recovery Act and comparable state and local requirements, as well as similar laws in Canada and the Netherlands. 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. Many states also have similar liability regimes that impose strict and potentially joint and several liability for releases into the environment.

Various regulators are considering regulation of so-called emerging contaminants, including for example a proposal by the EPA in August 2022 to list two per- and polyfluoroalkyl substances as CERCLA hazardous substances. We cannot predict the impact of future regulation of presently unregulated substances, but the prospect of such regulation creates additional uncertainty.

Oil Pollution Liability - 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. Likewise, the CWA contains provisions that also impose similar liabilities for oil spills, and regulations under the CWA imposed prevention and response planning requirements applicable to many of our facilities. These liability regimes, as well as the rules under the OPA and CWA, or new agency interpretations of existing laws and regulations, may necessitate additional expenditures in future years and result in increased costs of our operations.

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 Climate Act, the European Birds and Habitats Directive implemented in the Nature Conservation 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 July 2023. 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 (on the basis of the latest amendment) to be climate neutral by 2050. Furthermore, the target is that 100% of the electricity production will be CO₂ neutral in 2050.

Enforcement and Litigation Proceedings - 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. These matters include statutory and regulatory programs related to soil and water discharges and contamination, air pollution, and GHG emissions, as well as 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, 2022, we had an accrual of \$192.3 million related to such environmental liabilities.

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.

Safety and Accident Prevention - 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 and other subordinate decrees and regulations, applicable to our operations in the Netherlands. We maintain a comprehensive safety program, including mechanical integrity and safety-related maintenance programs and training, to comply 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 CAA 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. Some of the revised requirements have not yet become effective, and the EPA issued a final rule in December 2019 that rescinded several of the requirements of the 2017 rule. That rescission was challenged in court, but the case has not proceeded because the EPA proposed a further RMP amendment in August 2022 that would reverse much of the 2019 rescission, with some modifications, and add provisions for employee participation, community engagement, and additional accident prevention requirements. 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/Industry:

- The prices of crude oil, renewable feedstocks and refined, finished lubricant and renewable diesel products materially affect our profitability, and are dependent upon many factors that are beyond our control.
- General economic conditions may adversely affect our business, operating results and financial condition.
- Our operations are subject to catastrophic losses, operational hazards and unforeseen interruptions and other disruptive risks for which we may not be adequately insured.
- A disruption to or proration of the product distribution systems or manufacturing facilities we utilize could negatively impact our profitability.
- A material decrease in the supply, or a material increase in the price, of crude oil, renewable feedstocks or other raw materials or equipment available to our refineries and other facilities could significantly reduce our production levels and negatively affect our operations.
- 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, our financial condition, results of operations, or cash flows could be materially and adversely affected.
- The refining and marketing industry and the lubricants and specialty products industry are highly competitive, and an increase in competition could adversely affect our earnings and profitability.
- REH Company became a significant holder of our common stock following the completion of the Sinclair Transactions.
- Our acquisition strategy involves numerous risks, any of which could adversely affect us.
- Negative publicity or an erosion of our business reputation could have a material adverse effect on our earnings, cash flows and financial condition.
- Terrorist attacks, and the threat of terrorist attacks or vandalism, have resulted in increased costs to our business. Continued global hostilities or other sustained military campaigns may adversely impact our results of operations.
- Our business may suffer due to a change in the composition of our Board of Directors, or the 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.
- A portion of our workforce is unionized, and any disruptions in our labor force or adverse employee relations could adversely affect our business.
- 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, has had and may continue to have a material adverse effect on our business.
- Our business is subject to the risks of international operations, including currency fluctuations.
- Potential product, service or other related liability claims and litigation could adversely affect our business, reputation and results of 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.
- Certain of our facilities and assets are located on or adjacent to Native American tribal lands. Furthermore, our operations are subject to potentially disruptive activity by those concerned with our industry.
- An impairment of our goodwill or long-lived assets could reduce our earnings or negatively impact our financial condition 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.
- The market price of our common stock may fluctuate significantly, and the value of a stockholder's investment could be impacted.

Risks Related to Government Regulation

- 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 and health and safety laws and regulations, and face potential exposure for environmental matters.
- 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.
- Increasing attention to environmental, social and governance (“ESG”) matters may adversely impact our business, financial results, stock price or price of debt securities.
- Physical impacts of climate change could have an adverse effect on our financial condition and results of operations.
- Compliance with, or developments with respect to, renewable and low carbon fuel blending programs, and other regulations, policies, and standards impacting the demand for low-carbon fuels could have an adverse effect on our financial condition and results of operations.
- Increases in required fuel economy and regulation of CO₂ emissions from motor vehicles may reduce demand for transportation fuels.
- Compliance with and changes in tax laws could materially and adversely impact our financial condition, results of operations and cash flows.

Risks Related to Cybersecurity, Data Security and Privacy, Information Technology and Intellectual Property

- Our information technology systems, operational systems, security systems, infrastructure, communications networks, software integrated in our manufacturing and administrative processes, and customer data processed by us, third-party vendors or suppliers are subject to risks presented by cyber events, including incidents or breaches of security, any of which could prevent us or third parties we rely on from effectively operating our business, and could harm our reputation or materially adversely affect our company's assets, growth efforts, operations, facilities, business reputation or financial condition.
- We may be subject to information technology system failures, communications network disruptions and data breaches that are generally beyond our control.
- Our business is subject to complex and evolving global laws, regulations and security standards regarding data privacy, cybersecurity and data protection, which could result in claims, increased cost of operations, or other harm to our business.
- We may be unable to adequately maintain, enforce and protect our intellectual property and may not be able to prevent third parties from unauthorized access or use of our intellectual property, which may increase our cost of doing business or otherwise hurt our ability to compete in the market.
- If we fail to comply with our obligations under license or technology agreements with third parties or are unable to license rights to use technologies on reasonable terms or at all, we may be required to pay damages or could potentially lose license rights that are critical to our business.

Risks Related to Liquidity, Financial Instruments and Credit

- 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.
- We are exposed to the credit risks, and certain other risks, of our key customers and vendors.
- 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.
- Our credit facility contains certain covenants and restrictions that may constrain our business and financing activities.
- Our hedging transactions may limit our gains and expose us to other risks.
- We may be unable to pay future dividends.

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/INDUSTRY

The prices of crude oil, renewable feedstocks and refined, finished lubricant and renewable diesel 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, renewable feedstocks (such as soybean oil), refined, finished lubricant and renewable diesel products, which can vary by type and class or product and 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), the price and availability of renewable feedstocks, 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 and facility operations. Developments in the global oil markets, such as actual or potential hostilities or other conflicts in oil producing areas, including the Russia-Ukraine war, and worldwide demand for crude oil, particularly in developing countries, can affect the prices of crude oil and result in inflated energy prices. 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 electric, gas/electric hybrid or hydrogen-powered 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 or our renewable feedstocks and must purchase nearly all of the feedstocks we process, the price of which fluctuates based upon worldwide and local market conditions. The profitability of our Refining, Lubricants and Specialty Products and Marketing segments depends largely on the spread between market prices for refined petroleum products and crude oil prices. The profitability of our Renewable segment depends largely on the spread between market prices for renewable diesel plus state and federal low carbon fuel incentives and renewable feedstocks, such as soybean oil. This margin is continually changing and may fluctuate significantly from time to time. Crude oil and refined and renewable 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. In addition, the volume of renewable diesel produced by our competitors is expected to increase going forward, and as the market becomes more competitive, or if there are changes in the regulations, policies, and standards affecting the demand for low-carbon fuels or our ability to obtain approved fuel pathways, our Renewables segment may experience increased volatility in product margins. A deterioration of crack spreads or price differentials between domestic and foreign crude oils or renewable diesel product margins could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Additionally, due to the seasonality of refined and renewable 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 products. Commodity prices have, and in the future may, fluctuate due to adverse weather events, regulatory interventions and geo-political conditions. In general, prices for refined products are influenced by the price of crude oil and prices for renewable diesel are influenced by the price of renewable feedstocks. Although an increase or decrease in the price for crude oil or renewable feedstocks may result in a similar increase or decrease in prices for refined products or renewable diesel, there may be a time lag in the realization of the similar increase or decrease in prices for refined products or renewable diesel. The effect of changes in crude oil or renewable feedstock prices on operating results, therefore, depends in part on how quickly refined product or renewable diesel prices adjust to reflect these changes. A substantial or prolonged increase in crude oil or renewable feedstock prices without a corresponding increase in refined product or renewable diesel prices, a substantial or prolonged decrease in refined product or renewable diesel prices without a corresponding decrease in crude oil or renewable feedstock prices, or a substantial or prolonged decrease in demand for refined products or renewable diesel could have a significant negative effect on our earnings and cash flow. Also, our crude oil and refined and renewable diesel product 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 product or renewable diesel 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.

General economic conditions may adversely affect our business, operating results and financial condition.

Economic slowdowns may have serious negative consequences for our business and operating results, because our performance is subject to domestic economic conditions and their impact on levels of consumer spending. Some of the factors affecting consumer spending include general economic conditions, unemployment, consumer debt, inflation, reductions in net worth based on declines in equity markets and residential real estate values, adverse developments in mortgage markets, taxation, energy prices, interest rates, consumer confidence and other macroeconomic factors. Political instability and global health crises, such as the COVID-19 pandemic, can also impact the global economy and decrease worldwide demand for oil and refined products. Increased volatility in the global oil markets, including the prices our customers or our joint ventures' customers pay for crude oil and other raw materials, has, and may continue to, materially adversely affect our business, financial condition, results of operations and/or cash flows.

Adverse developments in the global economy or in regional economies could also negatively impact our customers and suppliers, and therefore have a negative impact on our business or financial condition. In the event of adverse developments or stagnation in the economy or financial markets, our customers and suppliers may experience deterioration of their businesses, reduced demand for their products, cash flow shortages and difficulty obtaining financing. As a result, existing or potential customers might delay or cancel plans to use our services and may not be able to fulfill their obligations to us in a timely fashion. Further, suppliers may experience similar conditions, which could impact their ability to fulfill their obligations to us. Moreover, a financial market crisis may have a material adverse impact on financial institutions and limit access to capital and credit. This could, among other things, make it more difficult for us to obtain (or increase our cost of obtaining) capital and financing for our operations. Our access to additional capital may not be available on terms acceptable to us or at all.

Inflation has the potential to adversely affect our liquidity, business, financial condition and results of operations by increasing our overall cost structure, particularly if we are unable to achieve commensurate increases in the prices we charge our customers. Current and future inflationary pressures may be driven by, among other things, supply chain disruptions and governmental stimulus or fiscal policies. Continuing increases in inflation could affect the U.S. economy generally, the overall demand for our products and services, our costs for labor, material and services and our operating margins, all of which could have an adverse effect on our business, financial position, results of operations and cash flows. As a result of inflation, we have experienced and may continue to experience, cost increases. Although we may take measures to mitigate the impact of this inflation, if these measures are not effective our business, financial condition, results of operations and liquidity could be materially adversely affected. Even if such measures are effective, there could be a difference between the timing of when these beneficial actions impact our results of operations and when the cost inflation is incurred.

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 or casualties (including those involving marine vessels/terminals), fires, explosions, hazardous materials releases or spills (such as the release of crude oil on the Osage pipeline in July 2022), terror or cyberattacks, vandalism, power failures, mechanical failures and other events beyond our control, and we have experienced certain of these events in the past. These events could result in an injury or loss of life, and have in the past and could in the future result in, property damage or destruction or curtailment or an interruption in our operations and may affect our ability to meet customer commitments. In addition, the consequences of any operational incident (including as a result of a maritime disaster or casualty) at our marine terminal facilities may be even more significant as a result of the complexities involved in addressing releases or spills occurring in U.S. federal and/or state waters and/or the repair of marine terminal facilities.

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 and insurance policies for our joint ventures are increasing. In some instances, certain insurance has become unavailable or has become available only for reduced amounts of coverage or at a significantly increased cost.

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.

A disruption to or proration of the 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 Casper, El Dorado, Navajo, Parco, Puget Sound, Woods Cross, and Tulsa Refineries are Magellan (RMPS), NuStar Energy Magellan (Mid-Con), SFPP, Pioneer, Olympic, UNEV and MPLX, and Magellan (Mid-Con), 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.

Additionally, our Refining, Lubricants and Specialty Products and Renewables segments depend on rail transportation for the delivery of feedstocks used in the production of our products and to deliver products to market, the availability of which is subject to various risks, including those associated with rail strikes, equipment shortages, operating hazards and transportation regulations. If rail transportation is disrupted, we may be unable to produce and/or deliver our products in a competitive or profitable manner and, if such disruption were to occur over an extended period of time, it could have a material adverse effect on our business, financial condition and results of operations.

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 resulting 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, or a material increase in the price, of crude oil, renewable feedstocks or other raw materials or equipment 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 and facilities, we must continually contract for crude oil and renewable feedstock supplies from third parties. There are a limited number of crude oil and renewable feedstock 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 or renewable feedstock suppliers, or enter into new agreements on similar terms, the supply of crude oil or renewable feedstocks 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, decreased demand, lack of drilling activity, natural production declines, governmental regulations, including travel bans and restrictions, quarantines, shelter in place orders, and shutdowns, catastrophic events or otherwise, could result in a decline in the volume of crude oil available to our refineries. As the volume of renewable diesel produced increases, competition for renewable feedstocks may also increase and result in an increase in feedstock costs and a decrease in renewable diesel margins. 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 or renewable feedstocks 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 or renewable feedstocks 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' and renewable facilities' 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, hydrogen, 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.

Our Artesia RDU and Sinclair RDU are co-located with the Navajo Refinery and Parco Refinery, respectively, and their operations are dependent upon certain shared infrastructure at the co-located facilities. For example, the hydrogen plants at the Navajo Refinery and Parco Refinery support both refinery and renewable diesel operations. As a result, any disruption due to weather events, mechanical failure or other interruption that negatively impacts, or causes a shut down of, shared infrastructure at the co-located facilities could result in lost production and have a material adverse effect on earnings for both refinery and renewable diesel operations at the co-located facility. In addition, in the event equipment or raw materials at the co-located facilities are constrained, we make commercial decisions that prioritize the continuing operation of one segment over the other in order to maximize earnings of our consolidated business.

In addition, periods of disruption in the global supply chain, including as a result of COVID-19 and the Russia-Ukraine war, have caused shortages in the equipment and parts necessary to operate our facilities and complete our capital projects. Certain suppliers have experienced, and may continue to experience, delays related to a variety of factors, including logistical delays and component shortages from vendors. We continue to monitor the situation and work closely with our suppliers to minimize disruption to our operations as a result of supply chain interruptions.

If our raw material, utility, gas, hydrogen or water supplies or access to the equipment necessary to operate our facilities were disrupted, our businesses may incur increased costs to procure alternative supplies or equipment or incur excessive downtime, which would have a direct negative impact on our operations.

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 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. For example, in the third quarter of 2020, we ceased refining operations at our Cheyenne Refinery 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 in Artesia, New Mexico. 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, terror or cyberattacks, vandalism or other events (such as equipment malfunctions, explosions, fires or 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. 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 several of our refineries in 2023, which involve numerous risks and uncertainties, including 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.

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.

REH Company became a significant holder of our common stock following the completion of the Sinclair Transactions.

As of February 15, 2023, REH Company owned approximately 20.8% of our common stock. In connection with the Sinclair Transactions, the REH Company stockholders agreed to certain customary lock up, voting and standstill restrictions, as well as customary registration rights. Under the Stockholders Agreement (the "Stockholders Agreement"), approximately 30,111,018 shares of our common stock issued to the REH Parties ("Restricted Shares") remain subject to a "lock-up" period that commenced on the closing date, with one-half of such Restricted Shares to be released from such restrictions on the first anniversary of the closing date, and the remainder to be released from such restrictions on the date that is 15 months from the closing date. Subject to release from the lock-up provisions and the filing of a resale registration statement or satisfaction of the requirements of Rule 144, REH Company and its stockholders may seek to sell their shares of common stock. These sales (or the perception that sales may occur) may affect the market for, and the market price of, our common stock in an adverse manner.

Additionally, pursuant to the Stockholders Agreement, the REH Parties are entitled to nominate (i) two persons to our Board of Directors for so long as the REH Parties beneficially own common stock constituting not less than 15% of all outstanding common stock and (ii) one person to our Board of Directors for so long as the REH Parties beneficially own less than 15% but more than or equal to 5% of all outstanding common stock. As a result, REH Company (and the REH Parties) has the ability to influence our management and affairs. Further, the existence of a new significant stockholder may have the effect of deterring hostile takeovers, delaying or preventing changes in control or changes in management, or limiting the ability of our other stockholders to approve transactions that they may deem to be in the best interests of our company.

So long as REH Company continues to control a significant amount of our common stock, it will continue to be able to influence all matters requiring stockholder approval, subject to the voting agreements of the REH Parties set forth in the Stockholders Agreement. Moreover, this concentration of stock ownership may also adversely affect the trading price of our common stock to the extent investors perceive a disadvantage in owning stock of a company with a significant stockholder.

Our acquisition strategy involves numerous risks, any of which could adversely affect us. Certain acquisitions, such as the Sinclair Transactions, require, and may continue to require, management to devote significant attention and resources to integrating the acquired businesses with our business.

An additional component of our growth strategy is to selectively acquire complementary assets or businesses for our refining operations, such as the Sinclair Transactions and our acquisition of the Puget Sound Refinery, 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 significant 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;
- the inability to integrate multiple acquisitions simultaneously or within a short timeframe of each other, including the Sinclair Transactions and the acquisition of the Puget Sound Refinery;
- difficulties integrating personnel from the acquired business while maintaining focus on providing consistent, high-quality products and services or the loss of key employees;
- difficulties integrating relationships with customers, vendors and business partners;
- liability for known or unknown environmental conditions or other contingent liabilities not covered by indemnification or insurance or potential unknown and unforeseen expenses, delays or regulatory conditions associated with such acquisitions;
- 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.

Delays or difficulties in the integration process could adversely affect our business, financial results, financial condition and stock price. Even if we are able to integrate our business operations successfully, there can be no assurance that this integration will result in the realization of the full benefits of synergies, cost savings, innovation and operational efficiencies that we currently expect or have communicated from this integration or that these benefits will be achieved within the anticipated time frame.

Negative publicity or an erosion of our business reputation could have a material adverse effect on our earnings, cash flows and financial condition.

Our reputation and our brands, including, without limitation, our existing Sinclair, HollyFrontier Specialty Products, Petro-Canada Lubricants, Red Giant Oil and Sonneborn brands, and any brands we may acquire or establish in the future, are an important corporate asset. Factors that could have a negative impact on our reputation and our brands include an operating incident or significant cybersecurity disruption; changes in consumer views concerning our products; a perception by investors or others that we are making insufficient progress with respect to our carbon emission reduction goals, or that pursuit of this ambition may result in allocation of capital to investments with reduced returns; and other adverse events such as those described in this Item 1A. Negative impacts on our reputation and our brands could in turn make it more difficult for us to compete successfully for new opportunities, obtain necessary regulatory approvals, obtain financing, attract talent, or could reduce consumer demand for our branded products. Our reputation may also be harmed by events which negatively affect the image of our industry as a whole. The materialization of risks discussed in this section could negatively affect our reputation and could have a material adverse effect on our earnings, cash flows and financial condition.

Terrorist attacks, and the threat of terrorist attacks or 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. Any attack on our facilities or those of our customers or suppliers could have a material adverse effect on our business. 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, vandalism, or cyberattacks or extortion 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, cyberattacks, vandalism or war could also affect our ability to raise capital including our ability to repay or refinance debt.

Our business may suffer due to a change in the composition of our Board of Directors, or the 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 Board of Directors, 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, an increase in labor costs as a result of inflation or otherwise could have an adverse impact on 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, 2022, approximately 26% 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 pay dividends to our stockholders 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 COVID-19 pandemic or any other widespread outbreak of an illness or pandemic or other public health crisis, and actions taken in response thereto, have had and may continue to have a material adverse effect on our operations, business, financial condition and results of operations and cash flows.

COVID-19's spread across the globe and governmental actions in response thereto have negatively affected worldwide economic and commercial activity, significantly impacted global demand for oil, gas and refined products, and created significant volatility and disruption of financial and commodity markets.

The spread of COVID-19 caused us to modify our business practices from time to time as needed (including limiting employee and contractor presence at our work locations, restricting travel unless approved by senior leadership, quarantining employees

when necessary and reducing utilization at our refineries), and similar widespread outbreaks of illness or pandemics could significantly disrupt our operations and ability to perform critical functions in the future.

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. The extent to which the pandemic will continue to impact our business and operating results remains uncertain and depends on future developments related to the duration and severity of the spread of the virus, emerging variants, vaccine and booster effectiveness, and government measures, designed to slow and contain the spread of COVID-19, among others, all of which are beyond our control. The effects of the COVID-19 pandemic, volatility in global oil markets as well as the potential for a recession, 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.

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 the Petro-Canada Lubricants and Sonneborn businesses 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.

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 maintain 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 renewable diesel and 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 products 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 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, 2022, we owned a 47% 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 Colorado, Idaho, Iowa, Kansas, Missouri, 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 2023 through 2037, 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 47% 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, 2022.

Certain of our facilities and assets are located on or adjacent to Native American tribal lands. Furthermore, our operations are subject to potentially disruptive activity by those concerned with our industry.

Certain of our facilities and other assets are located on or adjacent to Native American tribal lands. Various federal agencies, along with each Native American tribe, promulgate and enforce regulations, including environmental standards, regarding operations on Native American tribal lands. In addition, each Native American tribe is a sovereign nation having the right to enforce laws and regulations (including various taxes, fees, and other requirements and conditions) and to grant approvals independent from federal, state and local statutes and regulations. In 2020, the Supreme Court ruled in *McGirt v. Oklahoma* that the Muscogee (Creek) Nation reservation in Eastern Oklahoma has not been disestablished, and therefore retains jurisdiction over criminal matters, and a subsequent ruling in July 2022 in *Oklahoma v. Castro-Huerta* narrowing *McGirt's* holding to find concurrent tribal and state jurisdiction with respect to crimes committed by non-Native Americans against Native Americans on tribal lands, substantial uncertainty exists with respect to matters of which tribes may have exclusive or concurrent jurisdiction. Although the ruling in *McGirt* indicates that it is limited to criminal law, the ruling has significant potential implications for civil law. At this time, we cannot predict how these jurisdictional issues may ultimately be resolved. Furthermore, our operations may be disrupted by restrictions on our access to railways and waterways on or adjacent to tribal lands, including, for example, through restrictions on the number of trains permitted to cross certain reservations. These factors may increase our cost of doing business on Native American tribal lands.

In addition, our industry is subject to potentially disruptive activities by those concerned with the possible environmental impacts of crude oil and refined products. Activists, non-governmental organizations and others may seek to restrict our operations or the transportation of crude oil and refined products by exerting social or political pressure. This interference could have a material adverse effect on our business, financial condition and results of operations

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. Although no impairment charges were taken in 2021 or 2022, a reasonable expectation exists that a 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.

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.

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, our affiliates or REH Company; and/or
- the other factors described in these Risk Factors, specifically, the Risk Factor titled “*REH Company became a significant holder of our common stock following the completion of the Sinclair Transactions.*”

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.

RISKS RELATED TO GOVERNMENT REGULATION

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

Regulation affects almost every part of our business. For instance, we are subject to laws and regulations related to working conditions, health and safety, equal employment opportunity, employee benefit and other labor and employment matters, and competition and antitrust matters. Our assets and operations are subject to regulation and oversight by foreign, federal, state and local regulatory authorities, including the FERC, Commodities Futures Trading Commission, EPA, Occupational Safety and Health Administration, the SEC and the United States Department of Justice, each of which may impose significant civil and criminal penalties to enforce compliance with its requirements. Any such regulatory violations could have a material adverse effect on our financial operating results including earnings, cash flow and liquidity. Further, our financial results may be

materially affected by the adoption of new or amended financial accounting standards, and regulatory or outside auditor guidance or interpretations.

New laws, policies, regulations, rulemaking and oversight, unexpected policy changes or interpretations of existing laws or regulations as well as changes to those currently in effect, could adversely impact our earnings, cash flows and operations. Legislative changes, as well as regulatory actions taken by these agencies, have the potential to adversely affect our profitability. 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.

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

Operations of our facilities, pipelines and distribution operations are subject to international, federal, state, provincial and local laws and regulations regarding, 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 human health and the environment, including climate change. Permits or other authorizations are required under these laws and regulations 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. A violation of permit conditions or a failure to comply with applicable 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 and the incurrence of capital expenditures; the occurrence of delays in the permitting or the denial of permits, development or expansion of projects; the issuance of injunctive relief limiting or prohibiting certain operations; and reputational harm. There is also the potential for liability for spill response and remediation, natural resource damage claims, and personal and property damage claims in the event of an oil or other refined product spill at a facility located near federal or state waters or a release of hazardous or other substances into the environment.

Changes in laws or regulations could require major modifications of our operations, including 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, implementation of the revised NAAQS for ozone could result in stricter permitting requirements, a delay in or inability to obtain required permits, and increased expenditures for pollution control equipment, the costs of which could be significant. Also, an EPA rule became effective in January 2018 that requires, among other things, benzene monitoring at refinery fence lines 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 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. Updated or new determinations under the Endangered Species Act and comparable Canadian, federal and state laws could also impact our operations or those of our suppliers. Our operations and those of our suppliers could also be impacted by new or revised federal restrictions or laws pertaining to oil and gas operations on federal lands, which could include pauses on leasing, enhanced environmental reviews, and emissions regulations. Compliance with new international and domestic environmental laws, regulations and interpretations will continue to have an adverse 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 water discharges and contamination, air pollution, accident prevention and personal injury and property damage allegedly caused by substances which we processed, manufactured, handled, used, released or disposed and climate change.

We are and have been the subject of various local, state, provincial, federal, international and private proceedings relating to environmental regulations, conditions and inquiries. Instances of non-compliance with environmental regulations could require additional expenditures, including expenditures for investigation and remediation, which could be significant.

Our operations are also subject to various international and domestic laws and regulations relating to occupational health and safety, including for chemical accident prevention. We maintain safety, training and maintenance programs as part of our ongoing efforts to comply 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 international 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 policy also aims to increase the share of renewable energy used in transportation and reduce greenhouse gas emissions from transportation fuels. 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, particularly gasoline, in certain markets. In the near term, the increasing renewable fuel standard obligations, as discussed in our Risk Factor titled *“Compliance with, or developments with respect to, renewable and low carbon fuel blending programs, and other regulations, policies and standards impacting the demand for low-carbon fuels could have an adverse effect on our financial condition and results of operations”* below, present 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.”

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 limit or eliminate future emissions, and to require or incentivize the use of lower carbon or renewable alternatives. As a result, our operations, and those of our customers, are subject to a series of regulatory, political, litigation, and financial risks associated with the refining and the use of petroleum products and emission of GHGs.

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 require control or reduction of emissions of GHGs, including methane, from such sources.

In 2021, President Biden issued several executive orders that committed to substantial action on climate change, released the “The Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050,” which established a roadmap to net zero emissions in the United States by 2050 and called for, among other things, improving energy efficiency, decarbonizing energy sources, the increased use of zero-emission 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. In 2021 and 2022, the EPA announced proposals to further reduce GHG emissions primarily from oil production and natural gas production, transmission and storage that, if finalized, could increase the cost of domestic crude oil and natural gas. President Biden also reinstated the Interagency Working Group on the Social Cost of Greenhouse Gases in 2021 and directed the group to publish interim estimates of the social cost of GHGs, which it did. In November 2022, the EPA published a draft report assigning new and higher social cost values to GHG emissions for use in its rulemaking initiatives. 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. See *“Compliance with, or developments with respect to, renewable and low carbon fuel blending programs, and other regulations, policies, and standards impacting the demand for low carbon fuels could have an adverse effect on our financial condition and results of operations”* below for more information on how these programs may impact us.

In March 2022, the SEC issued proposed rules that, if adopted, would require public companies to include certain climate-related disclosures in their registration statements and periodic reports, including information about climate-related risks, climate-related financial statement metrics, and greenhouse gas emissions. In November 2022, the Biden Administration issued a proposed rule that would require government contractors to publicly disclose their greenhouse gas emissions and set emissions reduction targets, which could affect us if we enter into contractual and business arrangements with government contractors.

Similar regulations exist at the provincial and federal levels in Canada, including a nation-wide GHG 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 at both federal and provincial levels. Canada's 2030 Emissions Reduction Plan issued pursuant to the Canadian Net-Zero Emissions Accountability Act, includes a projected contribution from the oil and gas sector of emissions reductions to 31% below 2005 levels in 2030 (or to 42% below 2019 levels) with an ultimate goal of achieving net zero emissions by 2050. At this time, the applicability to, and impact on, if any, our Canadian operations is not clear.

The Netherlands also participates in European legal initiatives, including GHG cap and trade programs. Furthermore, the Climate Act has come into effect with the goal of significantly reducing GHG emissions by 49% (compared to 1990) by 2030 and to be climate neutral by 2050. The Climate Act also establishes that the government must prepare a Climate Plan. This plan contains, among others, the principles by which the Dutch government intends to achieve the goals set out in the Climate Act.

At the international level, the United Nations-sponsored "Paris Agreement" requires 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 in 2020. The United States rejoined the Paris Agreement in 2021 and issued its corresponding "nationally determined contribution" ("NDC") to reduce economy-wide net GHG emissions to 50-52% below 2005 levels by 2030. While the NDC does not identify specific actions necessary to achieve these reductions, it lists several sectors as pathways for reductions, including the power, transportation, building, industrial, and agricultural sectors. The administration has acknowledged that a combination of regulatory actions and legislation will be necessary to achieve the U.S. NDC. EU member states have agreed to reduce emissions by at least 40% by 2030, and by at least 55% reduction in GHG emissions by 2030. They have also agreed to be climate neutral and climate sustainable by 2050. Moreover, following the United States' reentry into Paris Agreement, the United States, the European Union and other partner countries have announced further pledges and agreements at several United Nations Climate Change Conference of Parties, including a pledge to reduce global methane emissions by 30% from 2020 to 2030 and a commitment to develop international standards for monitoring and reporting on methane emissions.

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 or otherwise result in decreased demand for the petroleum products we refine and produce. For example, in November 2021, the United States enacted a nearly \$1 trillion bipartisan infrastructure law, which provided significant funding for electric vehicles and clean energy technologies, and in August 2022 the United States enacted the Inflation Reduction Act of 2022, which allocated \$369 billion to climate change and environmental initiatives, including transportation electrification, fees on and greater regulation of methane emissions, and financial incentives for low or zero-carbon forms of energy, products, or processes, which could result in changes in consumer preferences or otherwise increase competition within our industry. In addition, several states have also taken steps to incentivize the production of electric vehicles or otherwise limit the sale of gasoline or diesel-powered vehicles. These and any future legislation or regulatory programs could increase the cost of consuming or otherwise reduce demand for, the refined petroleum products that we produce. Additionally, political, litigation and financial risks may result in curtailed refinery activity, increased 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. In 2022, for example, the EPA announced an enforcement initiative targeting GHG compliance. In the Netherlands, The Hague District Court has ordered Royal Dutch Shell ("RDS") to reduce the CO₂ emissions of the RDS group by net 45% by 2030, compared to 2019 levels, through the RDS group's corporate policy. Although this judgment is still subject to appeal, other environmental organizations may bring similar cases against other parties. 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 stock price.

In addition, increasing societal expectations for companies to address environmental issues, including climate change, and increased consumer use of substitutes to energy commodities may result in increased costs, reduced demand for our products and our services, reduced profits, increased investigations and litigation, and negative impacts on our stock price and costs of and access to capital markets. To the extent that societal pressures or political or other factors are involved, it is possible that such liability could be imposed on us without regard to our causation of or contribution to the asserted damage, or to other mitigating factors.

Furthermore, our stock 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, there is the possibility that financial institutions may be pressured or required to adopt policies that limit funding for fossil fuel energy companies. The Glasgow Financial Alliance for Net Zero (“GFANZ”) recently announced commitments from over 550 firms around the world, resulting in over \$130 trillion in capital committed to net zero goals. The various sub-alliances of GFANZ generally require participants to set short-term, sector-specific targets to transition their financing, investing, and/or underwriting activities to net zero emissions by 2050. More recently, in January 2023, the Federal Reserve published instructions for its first climate scenario exercise, which the six largest American banks are required to complete by July 31, 2023. Moreover, institutional lenders 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. Accordingly, 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 petroleum products, all of which could adversely impact our future financial results.

Increasing attention to environmental, social and governance (“ESG”) matters may adversely impact our business, financial results, stock price or price of debt securities.

In recent years the investment community, including investment advisors, sovereign wealth funds, pension funds, universities, financial institutions, including institutional banks, lenders, and insurance companies, and other groups have become more attentive to ESG and sustainability related practices and have been lobbied intensively, and often publicly, by environmental activists concerned about climate change to limit or curtail activities with fossil fuel energy companies. There has also been an increase in third-party providers of company ESG ratings, and more ESG-focused voting policies among proxy advisory firms, portfolio managers, and institutional investors. As a result, some investors, funds, financial institutions and other capital markets participants may screen companies such as ours for ESG performance before investing in our common stock or debt securities, or lending to us or have imposed restrictions upon or otherwise limited lending to, investing in, or providing insurance coverage for, companies that operate in industries with higher perceived environmental exposure, such as the energy industry. If we are unable to meet the ESG standards or investment, lending, ratings, or voting criteria and policies set by these parties, we may lose investors, investors may allocate a portion of their capital away from us, we may become a target for ESG-focused activism, we may face increased costs of or limitations on access to capital or insurance necessary to sustain or grow our business, the price of our common stock or debt securities may be adversely impacted, demand for our services and refined petroleum products may be adversely impacted, and our reputation may be adversely affected, all of which could adversely impact our future financial results.

Members of the investment community are also increasing their focus on ESG practices and disclosures, including those related to climate change, GHG emissions targets, business resilience under the assumptions of demand-constrained scenarios, and net-zero ambitions in the energy industry in particular, as well as diversity, equality, and inclusion initiatives, political activities, and governance standards among companies more generally. As a result, we may face increasing pressure or negative publicity regarding our ESG practices and disclosures and demands for ESG-focused engagement from investors, stakeholders, and other interested parties. This could result in higher costs, disruption and diversion of management attention, an increased strain on our resources, and the implementation of certain ESG practices or disclosures that may present a heightened level of legal and regulatory risk, or that threaten our credibility with other investors and stakeholders.

Physical impacts of climate change could have an adverse effect on our financial condition and results of operations.

Scientists have noted that changes in the environment may produce climate changes that have significant effects on the weather. These events, including but not limited to drought, winter storms, wildfire, tornados, extreme temperatures, extreme precipitation or flooding, may become more intense or more frequent as a result of climate change and could have an adverse effect on our continued operations as well as the operations of our suppliers and customers. Additionally, changing meteorological conditions, particularly temperature, may result in changes to demand for our products. Our customers or suppliers may also be subject to similar risks, any of which may adversely impact our business, financial condition, or operations.

Compliance with, or developments with respect to, renewable and low carbon fuel blending programs, and other regulations, policies, and standards impacting the demand for low-carbon fuels could have an adverse effect on our financial condition and results of operations.

As described under “Items 1 and 2. Business and Properties – Additional Operations and Other Information – Governmental Regulation – Low Carbon Fuel Regulations,” many international, federal, state, provincial and local governments have issued, or are considering issuing, low carbon fuel regulations, policies, and standards to help reduce GHG emissions and increase the percentage of low-carbon fuels in the transportation fuel mix.

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 denied all pending small refinery exemption petitions on the belief that small refineries are able to pass through compliance costs to customers. Based on this new approach to evaluating exemption petitions, the EPA has indicated that it is unlikely to grant such exemptions in future years. 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.

In addition, the RFS regulations are highly complex and evolving, requiring us to periodically update our compliance systems. In December 2022, the EPA published proposed RFS regulations that would establish annual RVOs and percentage standards for 2023 through 2025 for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel, and requested comment on establishing standards for 2026. Although these regulations are not final, the proposed biofuel blending percentages are higher than previous years. Once the EPA finalizes the proposed RVOs, our 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 proposed compliance years, which is currently scheduled in June 2023. 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 strategically market our low-carbon fuels based on regional policies, feedstock preferences, CI scores, and our ability to obtain fuel pathways. A significant portion of our low-carbon fuels are sold in California and Canada. We are exposed to the volatility in the market price of Low Carbon Fuel Standard Program credits. We cannot predict the future prices of Low Carbon Fuel Standard Program credits. Prices for Low Carbon Fuel Standard Program credits are dependent upon a variety of factors, including, as applicable, changes in regulations, the availability of Low Carbon Fuel Standard Program credits for purchase, transportation fuel production levels, which can vary significantly each quarter, approved CI pathways, and CI scores. If an insufficient number of Low Carbon Fuel Standard Program credits are available for purchase, if we have to pay significantly higher prices for them, or if we are otherwise unable to meet other obligations under the Low Carbon Fuel Standards Programs, our business, financial condition, results of operations, and liquidity could be adversely affected.

In addition to state low carbon fuels standards (e.g., California LCFS, Oregon CFP and Washington CFS), and certain carbon cap and trade programs (e.g., Oregon CPP, and Washington CCA), we operate in multiple jurisdictions that have issued, or are considering issuing, similar low-carbon fuel regulations, policies, and standards. The low-carbon fuel standards, carbon cap and trade programs and similar U.S. state and international low carbon fuel regulations, policies, and standards are extremely complex, often have different or conflicting requirements or methodologies, and are frequently evolving, requiring us to periodically update our systems and controls to maintain compliance, which could require significant expenditures, and presents an increased risk of administrative error. Our Refining segment could be materially and adversely affected if (i) we are unable to comply with these programs in the states where we sell our petroleum products or we incur a significant cost to comply or (ii) we are unable to continue to sell our products in markets where we currently sell our products. While these regulations, policies and standards may materially and adversely impact our Refining segment, they do create opportunity for our Renewables segment. As a result, our Renewables segment could be materially and adversely affected if (i) these regulations, policies, and standards are adversely changed, not enforced, or discontinued, (ii) the benefits therefrom are reduced (such as the blender's tax credit and other incentives), (iii) any of the products we produce are deemed not to qualify for compliance therewith, or (iv) we are unable to satisfy or maintain any approved pathways. Such changes could also negatively impact the economic assumptions and projections with respect to many of our Renewables segment investments and could have a material adverse impact on the returns achieved from those investments.

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. The EPA and NHTSA previously adopted such standards, which standards were subsequently revised in April 2022 to impose more stringent requirements for emissions reductions. These rulemakings will likely be subject to challenge by a variety of parties seeking even 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. In the Climate Agreement, EU countries expressed the ambition to achieve completely emission-free road traffic by 2050. In June 2022, the EU Parliament supported a proposal by the EU Commission that will only allow zero emission vehicles to be brought into the EU market as of 2035. Any further 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 adverse effect on our financial condition and results of operation.

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. In addition, many tax liabilities are subject to periodic audits by taxing authorities, and such audits could subject us to interest and penalties. 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, U.S. federal tax law provides various tax credits to producers of qualifying renewable fuels. These tax credits have the effect of making the production of qualifying renewable fuels more competitive by offsetting a portion of the production costs or by supplementing a portion of the revenue, but may be repealed by governmental action at any time. Alternatively, the types of renewable fuels to which these tax credits apply, as well as the applicable value, duration, and requirements, may be modified or amended by governmental action in a form where the types of fuel mixtures we produce are not eligible for the tax credits or are eligible for relatively less benefits than we anticipated. As a result, a loss of, or reduction in, U.S. federal tax credits for producers of qualifying renewable fuels could increase our production costs or decrease our revenues which, in turn, could adversely impact the financial condition, results of operations and cash flows of our renewables business.

RISKS RELATED TO CYBERSECURITY, DATA SECURITY AND PRIVACY, INFORMATION TECHNOLOGY AND INTELLECTUAL PROPERTY

Our information technology systems, operational systems, security systems, infrastructure, communications networks, software integrated in our manufacturing and administrative processes, and customer data processed by us, third-party vendors or suppliers are subject to risks presented by cyber events, including incidents or breaches of security, any of which could prevent us or third parties we rely on from effectively operating our business, and could harm our reputation or materially adversely affect our company's assets, growth efforts, operations, facilities, business reputation or financial condition.

Our business is dependent upon increasingly complex information technology systems and other digital technologies for controlling our plants and pipelines, processing transactions and summarizing and reporting results of operations. The secure collection, processing, maintenance, storage, and transmission of information is critical to our operations. We are at risk for interruptions, outages and breaches of operational systems, including business, financial, accounting, product development, data processing or manufacturing processes, owned by us or our third-party vendors or suppliers; or third-party data that we process or our third-party partners process on our behalf. Such cyber incidents could materially disrupt or shut down operational systems; result in loss of, unauthorized access to, or copying or transfer of intellectual property assets, trade secrets or other proprietary or competitively sensitive information; compromise certain information of customers, employees, suppliers or others; and jeopardize the security of our facilities. We monitor our information technology systems on a 24/7 basis in an effort to detect cyberattacks, security breaches or unauthorized access. Preventative and detective measures we utilize include independent cybersecurity audits and penetration tests. We implemented these efforts along with other risk mitigation procedures designed to detect and address unauthorized and damaging activity on our network, stay abreast of the increasing cybersecurity threat landscape and improve our cybersecurity posture, but there is no guarantee that such measures will be adequate to detect, prevent or mitigate cyber incidents. Any implementation, maintenance, segregation and improvement of our systems may require significant management time, support and cost and may not be effective or adequate.

A cyber incident could be caused by disasters, insiders (through inadvertence or with malicious intent) or malicious third parties (including nation-states or nation-state supported actors) using sophisticated, targeted methods to circumvent firewalls, encryption and other security defenses, including hacking, fraud, trickery or other forms of deception that are generally beyond our control despite our implementation of protective measures. While there have been immaterial incidents of unauthorized access to our information technology systems, we have not experienced any material impact on our business or operations from these attacks. In addition, information technology system failures, communications network disruptions, and security breaches could still impact equipment and software used to control plants and pipelines, resulting in improper operation of our assets or 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. These information technology system failures, communications network disruptions, and security breaches could also cause us to breach our contractual arrangements with other parties, subject us to regulatory actions or litigation and harm our brand and business relationships.

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. We also work with third-party partners that may in the course of their business relationship with us collect, store, process and transmit such data on our behalf and in connection with our products and services offerings. Despite our security measures, our or our third-party partners' information technology systems may become the target of cyberattacks or security breaches (including employee error, malfeasance or other intentional or unintentional breaches) which are generally beyond our control, 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. Our efforts to improve security and protect data may result in increased capital and operating costs to modify, upgrade or enhance our security measures to protect against such cyber-attacks and we may face difficulties in fully anticipating or implementing adequate security measures or mitigating potential harm. Moreover, as technologies evolve and cyberattacks become increasingly sophisticated, we may not be able to anticipate, detect or prevent cyberattacks or security breaches, particularly because the methodologies used by attackers change frequently or may not be recognized until after such attack is launched, and because attackers are increasingly using technologies specifically designed to circumvent cybersecurity measures and avoid detection. Even with insurance coverage for cyberattacks, data breaches or unauthorized access of our or a third-party partner's information technology systems, a claim could be denied or coverage delayed. Moreover, it is increasingly difficult to buy sufficient cyber insurance coverages as the insurance market has been limiting both liability under cyber policies and the issuance of said policies, generally. A cyberattack or security breach could result in liability under data privacy laws, regulatory penalties, damage to our reputation or a loss of 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.

We may be subject to information technology system failures, communications network disruptions and data breaches that are generally beyond our control.

We depend on the efficient and uninterrupted operation of third-party 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 designed 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 natural disasters, power loss, telecommunications failure, terrorist attacks, Internet failures, computer malware, ransomware, cyberattacks, data breaches and other events unforeseen or generally beyond our control. Additionally, the implementation of social distancing measures and other limitations on our employees, service providers and other third parties in response to the COVID-19 pandemic have necessitated in certain cases to switching to remote work arrangements on less secure systems and environments. The increase in companies and individuals working remotely has increased the risk of cyberattacks and potential cybersecurity incidents, both deliberate attacks and unintentional events. Any of these events could cause system interruptions, delays, and loss of critical data, and could prevent us from developing or manufacturing products or providing services, which could make our business and services less attractive and subject us to liability. Any of these events could damage our reputation and be expensive to remedy.

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

The constantly evolving global regulatory and legislative environment surrounding data privacy and protection poses increasingly complex compliance challenges, and complying with such data protection obligations could increase the costs and complexity of compliance and enforcement risks. These laws also are not uniform, as certain laws may be more stringent or broader in scope, or offer greater individual rights, with respect to sensitive and personal information, and such laws may differ from each other, which may complicate compliance efforts. 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 obligations 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 laws such as the General Data Protection Regulation, and other similar data 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 or subject us to legal and reputational risks, including significant fines, civil or criminal penalties or judgments, proceedings or litigation by governmental agencies or customers, class action privacy litigation in certain jurisdictions and negative publicity.

We may be unable to adequately maintain, enforce and protect our intellectual property and may not be able to prevent third parties from unauthorized access or use of our intellectual property, which may increase our cost of doing business or otherwise hurt our ability to compete in the market.

We develop and 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 designed 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 jurisdictions. Despite our efforts to protect such intellectual property, it is possible that competitors or other unauthorized third parties may illegally obtain, copy, use or disclose our trademarks (or other marks likely to cause confusion among our consumers), technologies, products and processes or seek court declarations that they do not infringe, misappropriate, dilute, or otherwise violate our intellectual property. In addition, the laws and/or judicial systems and enforcement mechanisms of foreign jurisdictions 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, misappropriation, dilution, or other violation complaints from others challenging our use of a technology or intellectual property right. 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 and any failure to adequately maintain, enforce and protect our intellectual property could subject us to increased competition and potentially result in the loss of our competitive advantage, resources, and customer trust, and negatively impact our brand. These risks could also lead to a decrease in our revenue which would negatively impact our business, prospects, liquidity, financial position and results of operations.

If we fail to comply with our obligations under license or technology agreements with third parties or are unable to license rights to use technologies on reasonable terms or at all, we may be required to pay damages or could potentially lose license rights that are critical to our business.

We obtain rights and licenses to certain intellectual property, including technologies, data, content and software from third parties, that are important to our business, and in the future we may enter into additional agreements that provide us with rights or licenses to valuable intellectual property or technology. If a licensor alleges that we failed to comply with any of the obligations under our license agreements, we may be required to pay damages, enter costly litigation, and the licensor may have the right to terminate part of or all of the license. Termination by the licensor would cause us to lose valuable rights that may be difficult to acquire elsewhere, and could prevent us from selling, marketing, manufacturing, importing or producing our products and services, or inhibit our ability to commercialize future products and services. Our business could suffer if any current or future licenses are limited or terminated, if the licensors fail to abide by the terms of the license, if the licensed intellectual property rights are found to be invalid or unenforceable, if the licensed technology is found to infringe, misappropriate, dilute, or otherwise violate the rights of a third party, or if we are unable to enter into necessary licenses on acceptable terms or at all. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing, misappropriating, diluting, or otherwise violating the licensor's or another party's rights.

In the future, we may identify additional third-party intellectual property that we believe is useful or necessary to engage in our business. However, such licenses may not be available on acceptable terms or at all. The licensing or acquisition of third-party intellectual property rights is a competitive area, and several companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. Even if such licenses are available, we may be required to pay the licensor substantial royalties based on sales of our products and services. Such royalties are a component of the cost of our products or services and may affect the attractiveness of and the margins on our products and services. In addition, such licenses may be non-exclusive, which could give our competitors access to the same intellectual property licensed to us. Any of the foregoing could have a material adverse effect on our competitive position, business, financial condition, results of operations and on our ability to prevent others from interfering with commercialization of our products and services.

RISKS RELATED TO LIQUIDITY, FINANCIAL INSTRUMENTS AND CREDIT

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. 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.

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. Additionally, certain key customers of the recently-acquired Puget Sound Refinery contribute significantly to the cash flows and profitability of that facility. Any default or delay in payment by, or disputes with, those customers could have an adverse impact on our financial results.

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. For example, in a low commodity price environment, certain of our customers have been or could be negatively impacted, causing them significant economic stress and resulting in an increase in nonpayment and/or nonperformance by them. Any such default or delay in payment by our customers could negatively affect our operating results in the periods in which they occur, and, if significant, could materially or adversely affect our business, financial condition, results of operations, and cash flows. 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.

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 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.

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.

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.

Environmental Matters

Navajo

HollyFrontier Navajo Refining LLC (now known as HF Sinclair Navajo Refining LLC (“HFS Navajo”)) has been engaged in discussions with, and has responded to document requests from, the EPA, the DOJ and the New Mexico Environment Department (“NMED”) (collectively, the “Agencies”) regarding HFS Navajo’s compliance with the Clean Air Act (“CAA”) and underlying regulations, and similar New Mexico laws and regulations, at its Artesia and Lovington, New Mexico refineries. The discussions have included the following topics: (a) alleged noncompliance with CAA’s National Emission Standards for Hazardous Air Pollutants (“NESHAP”) and New Source Performance Standards (“NSPS”) at the Artesia refinery, which were set forth in a Notice of Violation (“May 2020 NOV”) issued by the EPA in May 2020; (b) a Post Inspection Notice issued in June 2020 by the NMED, alleging noncompliance issues similar to those alleged by the EPA in its May 2020 NOV as well as alleged noncompliance with the State Implementation Plan (“SIP”) and the Title V permit operating programs; (c) an information request issued in September 2020 by the EPA, pursuant to CAA Section 114, related to benzene fenceline monitoring, flare fuel gas, leak detection and repair, storage vessels and tanks, and other information regarding the Artesia refinery; (d) an information request issued by the EPA in May 2021, pursuant to CAA Section 114, requesting additional information and testing related to certain tanks at the Artesia refinery; and (e) informal information requests related to, among other things, the Artesia refinery’s wastewater treatment plant, oil water separators and heat exchangers. In April 2022, the EPA alleged additional CAA noncompliance at the Artesia refinery beyond the allegations in the May 2020 NOV, including alleged noncompliance with NESHAP, NSPS, SIP, Title V and other requirements.

Beginning in the spring of 2021, HFS Navajo and the Agencies began monthly meetings to discuss potential injunctive relief measures to address the alleged noncompliance at the Artesia refinery. In September 2021, the EPA presented to HFS Navajo potential claims for stipulated penalties for alleged noncompliance with a 2002 consent decree.

HFS Navajo continues to work with the Agencies to resolve these issues. At this time, no penalties have been demanded, and it is too early to predict the outcome of this matter.

Port of Seattle

In October 2017, Sinclair Oil received a Notice of Claim from the Port of Seattle alleging Sinclair Oil’s responsibility for the clean-up of 12.5 million gallons of bunker fuel improperly disposed of at a facility in the Port of Seattle from 1977 to 1980. Sinclair Oil responded that it did sell bunker fuel for use as a fuel for ships at the Port of Seattle during this time frame but not for disposal as is being alleged. In late 2018, Sinclair Oil received a demand letter from the Port of Seattle. Sinclair Oil and the Port of Seattle entered into a tolling agreement in mid-2019. The parties have exchanged offers, and Sinclair Oil is awaiting a response to its last offer made in August 2020. It is too early to predict the outcome of this matter.

Renewable Fuel Standard

On April 7, 2022, the EPA issued a decision reversing the grant of small refinery exemptions for our Woods Cross and Cheyenne refineries for the 2018 compliance year. On June 3, 2022, the EPA issued a decision reversing the grant of small refinery exemptions for our Woods Cross and Cheyenne refineries for the 2016 compliance year and denying small refinery exemption petitions for our Woods Cross and Cheyenne refineries for the 2019 and 2020 compliance years.

Various subsidiaries of HollyFrontier are currently pursuing legal challenges to the EPA’s decisions to reverse its grant of small refinery exemptions for the 2016 and 2018 compliance years. The first lawsuit, filed against the EPA on May 6, 2022 and currently pending before the U.S. Court of Appeals for the DC Circuit, seeks to have the EPA’s reversal of our 2018 small refinery exemption petitions overturned. The second lawsuit, filed against the EPA on August 5, 2022 and currently pending before the U.S. Court of Appeals for the DC Circuit, seeks to have the EPA’s reversal of our 2016 small refinery exemption petitions overturned and to have the EPA’s denial of our 2019 and 2020 small refinery exemption petitions reversed.

In addition, for both the 2016 and 2018 compliance years, pursuant to the June 2022 and April 2022 decisions, respectively, the EPA established an alternative compliance demonstration for small refineries pursuant to which the EPA is not imposing any obligations for the small refineries whose exemptions were reversed. On June 24, 2022, Growth Energy filed two lawsuits in the U.S. Court of Appeals for the DC Circuit against the EPA challenging the alternative compliance demonstration for the 2016 and 2018 compliance years. On July 25, 2022, various subsidiaries of HollyFrontier intervened on behalf of the EPA to aid the defense of the EPA’s alternative compliance demonstration decision.

It is too early to predict the outcome of these matters.

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 “DINO.”

In September 2022, our Board of Directors approved a \$1.0 billion share repurchase program, which replaced all existing share repurchase programs. This share repurchase program authorizes us to repurchase common stock in the open market or through privately negotiated transactions. Privately negotiated repurchases from REH Company (formerly known as The Sinclair Companies) are also authorized under the share repurchase program, subject to REH Company’s interest in selling its shares and other limitations. The timing and amount of share repurchases, including those from REH Company, will depend on market conditions and corporate, tax, regulatory and other relevant considerations. This program may be discontinued at any time by our Board of Directors. The following table includes repurchases made under this program during the fourth quarter of 2022.

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 2022	946,911	\$ 54.70	946,911	\$ 848,199,339
November 2022	2,391,249	\$ 61.69	2,391,249	\$ 700,689,691
December 2022 ⁽¹⁾	1,767,354	\$ 49.37	767,354	\$ 662,037,439
Total for October to December 2022	<u>5,105,514</u>		<u>4,105,514</u>	

- (1) On December 14, 2022, we repurchased 1,000,000 shares pursuant to separate authorization from our Board of Directors and not as part of our \$1.0 billion share repurchase program. This repurchase was made in connection with the sale by REH Company of approximately 5,000,000 shares of common stock, inclusive of the 1,000,000 shares we repurchased in an unregistered block trade permitted under applicable securities laws.

As of February 15, 2023, we had approximately 130,876 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. [Reserved]

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 HF Sinclair and its consolidated subsidiaries or to HF Sinclair 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 HF Sinclair, unless when used in disclosures of transactions or obligations between HEP and HF Sinclair 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 HF Sinclair. When used in descriptions of agreements and transactions, “HEP” refers to HEP and its consolidated subsidiaries. References herein to HF Sinclair “we,” “our,” “ours,” and “us” with respect to time periods prior to March 14, 2022 refer to HollyFrontier and its consolidated subsidiaries and do not include the Acquired Sinclair Businesses. References herein to HF Sinclair “we,” “our,” “ours,” and “us” with respect to time periods from and after March 14, 2022 include the operations of the Acquired Sinclair Businesses. Unless otherwise specified, the financial statements included herein include financial information for HF Sinclair, which for the time period from March 14, 2022 to December 31, 2022 includes the combined business operations of HollyFrontier and the Acquired Sinclair Businesses.

OVERVIEW

We are an independent energy company that produces and markets high-value light products such as gasoline, diesel fuel, jet fuel, renewable diesel and other specialty products. We own and operate refineries located in Kansas, Oklahoma, New Mexico, Washington, Utah and Wyoming. We market our refined products principally in the Southwest United States, the Rocky Mountains extending into the Pacific Northwest and in other neighboring Plains states. We supply high-quality fuels to more than 1,500 branded stations and license the use of the Sinclair brand at more than 300 additional locations throughout the country. In addition, our subsidiaries produce and market base oils and other specialized lubricants in the United States, Canada and the Netherlands, and export products to more than 80 countries. Through our subsidiaries, we produce renewable diesel at two of our facilities in Wyoming and our facility in New Mexico. We also own a 47% 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 HF Sinclair subsidiaries.

Market Developments

For the year ended December 31, 2022, net income attributable to HF Sinclair stockholders was \$2,922.7 million compared to net income of \$558.3 million and net loss of \$601.4 million for the years ended December 31, 2021, and 2020, respectively. Gross refining margin per produced barrel sold in our Refining segment for 2022 increased 146% over the year ended December 31, 2021.

Our results for the year ended December 31, 2022 were favorably impacted by continued strong global economic activity with global demand for transportation fuels, lubricants and the transportation and terminal services having returned to pre-pandemic levels. Following the rapid increases in crude oil prices and market crack spreads in the first half of the year, crude oil prices and market crack spreads remained at a high level as a result of continued robust demand and the global supply disruption related to actions taken in response to both the COVID-19 pandemic and sanctions imposed on Russia for its invasion of Ukraine. We continue to adjust our operational plans to the evolving market conditions. The extent to which our future results are affected by volatile regional and global economic or geopolitical conditions or the COVID-19 pandemic will depend on various factors and consequences beyond our control.

Sinclair Acquisition

On March 14, 2022 (the “Closing Date”), HollyFrontier and HEP announced the establishment of HF Sinclair as the new parent holding company of HollyFrontier and HEP and their subsidiaries, and the completion of their respective acquisitions of Sinclair Oil Corporation (now known as Sinclair Oil LLC, “Sinclair Oil”) and Sinclair Transportation Company LLC (“STC”) from The Sinclair Companies (now known as REH Company and referred to herein as “REH Company”). On the Closing Date, HF Sinclair completed its previously announced acquisition of Sinclair Oil by effecting (a) a holding company merger with HollyFrontier surviving such merger as a direct wholly owned subsidiary of HF Sinclair (the “HFC Merger”) and (b) immediately following the HFC Merger, a contribution whereby REH Company contributed all of the equity interests of Hippo Holding LLC (now known as Sinclair Holding LLC), the parent company of Sinclair Oil (the “Target Company”) to HF Sinclair in exchange for 60,230,036 shares of HF Sinclair common stock, resulting in the Target Company becoming a direct wholly owned subsidiary of HF Sinclair (the “HFC Transactions”). At the effective time of the HFC Merger, all of HollyFrontier’s outstanding shares were automatically converted into equivalent corresponding shares of HF Sinclair, and HF Sinclair became the successor issuer to HollyFrontier pursuant to Rule 12g-3(a) under the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), and replaced HollyFrontier as the public company trading on the New York Stock Exchange (“NYSE”) under the symbol “DINO.”

HF Sinclair acquired REH Company’s refining, branded marketing, renewables, and midstream businesses. The branded marketing business supplies high-quality fuels to more than 1,300 Sinclair branded stations and licenses the use of the Sinclair brand at more than 300 additional locations throughout the United States. The renewables business includes the operation of a renewable diesel unit located in Sinclair, Wyoming. The refining business includes two Rocky Mountains-based refineries located in Casper, Wyoming and Sinclair, Wyoming. Under the terms of the Contribution Agreement, HEP acquired STC, REH Company’s integrated crude and refined products pipelines and terminal assets, including approximately 1,200 miles of integrated crude and refined product pipeline supporting the Sinclair refineries and third parties, eight product terminals and two crude terminals with approximately 4.5 million barrels of operated storage. In addition, HEP acquired STC’s interests in three pipeline joint ventures for crude gathering and product offtake including: Saddle Butte Pipeline III, LLC (25.06% non-operated interest); Pioneer Investments Corp. (49.995% non-operated interest); and UNEV Pipeline, LLC (“UNEV”) (the 25% non-operated interest not already owned by HEP, resulting in UNEV becoming a wholly owned subsidiary of HEP). The addition of Sinclair Oil and STC to the HollyFrontier business created a combined company with increased scale and ability to diversify and is expected to drive growth through the expanded refining and renewables business. In addition, the HFC Transactions added an integrated branded wholesale distribution network to our business.

See Note 2 “Acquisitions” and Note 4 “Holly Energy Partners” in the Notes to Consolidated Financial Statements for additional information.

Puget Sound Refinery Acquisition

On May 4, 2021, HollyFrontier Puget Sound Refining LLC (now known as HF Sinclair Puget Sound Refining LLC), a wholly owned subsidiary of HollyFrontier, entered into a sale and purchase agreement with Equilon Enterprises LLC d/b/a Shell Oil Products US (“Shell”) to acquire Shell's Puget Sound refinery and related assets, including the on-site cogeneration facility and related logistics assets. The acquisition closed on November 1, 2021.

Renewable Fuel Standard Regulations

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 \$903.7 million for the year ended December 31, 2022. At December 31, 2022, our open RINs credit obligations were \$81.2 million. See Note 2 “Acquisitions” in the Notes to Consolidated Financial Statements for additional information on RINs credit obligations assumed in the Sinclair Transactions.

Under the RFS regulations, the EPA is required to set annual volume targets of renewable fuels that obligated parties, such as us, must blend into petroleum-based transportation fuels consumed in the United States. These volume requirements are used to determine an obligated party’s renewable volume obligation (“RVO”). The EPA released a final rule on June 3, 2022 that, among other things, reduced the volume targets for 2020 and established targets for 2021 and 2022. In 2020, we recognized the cost of the RVO using the 2020 volume targets set by the EPA at that time, and in 2021 and the three months ended March 31, 2022, we recognized the cost of the RVO using our estimates. As a result of the final rule released by the EPA on June 3, 2022 as noted above, we recognized a benefit of \$72.0 million in the year ended December 31, 2022 related to the modification of the 2020 and 2021 volume targets.

Recent U.S. Tax Legislation

On August 16, 2022, the U.S. government enacted the Inflation Reduction Act of 2022 (the "Inflation Reduction Act") into law. The Inflation Reduction Act includes a new corporate alternative minimum tax (the "Corporate AMT") of 15% on the adjusted financial statement income ("AFSI") of corporations with average AFSI exceeding \$1.0 billion over a three-year period. The Corporate AMT is effective for us beginning January 1, 2023. We are evaluating the Corporate AMT and its potential impact on our future U.S. tax expense, cash taxes, and effective tax rate. The Inflation Reduction Act also extends the federal blender’s tax credit at the current rate of \$1 per gallon for renewable diesel through the end of 2024. Additionally, the Inflation Reduction Act imposes an excise tax of 1% tax on the fair market value of net stock repurchases made after December 31, 2022. The impact of this provision will be dependent on the extent of net share repurchases made after January 1, 2023.

OUTLOOK

Within our Refining segment, for the first quarter of 2023, we expect to run between 500,000 – 530,000 barrels per day of crude oil. This guidance reflects the lingering effects of winter weather events and planned maintenance activities at our Puget Sound, Woods Cross and El Dorado Refineries during the period. Refined product margins are expected to remain healthy driven by constrained refined product supply in the markets we serve.

Within our Renewables segment, for the first quarter of 2023, we expect to continue to increase throughputs by optimizing our operations, and we expect to achieve normalized run rates in the second half of the year.

Within our Marketing segment, we expect similar growth in the number of sites we achieved in 2022 to continue in 2023.

Within our Lubricants and Specialty Products segment, we expect strong demand for base oils and finished products and the recent trends related to the FIFO impact of higher priced feedstocks experienced in the second half of 2022 will continue in the first quarter of 2023.

HEP remains committed to its capital allocation strategy focused on funding all capital expenditures and distributions within operating cash flow, with the goal of achieving its leverage target of 3.0 - 3.5x and distributable cash flow coverage of 1.3x or greater in mid-2023.

In September 2022, our Board of Directors authorized a new \$1.0 billion share repurchase program, and we expect to actively repurchase shares throughout the first quarter of 2023. On February 23, 2023, our Board of Directors also declared a regular quarterly dividend in the amount of \$0.45 per share, an increase of \$0.05 over our previous dividend of \$0.40 per share. The dividend is payable on March 17, 2023 to holders of record of common stock on March 7, 2023.

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 included 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. During the second quarter of 2022, we received \$83 million in cash tax benefit from the net operating loss carryback provisions under the CARES Act. We have received all the carryback claims related to the CARES Act.

A more detailed discussion of our financial and operating results for the years ended December 31, 2022 and 2021 is presented in the following sections. Discussions of year-over-year comparisons for 2021 and 2020 can be found in “Management's Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7 of HollyFrontier’s Annual Report on Form 10-K for the year ended December 31, 2021.

RESULTS OF OPERATIONS

Financial Data

	Years Ended December 31,		
	2022	2021	2020
	(In thousands, except per share data)		
Sales and other revenues	\$ 38,204,839	\$ 18,389,142	\$ 11,183,643
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)	30,680,013	15,567,052	9,158,805
Lower of cost or market inventory valuation adjustment	52,412	(310,123)	78,499
	30,732,425	15,256,929	9,237,304
Operating expenses (exclusive of depreciation and amortization)	2,334,893	1,517,478	1,300,277
Selling, general and administrative expenses (exclusive of depreciation and amortization)	426,485	362,010	313,600
Depreciation and amortization	656,787	503,539	520,912
Goodwill and long-lived asset impairments	—	—	545,293
Total operating costs and expenses	34,150,590	17,639,956	11,917,386
Income (loss) from operations	4,054,249	749,186	(733,743)
Other income (expense):			
Earnings (loss) of equity method investments	(260)	12,432	6,647
Interest income	30,179	4,019	7,633
Interest expense	(175,628)	(125,175)	(126,527)
Gain on business interruption insurance settlement	15,202	—	81,000
Gain on tariff settlement	—	51,500	—
Gain on sales-type leases	—	—	33,834
Gain (loss) on early extinguishment of debt	604	—	(25,915)
Gain (loss) on foreign currency transactions	(1,637)	(2,938)	2,201
Gain on sale of assets and other	13,337	98,128	7,824
	(118,203)	37,966	(13,303)
Income (loss) before income taxes	3,936,046	787,152	(747,046)
Income tax expense (benefit)	894,872	123,898	(232,147)
Net income (loss)	3,041,174	663,254	(514,899)
Less net income attributable to noncontrolling interest	118,506	104,930	86,549
Net income (loss) attributable to HF Sinclair stockholders	\$ 2,922,668	\$ 558,324	\$ (601,448)
Earnings (loss) per share:			
Basic	\$ 14.28	\$ 3.39	\$ (3.72)
Diluted	\$ 14.28	\$ 3.39	\$ (3.72)
Cash dividends declared per common share	\$ 1.20	\$ 0.35	\$ 1.40
Average number of common shares outstanding:			
Basic	202,566	162,569	161,983
Diluted	202,566	162,569	161,983

Other Financial Data

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Net cash provided by operating activities	\$ 3,777,159	\$ 406,682	\$ 457,931
Net cash used for investing activities	\$ (774,488)	\$ (1,327,219)	\$ (330,162)
Net cash provided by (used for) financing activities	\$ (1,560,759)	\$ (211,803)	\$ 353,226
Capital expenditures	\$ 524,007	\$ 813,409	\$ 330,160
EBITDA ⁽¹⁾	\$ 4,619,776	\$ 1,306,917	\$ (193,789)

- (1) Earnings before interest, taxes, depreciation and amortization, which we refer to as “EBITDA,” is calculated as net income (loss) attributable to HF Sinclair stockholders plus (i) income tax provision, (ii) interest expense, net of interest income 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 on 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 five reportable segments, Refining, Renewables, Marketing, 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

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 is comprised of the El Dorado and Tulsa Refineries. The West region is comprised of the Puget Sound, Navajo, Woods Cross, Parco and Casper Refineries. The Puget Sound Refinery was acquired November 1, 2021, and thus is included for the period November 1, 2021 through December 31, 2022. In addition, the refinery operations of the Parco and Casper Refineries are included for the period March 14, 2022 (date of acquisition) through December 31, 2022. The following tables set forth information, including non-GAAP performance measures, about our consolidated refinery operations. The 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,		
	2022 ⁽⁸⁾	2021 ⁽⁹⁾	2020
Mid-Continent Region			
Crude charge (BPD) ⁽¹⁾	283,160	260,350	241,140
Refinery throughput (BPD) ⁽²⁾	299,380	276,430	257,030
Sales of produced refined products (BPD) ⁽³⁾	280,800	265,470	248,320
Refinery utilization ⁽⁴⁾	108.9 %	100.1 %	92.7 %
Average per produced barrel sold ⁽⁵⁾			
Refinery gross margin	\$ 22.01	\$ 9.44	\$ 5.17
Refinery operating expenses ⁽⁶⁾	6.19	6.42	5.46
Net operating margin	<u>\$ 15.82</u>	<u>\$ 3.02</u>	<u>\$ (0.29)</u>
Refinery operating expenses per throughput barrel ⁽⁷⁾	\$ 5.81	\$ 6.17	\$ 5.27
Feedstocks:			
Sweet crude oil	58 %	61 %	58 %
Sour crude oil	20 %	15 %	19 %
Heavy sour crude oil	16 %	18 %	17 %
Other feedstocks and blends	6 %	6 %	6 %
Total	<u>100 %</u>	<u>100 %</u>	<u>100 %</u>

	Years Ended December 31,		
	2022 ⁽⁸⁾	2021 ⁽⁹⁾	2020
Mid-Continent Region			
Sales of refined products:			
Gasolines	51 %	52 %	52 %
Diesel fuels	33 %	33 %	34 %
Jet fuels	6 %	5 %	4 %
Fuel oil	1 %	1 %	1 %
Asphalt	3 %	3 %	3 %
Base oils	4 %	4 %	4 %
LPG and other	2 %	2 %	2 %
Total	100 %	100 %	100 %
West Region			
Crude charge (BPD) ⁽¹⁾	323,820	140,370	124,050
Refinery throughput (BPD) ⁽²⁾	347,590	155,440	138,050
Sales of produced refined products (BPD) ⁽³⁾	347,540	158,630	143,350
Refinery utilization ⁽⁴⁾	81.4 %	82.7 %	85.6 %
Average per produced barrel sold ⁽⁵⁾			
Refinery gross margin	\$ 30.64	\$ 13.32	\$ 10.97
Refinery operating expenses ⁽⁶⁾	9.31	8.09	7.07
Net operating margin	\$ 21.33	\$ 5.23	\$ 3.90
Refinery operating expenses per throughput barrel ⁽⁷⁾	\$ 9.31	\$ 9.27	\$ 7.34
Feedstocks:			
Sweet crude oil	28 %	22 %	30 %
Sour crude oil	50 %	58 %	49 %
Heavy sour crude oil	10 %	1 %	— %
Black wax crude oil	5 %	10 %	11 %
Other feedstocks and blends	7 %	9 %	10 %
Total	100 %	100 %	100 %
Sales of refined products:			
Gasolines	53 %	54 %	56 %
Diesel fuels	32 %	35 %	35 %
Jet fuels	5 %	1 %	— %
Fuel oil	3 %	3 %	3 %
Asphalt	3 %	4 %	4 %
LPG and other	4 %	3 %	2 %
Total	100 %	100 %	100 %
Consolidated			
Crude charge (BPD) ⁽¹⁾	606,980	400,720	365,190
Refinery throughput (BPD) ⁽²⁾	646,970	431,870	395,080
Sales of produced refined products (BPD) ⁽³⁾	628,340	424,100	391,670
Refinery utilization ⁽⁴⁾	92.3 %	93.1 %	90.2 %
Average per produced barrel ⁽⁵⁾			
Refinery gross margin	\$ 26.78	\$ 10.89	\$ 7.29
Refinery operating expenses ⁽⁶⁾	7.92	7.04	6.05
Net operating margin	\$ 18.86	\$ 3.85	\$ 1.24
Refinery operating expenses per throughput barrel ⁽⁷⁾	\$ 7.69	\$ 6.92	\$ 6.00

	Years Ended December 31,		
	2022 ⁽⁸⁾	2021 ⁽⁹⁾	2020
Feedstocks:			
Sweet crude oil	42 %	47 %	48 %
Sour crude oil	36 %	31 %	29 %
Heavy sour crude oil	13 %	12 %	11 %
Black wax crude oil	3 %	4 %	4 %
Other feedstocks and blends	6 %	6 %	8 %
Total	100 %	100 %	100 %
Sales of refined products:			
Gasolines	52 %	53 %	54 %
Diesel fuels	32 %	34 %	34 %
Jet fuels	6 %	4 %	3 %
Fuel oil	2 %	1 %	1 %
Asphalt	3 %	3 %	4 %
Base oils	2 %	2 %	2 %
LPG and other	3 %	3 %	2 %
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 Asphalt and inter-segment sales) 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). As a result of our acquisition of the Puget Sound Refinery on November 1, 2021, our consolidated crude capacity increased from 405,000 BPSD at December 31, 2020 to 554,000 BPSD at December 31, 2021, and further increased to 678,000 BPSD at December 31, 2022 as a result of our acquisition of the Parco and Casper Refineries on March 14, 2022.
- (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.
- (8) We acquired the Parco and Casper Refineries on March 14, 2022. Refining operating data for the year ended December 31, 2022 includes crude oil and feedstocks processed and refined products sold at our Parco and Casper Refineries for the period March 14, 2022 through December 31, 2022 only, averaged over the 365 days in the year ended December 31, 2022.
- (9) We acquired the Puget Sound Refinery on November 1, 2021. Refining operating data for the year ended December 31, 2021 includes crude oil and feedstocks processed and refined products sold at our Puget Sound Refinery for the period November 1, 2021 through December 31, 2021 only, averaged over the 365 days in the year ended December 31, 2021.

Renewables Operating Data

The following table sets forth information about our renewables operations and includes our Sinclair businesses for the period March 14, 2022 (the date of acquisition) through December 31, 2022.

	Year Ended December 31, 2022
Renewables	
Sales volumes (in thousand gallons)	136,204
Average per produced gallon ⁽¹⁾	
Renewables gross margin	\$ 0.30
Renewables operating expenses ⁽²⁾	0.82
Net operating margin	<u>\$ (0.52)</u>

- (1) Represents average amount per produced gallon 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.
- (2) Represents total Renewables segment operating expenses, exclusive of depreciation and amortization, divided by sales volumes of renewable diesel produced at our renewable diesel units.

Marketing Operating Data

The following table sets forth information about our Marketing operations and includes our Sinclair businesses for the period March 14, 2022 (the date of acquisition) through December 31, 2022.

	Year Ended December 31, 2022
Marketing	
Number of branded sites at period end ⁽¹⁾	1,513
Sales volumes (in thousand gallons)	1,118,444
Margin per gallon of sales ⁽²⁾	\$ 0.06

- (1) Includes 131 non-Sinclair branded sites from legacy HollyFrontier agreements.
- (2) Represents average amount per gallon 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.

Lubricants and Specialty Products Segment Operating Data

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

	Years Ended December 31,		
	2022	2021	2020
Lubricants and Specialty Products			
Throughput (BPD)	18,330	19,177	19,645
Sales of produced barrels sold (BPD)	32,530	34,016	32,902
Sales of produced refined products:			
Finished products	51 %	51 %	49 %
Base oils	28 %	27 %	26 %
Other	21 %	22 %	25 %
Total	<u>100 %</u>	<u>100 %</u>	<u>100 %</u>

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, 2022				
Sales and other revenues	\$ 1,254,929	\$ 2,859,718	\$ (956,047)	\$ 3,158,600
Cost of products sold	\$ 958,537	\$ 2,330,666	\$ (956,047)	\$ 2,333,156
Operating expenses	\$ 135,275	\$ 142,247	\$ —	\$ 277,522
Selling, general and administrative expenses	\$ 23,511	\$ 144,696	\$ —	\$ 168,207
Depreciation and amortization	\$ 30,148	\$ 53,299	\$ —	\$ 83,447
Income from operations	\$ 107,458	\$ 188,810	\$ —	\$ 296,268
Year Ended December 31, 2021				
Sales and other revenues	\$ 1,005,152	\$ 2,378,332	\$ (822,872)	\$ 2,560,612
Cost of products sold	\$ 646,107	\$ 1,992,567	\$ (822,872)	\$ 1,815,802
Operating expenses	\$ 120,750	\$ 131,706	\$ —	\$ 252,456
Selling, general and administrative expenses	\$ 27,071	\$ 143,084	\$ —	\$ 170,155
Depreciation and amortization	\$ 28,093	\$ 51,674	\$ —	\$ 79,767
Income from operations	\$ 183,131	\$ 59,301	\$ —	\$ 242,432
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	\$ (265,597)	\$ 56,405	\$ —	\$ (209,192)

- (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.

Results of Operations - Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Summary

Net income attributable to HF Sinclair stockholders for the year ended December 31, 2022 was \$2,922.7 million (\$14.28 per basic and diluted share), a \$2,364.3 million increase compared to net income of \$558.3 million (\$3.39 per basic and diluted share) for the year ended December 31, 2021. The increase in net income was principally driven by stronger product demand, higher sales prices and the acquisition of the Puget Sound Refinery and the Acquired Sinclair Businesses, which resulted in higher refined product sales volumes and an increase in refinery gross margins. Lower of cost or market inventory reserve adjustments decreased pre-tax earnings by \$52.4 million for the year ended December 31, 2022 and increased pre-tax earnings by \$310.1 million for the year ended December 31, 2021. Net income for the year ended December 31, 2021 was impacted by winter storm Uri, which increased natural gas costs across our refining system. Refinery gross margins for the year ended December 31, 2022 increased to \$26.78 per produced barrel from \$10.89 for the year ended December 31, 2021.

Sales and Other Revenues

Sales and other revenues increased 108% from \$18,389.1 million for the year ended December 31, 2021 to \$38,204.8 million for the year ended December 31, 2022 principally due to the increase in sales prices and higher refined product sales volumes, in part due to the acquisition of the Puget Sound Refinery and the Acquired Sinclair Businesses. Sales and other revenues included \$3,911.9 million, \$3,149.1 million and \$654.9 million in unaffiliated revenues related to our Marketing, Lubricants and Specialty Products and Renewables segments, respectively, for the year ended December 31, 2022. Sales and other revenues included \$2,550.6 million in unaffiliated revenues related to our Lubricants and Specialty Products segment for the year ended December 31, 2021.

Cost of Products Sold

Total cost of products sold increased 101% from \$15,256.9 million for the year ended December 31, 2021 to \$30,732.4 million for the year ended December 31, 2022, principally due to higher crude oil costs and higher refined product sales volumes, in part due to the acquisition of the Puget Sound Refinery and the Acquired Sinclair Businesses. During the years ended December 31, 2022 and 2021, we recognized a lower of cost or market inventory valuation adjustment charge of \$52.4 million and a benefit of \$310.1 million, respectively. Within our Lubricants and Specialty Products segment, FIFO impact was a benefit of \$77.6 million and \$86.6 million for the years ended December 31, 2022 and 2021, respectively.

Gross Refinery Margins

Gross refinery margin per barrel sold increased 146% from \$10.89 for the year ended December 31, 2021 to \$26.78 for the year ended December 31, 2022 principally due to the increase in the average per barrel sold sales prices during 2022, partially offset by the increase in 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 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, increased 54% from \$1,517.5 million for the year ended December 31, 2021 to \$2,334.9 million for the year ended December 31, 2022 primarily due to our acquisition of the Puget Sound Refinery and the Acquired Sinclair Businesses.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased 18% from \$362.0 million for the year ended December 31, 2021 to \$426.5 million for the year ended December 31, 2022 primarily due to higher employee related expenses from recent acquisitions and professional services and legal costs primarily incurred in connection with the Sinclair Transactions. See Note 2 “Acquisitions” in the Notes to Consolidated Financial Statements for additional information on these acquisitions.

Depreciation and Amortization Expenses

Depreciation and amortization increased 30% from \$503.5 million for the year ended December 31, 2021 to \$656.8 million for the year ended December 31, 2022. This increase was due principally to depreciation and amortization attributable to the acquisition of the Puget Sound Refinery, the Acquired Sinclair Businesses and newly capitalized projects related to our renewable diesel units.

Earnings (Loss) of Equity Method Investments

For the year ended December 31, 2022, we recorded a net loss of \$0.3 million as compared to net earnings of \$12.4 million of equity method investments for the year ended December 31, 2021. Net loss during the year ended December 31, 2022 was primarily due to HEP’s 50% share of incurred and estimated environmental remediation and recovery expenses, net of insurance proceeds received to date, for Osage Pipeline. In July 2022, Osage Pipeline, which carries crude oil from Cushing, Oklahoma to El Dorado, Kansas, suffered a release of crude oil. The pipeline resumed operations during the third quarter of 2022 and remediation efforts are underway.

Interest Income

Interest income was \$30.2 million for the year ended December 31, 2022 compared to \$4.0 million for the year ended December 31, 2021. The increase in interest income was primarily due to higher interest rates on cash investments.

Interest Expense

Interest expense was \$175.6 million for the year ended December 31, 2022 compared to \$125.2 million for the year ended December 31, 2021. This increase was primarily due to the April 2022 issuance of \$400 million in aggregate principal amount of HEP’s 6.375% senior notes maturing in April 2027 and higher market interest rates on HEP’s revolving credit facility during the year ended December 31, 2022.

For the years ended December 31, 2022 and 2021, interest expense attributable to our HEP Segment was \$82.6 million and \$53.8 million, respectively.

Gain on Business Interruption Insurance Settlement

During the year ended December 31, 2022, we recorded a gain of \$15.2 million from the settlement of our business interruption claim related to winter storm Uri that occurred in the first quarter of 2021.

Gain on Tariff Settlement

For the year ended December 31, 2021, we recorded a gain of \$51.5 million upon the settlement of a tariff rate case. See Note 19 “Contingencies” in the Notes to Consolidated Financial Statements for additional information on this case and settlement.

Gain on Early Extinguishment of Debt

For the year ended December 31, 2022, we recorded a \$0.6 million gain on the extinguishment of debt related to our open market repurchase of \$42.2 million in principal of our \$350 million aggregate principal amount of our 2.625% senior notes maturing October 2023 at a cost of \$41.4 million.

Loss 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 a loss of \$1.6 million and \$2.9 million for the years ended December 31, 2022 and 2021, respectively. For the years ended December 31, 2022 and 2021, loss on foreign currency transactions included a gain of \$27.8 million and a loss of \$4.0 million, respectively, on foreign exchange forward contracts (utilized as an economic hedge).

Gain on Sale of Assets and Other

For the year ended December 31, 2021, we recorded an \$86.0 million gain related to the sale of real property in Mississauga, Ontario, and HEP recorded a \$5.3 million gain related to the sale of certain pipeline assets. See Note 1 “Description of Business and Presentation of Financial Statements” in the Notes to Consolidated Financial Statements for additional information.

Income Taxes

For the year ended December 31, 2022, we recorded an income tax expense of \$894.9 million compared to \$123.9 million for the year ended December 31, 2021. This increase was principally due to higher pre-tax income during the year ended December 31, 2022 compared to the year ended December 31, 2021. Our effective tax rates were 22.7% and 15.7% for the years ended December 31, 2022 and 2021, respectively. The year-over-year increase in the effective tax rate is principally due 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.

LIQUIDITY AND CAPITAL RESOURCES

HF Sinclair Credit Agreement

On April 27, 2022, after giving effect to the consummation of the exchange offers and the issuance of the HF Sinclair Senior Notes (as defined below), HF Sinclair entered into a \$1.65 billion senior unsecured revolving credit facility maturing in April 2026 (the “HF Sinclair Credit Agreement”). The HF Sinclair 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. The HF Sinclair Credit Agreement replaced the \$1.35 billion senior unsecured revolving credit facility of HollyFrontier, which was terminated on April 27, 2022. At December 31, 2022, we were in compliance with all covenants, had no outstanding borrowings and had outstanding letters of credit totaling \$2.3 million under the HF Sinclair Credit Agreement.

HollyFrontier Bond Exchange and HF Sinclair Senior Notes

On April 27, 2022, HF Sinclair completed its offers to exchange any and all outstanding HollyFrontier 2.625% senior notes maturing October 2023 (the “HollyFrontier 2.625% Senior Notes”), 5.875% senior notes maturing April 2026 (the “HollyFrontier 5.875% Senior Notes”) and 4.500% senior notes maturing October 2030 (the “HollyFrontier 4.500% Senior Notes”) (and, collectively, the “HollyFrontier Senior Notes”) for 2.625% senior notes maturing October 2023 (the “HF Sinclair 2.625% Senior Notes”), 5.875% senior notes maturing April 2026 (the “HF Sinclair 5.875% Senior Notes”) and 4.500% senior notes maturing October 2030 (the “HF Sinclair 4.500% Senior Notes”) (and, collectively, the “HF Sinclair Senior Notes”) to be issued by HF Sinclair and cash. Additionally, HF Sinclair solicited consents to adopt certain amendments to the indenture governing the HollyFrontier Senior Notes.

In connection with the exchange offers and consent solicitations, HollyFrontier amended the indenture governing the HollyFrontier Senior Notes to eliminate (i) substantially all of the restrictive covenants, (ii) certain of the events which may lead to an “Event of Default”, (iii) the SEC reporting covenant and (iv) with respect to the HollyFrontier 2.625% Senior Notes and the HollyFrontier 4.500% Senior Notes only, the offer to repurchase such senior notes upon certain change of control triggering events.

The HF Sinclair Senior Notes are unsecured and unsubordinated obligations of ours and rank equally with all our other existing and future unsecured and unsubordinated indebtedness. Each series of HF Sinclair Senior Notes has the same interest rate (including interest rate adjustment provisions, as applicable), interest payment dates, maturity date and redemption terms as the corresponding series of HollyFrontier Senior Notes. The HF Sinclair Senior Notes were issued in exchange for the HollyFrontier Senior Notes pursuant to a private exchange offer exempt from registration under the Securities Act of 1933, as amended (the Securities Act”).

On September 12, 2022, HF Sinclair filed a registration statement, which was declared effective on September 21, 2022, to exchange the HF Sinclair Senior Notes for an equal principal amount of the respective series of the HF Sinclair Senior Notes (the “Registered HF Sinclair Senior Notes”). The Registered HF Sinclair Senior Notes are substantially identical to the HF Sinclair Senior Notes in all material respects except the Registered HF Sinclair Senior Notes are registered under the Securities Act and will not be subject to restrictions on transfer or to any increase in annual interest rate for failure to comply with the Registration Rights Agreement, dated April 27, 2022, and will not have the registration rights applicable to the HF Sinclair Senior Notes.

On October 21, 2022, HF Sinclair completed its offers to exchange HF Sinclair Senior Notes for Registered HF Sinclair Senior Notes.

Further, we may from time to time seek to retire some or all of our outstanding debt or debt agreements through cash purchases, and/or exchanges, open market purchases, privately negotiated transactions, tender offers or otherwise. Such transactions, if any, may be material and will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors.

During the fourth quarter of 2022, we made open market repurchases of HF Sinclair 2.625% Senior Notes and HollyFrontier 2.625% Senior Notes that resulted in the extinguishment of \$42.2 million in principal of the HF Sinclair 2.625% Senior Notes and fifteen thousand dollars in principal of the HollyFrontier 2.625% Senior Notes. Total cash consideration paid to repurchase the principal amount outstanding, excluding accrued interest, totaled \$41.4 million, and we recognized a \$0.6 million gain on the extinguishment of debt during the year ended December 31, 2022.

The HF Sinclair 2.625% Senior Notes and the HollyFrontier 2.625% Senior Notes are due October 2023 and are classified as “Current debt” on our consolidated balance sheet.

HF Sinclair Financing Arrangements

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 cash. 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 current leases mature in one year or less. Upon maturity, we must either satisfy the obligation at fair market value or refinance to extend the maturity.

HEP Credit Agreement

HEP has a \$1.2 billion senior secured revolving credit facility maturing in July 2025 (the “HEP Credit Agreement”). In August 2022, the HEP Credit Agreement was amended to, among other things, provide an alternative reference rate for LIBOR. The HEP Credit Agreement 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 an accordion feature that allows HEP to increase the commitments under the HEP Credit Agreement up to a maximum amount of \$1.7 billion. During the year ended December 31, 2022, HEP had net repayments of \$172.0 million under the HEP Credit Agreement. At December 31, 2022, HEP was in compliance with all of its covenants, had outstanding borrowings of \$668.0 million and no outstanding letters of credit under the HEP Credit Agreement.

HEP Senior Notes

On April 8, 2022, HEP closed a private placement of \$400 million in aggregate principal amount of 6.375% senior notes maturing April 2027 (the “HEP 6.375% Senior Notes”) at par for net proceeds of approximately \$393 million, after deducting the initial purchasers’ discounts and commissions and estimated offering expenses. The HEP 6.375% 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. The net proceeds from the offering of the HEP 6.375% Senior Notes were used to partially repay outstanding borrowings under the HEP Credit Agreement.

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

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. Further, we may from time to time seek to retire some or all of our outstanding debt or debt agreements through cash purchases, and/or exchanges, open market purchases, privately negotiated transactions, tender offers or otherwise. Such transactions, if any, may be material and will depend on prevailing market conditions, our liquidity requirements and other factors. In addition, components of our long-term growth strategy include the optimization 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 for the repurchase of common stock under our share repurchase program.

Our standalone (excluding HEP) liquidity was approximately \$3.30 billion at December 31, 2022, consisting of cash and cash equivalents of \$1.65 billion and an undrawn \$1.65 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. 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. Cash equivalents are stated at cost, which approximates market value.

In November 2019, our Board of Directors approved a \$1.0 billion share repurchase program, which replaced all existing share repurchase programs as of that time, authorizing us to repurchase common stock in the open market or through privately negotiated transactions. In June 2022, our Board of Directors determined that privately negotiated repurchases from REH Company (formerly known as The Sinclair Companies) are also authorized under the share repurchase program, subject to REH Company’s interest in selling its shares and other limitations. As of December 31, 2022, we had repurchased \$975.0 million under this share repurchase program, of which \$500.0 million were repurchased pursuant to privately negotiated repurchases from REH Company.

On September 21, 2022, our Board of Directors approved a new \$1.0 billion share repurchase program, which, effective September 26, 2022, replaced all existing share repurchase programs, including \$25.0 million remaining under the previously existing \$1.0 billion share repurchase program. This new share repurchase program authorizes us to repurchase common stock in the open market or through privately negotiated transactions. Privately negotiated repurchases from REH Company are also authorized under the share repurchase program, subject to REH Company’s interest in selling its shares and other limitations. The timing and amount of share repurchases, including those from REH Company, will depend on market conditions and corporate, tax, regulatory and other relevant considerations. This program may be discontinued at any time by our Board of Directors. As of December 31, 2022, we repurchased \$338.0 million under this new share repurchase program, of which \$250.0 million were repurchased pursuant to privately negotiated repurchases from REH Company. 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 year ended December 31, 2022, we made open market and privately negotiated purchases of 25,716,042 shares for \$1,313.0 million under our share repurchase programs, of which 14,407,274 shares were repurchased for \$750.0 million pursuant to privately negotiated repurchases from REH Company. As of December 31, 2022 we had remaining authorization to repurchase up to \$662.0 million under the new share repurchase program, of which we repurchased 913,883 shares for \$48.0 million year-to-date February 15, 2023.

On December 14, 2022, we agreed to repurchase an aggregate of 1,000,000 shares of our outstanding common stock from a registered broker for an aggregate purchase price of \$48.6 million (the “December Repurchase”). The purchase price was funded with cash on hand. The shares repurchased are held as treasury stock.

The December Repurchase was made in connection with the sale by REH Company of approximately 5,000,000 shares of common stock, inclusive of the 1,000,000 shares we repurchased, in an unregistered block trade permitted under applicable securities laws (such sale, the “Sale”). In connection with the Sale, REH Company agreed to customary “lock-up” restrictions that will expire 60 days following the date of the Sale, subject to waiver by the broker and certain exceptions, including, but not limited to, privately negotiated sales or transfers of common stock to us from REH Company.

The December Repurchase was made pursuant to separate authorization from our Board of Directors and not as part of our \$1.0 billion share repurchase program authorized by our Board of Directors on September 21, 2022, and accordingly, did not reduce the remaining authorization thereunder.

Cash Flows – Operating Activities

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Net cash flows provided by operating activities were \$3,777.2 million for the year ended December 31, 2022 compared to \$406.7 million for the year ended December 31, 2021, an increase of \$3,370.5 million. The increase in operating cash flows was primarily due to the increase in gross refinery margins, partially offset by higher operating expenses.

Changes in working capital increased operating cash flows by \$28.7 million and decreased operating cash flows by \$264.9 million for the years ended December 31, 2022 and 2021, respectively.

Cash Flows – Investing Activities and Planned Capital Expenditures

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

For the year ended December 31, 2022, our net cash flows used for investing activities were \$774.5 million. On March 14, 2022, we closed the Sinclair Transactions and paid cash of \$251.4 million. The remainder of the purchase consideration was funded with the issuance of HF Sinclair common stock and HEP common units. See Note 2 “Acquisitions” in the Notes to Consolidated Financial Statements for additional information on the Sinclair Transactions. Cash expenditures for properties, plants and equipment for the year ended December 31, 2022 were \$524.0 million, which included HEP capital expenditures of \$39.0 million for the year ended December 31, 2022.

For the year ended December 31, 2021, our net cash flows used for investing activities were \$1,327.2 million. On November 1, 2021, we closed the acquisition of the Puget Sound Refinery for aggregate cash consideration of \$624.3 million. Cash expenditures for properties, plants and equipment for the year ended December 31, 2021 were \$813.4 million, which included HEP capital expenditures of \$88.3 million for the year ended December 31, 2021. During the twelve months ended December 31, 2021, we received proceeds of \$98.8 million, or CAD 125 million, for the sale of real property in Mississauga, Ontario.

HF Sinclair Corporation

Each year our Board of Directors approves our annual capital budget which includes specific projects that management is authorized to undertake. 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 2023 is as follows:

	Expected Cash Spending Range	
	(In millions)	
HF Sinclair		
Refining	\$ 250.0	\$ 280.0
Renewables	25.0	35.0
Lubricants and Specialty Products	35.0	50.0
Marketing	20.0	30.0
Corporate	50.0	80.0
Turnarounds and catalyst	530.0	630.0
Total HF Sinclair	910.0	1,105.0
HEP		
Maintenance	25.0	35.0
Expansion and joint venture investment	5.0	10.0
Total HEP	30.0	45.0
Total	<u>\$ 940.0</u>	<u>\$ 1,150.0</u>

Cash Flows – Financing Activities

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

For the year ended December 31, 2022, our net cash flows used for financing activities were \$1,560.8 million. During the year ended December 31, 2022, we purchased \$1,371.7 million of treasury stock, paid \$255.9 million in dividends and paid \$41.4 million to extinguish \$42.2 million in principal of the HF Sinclair 2.625% Senior Notes and HollyFrontier 2.625% Senior Notes. During the year ended December 31, 2022, HEP received \$400.0 million in proceeds from the issuance of the HEP 6.375% Senior Notes, had net repayments of \$172.0 million under the HEP Credit Agreement and paid distributions of \$96.2 million to noncontrolling interests.

For the year ended December 31, 2021, our net cash flows used for financing activities were \$211.8 million. During the year ended December 31, 2021, we paid \$57.7 million in dividends, purchased \$7.1 million of treasury stock and paid \$7.9 million of financing costs in connection with the amendment of the HollyFrontier Credit Agreement in April 2021. During the year ended December 31, 2021, HEP had net repayments of \$73.5 million under the HEP Credit Agreement and paid \$6.6 million of financing costs in connection with the amendment of the HEP Credit Agreement in April 2021. In addition, HEP paid distributions of \$75.4 million to noncontrolling interests and received contributions from noncontrolling interests of \$23.2 million.

Contractual Obligations and Commitments

The following table presents our long-term contractual obligations as of December 31, 2022 in total and by period due beginning in 2023. 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			
		2023	2024 & 2025	2026 & 2027	Thereafter
		(In thousands)			
HF Sinclair Corporation					
Long-term and current debt - principal ⁽¹⁾	\$ 1,707,827	\$ 307,827	\$ —	\$ 1,000,000	\$ 400,000
Long-term and current debt - interest ⁽¹⁾	311,477	82,810	138,206	44,334	46,127
Financing arrangements ⁽²⁾	39,775	39,775	—	—	—
Supply agreements ⁽³⁾	2,215,441	1,328,585	886,856	—	—
Transportation and storage agreements ⁽⁴⁾	2,159,656	214,628	430,060	353,132	1,161,836
Operating and finance leases ⁽⁵⁾	406,395	125,276	140,903	47,011	93,205
Other long-term obligations	121,845	21,600	24,547	17,085	58,613
	6,962,416	2,120,501	1,620,572	1,461,562	1,759,781
Holly Energy Partners, L.P.					
Long-term debt - principal ⁽¹⁾	1,568,000	—	668,000	400,000	500,000
Long-term debt - interest ⁽¹⁾	287,194	70,200	131,973	82,938	2,083
Operating and finance leases ⁽⁵⁾	100,097	8,953	15,647	14,143	61,354
Other agreements	250,885	8,811	15,823	11,887	214,364
	2,206,176	87,964	831,443	508,968	777,801
Total	\$ 9,168,592	\$ 2,208,465	\$ 2,452,015	\$ 1,970,530	\$ 2,537,582

- (1) See Note 13 “Debt” in the Notes to Consolidated Financial Statements for a description of our outstanding debt.
- (2) We have a financing arrangement related to the sale and subsequent lease-back of certain of our precious metals.
- (3) 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 2023 and 2025 using current market rates.
- (4) 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 2023 and 2040.
- (5) Operating and finance lease obligations include options to extend terms that are reasonably certain of being exercised.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

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. Inventories related to our renewable business are stated at the lower of cost, using the LIFO method for feedstock and unfinished and finished renewable 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.

The excess of replacement cost over the LIFO carrying value of refinery inventories was \$39.0 million and \$111.1 million at December 31, 2022 and 2021, respectively. Future decreases in overall inventory values could result in an establishment of a lower of cost or market inventory valuation reserve and additional charges to cost of products sold.

Our renewables inventories that are valued at the lower of LIFO cost or market reflect a valuation reserve of \$61.2 million and \$8.7 million at December 31, 2022 and 2021, respectively. A new market reserve of \$61.2 million as of December 31, 2022 was 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 \$52.4 million and \$8.7 million for the years ended December 31, 2022 and 2021, respectively.

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.

Goodwill and Long-lived Assets

As of December 31, 2022, our goodwill balance was \$3.0 billion, with goodwill assigned to our Refining, Renewables, Marketing, Lubricants and Specialty Products and HEP segments of \$1,977.4 million, \$159.0 million, \$163.8 million, \$246.0 million and \$432.0 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 group our long-lived assets as follows: (i) our refinery asset groups, which include certain HEP logistics assets, (ii) our renewables products asset groups (iii) our Lubricants and Specialty Products asset groups, (iv) our Marketing assets and (v) 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 such 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.

We performed our annual goodwill impairment testing quantitatively as of July 1, 2022 and determined there was no impairment of goodwill attributable to our reporting units. The estimated fair values of our reporting units 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. The excess of the fair values of the reporting units over their respective carrying values ranged from 32% to 47%. 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 annual goodwill testing.

In performing our impairment test of goodwill, we developed cash flow forecasts for each of our 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 a 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. Our fair value estimates are based on projected cash flows, which we believe to be reasonable.

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 long-lived asset impairments at some point in the future. Future impairment charges could be material to our results of operations and financial condition.

Valuation of Business Combinations

We recognize and measure the assets acquired and liabilities assumed in a business combination based on their estimated fair values at the acquisition date. Any excess or surplus of the purchase consideration when compared to the fair value of the net tangible assets acquired, if any, is recorded as goodwill or gain from a bargain purchase. The fair value of assets and liabilities as of the acquisition date are often estimated using a combination of approaches, including the income approach, which requires us to project future cash flows and apply an appropriate discount rate; the cost approach, which requires estimates of replacement costs and depreciation and obsolescence estimates; and the market approach which uses market data and adjusts for entity-specific differences. We use all available information to make these fair value determinations and engage third-party consultants for valuation assistance. The estimates used in determining fair values are based on assumptions believed to be reasonable but which are inherently uncertain. Accordingly, actual results may differ materially from the projected results used to determine fair value.

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, collar contracts, 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 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, 2022, 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 2023):

Contract Description	Total Outstanding Notional	Unit of Measure
NYMEX futures (WTI) - short	845,000	Barrels
Forward gasoline and diesel contracts - long	425,000	Barrels
Foreign currency forward contracts	432,161,594	U.S. dollar
Forward commodity contracts (platinum) ⁽¹⁾	36,969	Troy ounces
Natural gas price swaps (basis spread) - long	5,110,000	MMBTU
Natural gas collar contracts	29,200,000	MMBTU

- (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 in commodity prices for our open commodity derivative contracts at December 31, 2022 and 2021:

	Derivative Fair Value Gain (Loss) at December 31,			
	2022		2021	
	(In thousands)			
10% increase in underlying commodity prices	\$	(3,502)	\$	(3,705)
10% decrease in underlying commodity prices	\$	3,298	\$	3,705

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 HF Sinclair Senior Notes, 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, 2022 is presented below:

	Outstanding Principal	Estimated Fair Value	Estimated Change in Fair Value
	(In thousands)		
HollyFrontier and HF Sinclair Senior Notes	\$ 1,707,827	\$ 1,655,726	\$ 33,118
HEP Senior Notes	\$ 900,000	\$ 852,658	\$ 24,213

For the variable rate HEP Credit Agreement, changes in interest rates would affect cash flows, but not the fair value. At December 31, 2022, outstanding borrowings under the HEP Credit Agreement were \$668.0 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 catastrophic losses, hazards of petroleum processing operations and unforeseen interruptions, including but not limited to fire, explosion, releases or spills, cyberattacks, weather-related perils, vandalism, power failures, mechanical failures and other events beyond our control. We maintain various insurance coverages, including general liability, property damage, business interruption and cyber 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 HF Sinclair stockholders plus (i) income tax provision, (ii) interest expense, net of interest income 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 on 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,		
	2022	2021	2020
	(In thousands)		
Net income (loss) attributable to HF Sinclair stockholders	\$ 2,922,668	\$ 558,324	\$ (601,448)
Add (subtract) income tax provision	894,872	123,898	(232,147)
Add interest expense	175,628	125,175	126,527
Subtract interest income	(30,179)	(4,019)	(7,633)
Add depreciation and amortization	656,787	503,539	520,912
EBITDA	<u>\$ 4,619,776</u>	<u>\$ 1,306,917</u>	<u>\$ (193,789)</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 operations. Other companies in our industry may not calculate these performance measures in the same manner.

Below are reconciliations to our consolidated statements of operations 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 net operating margin per produced barrel sold to refinery gross margin to refining sales and other revenues

	Years Ended December 31,		
	2022	2021	2020
	(Dollars in thousands, except per barrel amounts)		
Refining segment sales and other revenues	\$ 34,412,909	\$ 16,358,558	\$ 9,539,189
Refining segment cost of products sold (exclusive of lower of cost or market inventory adjustment)	28,270,195	14,673,062	8,439,680
Lower of cost or market inventory adjustment	—	(318,353)	82,214
	6,142,714	2,003,849	1,017,295
Add (subtract) lower of cost or market inventory adjustment	—	(318,353)	82,214
Less Cheyenne Refinery sales and other revenues	—	—	(501,589)
Less Cheyenne Refinery cost of products sold	—	—	447,628
Refining gross margin	<u>\$ 6,142,714</u>	<u>\$ 1,685,496</u>	<u>\$ 1,045,548</u>
Refining segment operating expenses	\$ 1,815,931	\$ 1,090,424	\$ 988,045
Less Cheyenne Refinery operating expenses	—	—	(121,151)
	<u>\$ 1,815,931</u>	<u>\$ 1,090,424</u>	<u>\$ 866,894</u>
Produced barrels sold (BPD)	628,340	424,100	391,670
Refinery gross margin per produced barrel sold	\$ 26.78	\$ 10.89	\$ 7.29
Less average refinery operating expenses per produced barrel sold	7.92	7.04	6.05
Net operating margin per produced barrel sold	<u>\$ 18.86</u>	<u>\$ 3.85</u>	<u>\$ 1.24</u>

Reconciliation of renewables operating information (non-GAAP performance measures) to amounts reported under generally accepted accounting principles in financial statements.

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

Reconciliation of renewables gross margin and operating expenses to gross margin per produced gallon sold and net operating margin per produced gallon sold

	Year Ended December 31, 2022
Renewables segment sales and other revenues	\$ 1,015,499
Renewables segment cost of products sold	974,167
Lower of cost or market inventory adjustment	52,412
	(11,080)
Add lower of cost or market inventory adjustment	52,412
Renewables gross margin	\$ 41,332
Renewables operating expenses	\$ 111,974
Produced gallons sold (in thousand gallons)	136,204
Renewables gross margin per produced gallon sold	\$ 0.30
Less operating expenses per produced gallon sold	0.82
Net operating margin per produced gallon sold	\$ (0.52)

Reconciliation of Marketing operating information (non-GAAP performance measures) to amounts reported under generally accepted accounting principles in financial statements.

Marketing gross margin is a non-GAAP performance measure that is used by our management and others to compare our Marketing performance to that of other companies in our industry. We believe this margin measure is helpful to investors in evaluating our Marketing performance on a relative and absolute basis. Marketing gross margin per gallon sold is total Marketing segment revenues less total Marketing segment cost of products sold divided by sales volumes of Marketing products sold. This margin does not include the non-cash effects of depreciation and amortization. This component performance measure can be reconciled directly to our consolidated statements of operations. Other companies in our industry may not calculate these performance measures in the same manner.

Reconciliation of Marketing gross margin to gross margin per gallon sold

	Year Ended December 31, 2022
Marketing segment sales and other revenues	\$ 3,911,922
Marketing segment cost of products sold	3,845,625
Marketing gross margin	\$ 66,297
Sales volumes (in thousand gallons)	1,118,444
Marketing segment gross margin per gallon sold	\$ 0.06

Item 8. Financial Statements and Supplementary Data

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

Management of HF Sinclair 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, 2022 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, 2022, the Company maintained effective internal control over financial reporting. Management’s assessment of, and conclusion on, the effectiveness of internal control over financial reporting did not include the internal controls of the Acquired Sinclair Businesses, that were acquired on March 14, 2022, as we are in the process of integrating operations of the Acquired Sinclair Businesses, including internal controls over financial reporting. The Acquired Sinclair Businesses represented approximately 17% of the Company's consolidated total assets and 26% of consolidated total revenues of the Company as of and for the year ended December 31, 2022.

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, 2022. That report is included herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of HF Sinclair Corporation

Opinion on Internal Control over Financial Reporting

We have audited HF Sinclair Corporation's internal control over financial reporting as of December 31, 2022, 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, HF Sinclair Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

As indicated in the accompanying Management's Report on its Assessment of the Company's Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of the Acquired Sinclair Businesses, which is included in the 2022 consolidated financial statements of the Company and constituted approximately 17% of total assets as of December 31, 2022 and approximately 26% of revenues for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of the Acquired Sinclair Businesses.

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, 2022 and 2021, the related consolidated statements of operations, comprehensive income, cash flows, and equity for each of the three years in the period ended December 31, 2022, and the related notes of the Company and our report dated February 28, 2023 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 28, 2023

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of HF Sinclair Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of HF Sinclair Corporation (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income, cash flows, and equity for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, 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, 2022, 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 28, 2023 expressed an unqualified opinion thereon.

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 Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter 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 matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

Valuation of Personal Property Assets in the Sinclair Acquisition

*Description of
the Matter*

During 2022, the Company completed its acquisition of the Acquired Sinclair Businesses for aggregate purchase consideration of \$2,749.5 million, as disclosed in Note 2 to the consolidated financial statements. The transaction was accounted for as a business combination. Of the total assets acquired and liabilities assumed, the Company acquired \$1,242.5 million of properties, plant, and equipment which was made up of real property and personal property.

Auditing management's accounting for the acquisition of the Acquired Sinclair Businesses was complex and highly judgmental due to the significant estimation required to determine the fair value of certain personal property. In particular, the fair value estimates for the Acquired Sinclair Businesses' personal property were sensitive to significant assumptions including replacement cost as adjusted for physical deterioration. 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 the Company's controls over the valuation of the personal property assets related to the acquisition. For example, we tested controls over management's review of the valuation models and the underlying assumptions used to develop estimated values of these assets.

To test the estimated fair value of the personal property, our audit procedures included, among others, evaluating the Company's selection of the valuation methodology, evaluating the significant assumptions used by the Company and evaluating the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. We involved valuation specialists to assist with our evaluation of the methodologies used by the Company and significant assumptions included in the fair value estimates. Specifically, our valuation specialists assisted by evaluating the valuation methodologies used, comparing key assumptions to current industry and market data, and developing an expected range of values based on significant inputs and assumptions to assess reasonableness of the Company's estimates.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1977.
Dallas, Texas
February 28, 2023

HF SINCLAIR CORPORATION CONSOLIDATED BALANCE SHEETS

(In thousands, except share data)

	December 31,	
	2022	2021
ASSETS		
Current assets:		
Cash and cash equivalents <i>(HEP: \$10,917 and \$14,381, respectively)</i>	\$ 1,665,066	\$ 234,444
Accounts receivable: Product and transportation <i>(HEP: \$16,344 and \$12,745, respectively)</i>	1,626,199	1,130,485
Crude oil resales	76,950	111,403
Inventories: Crude oil and refined products	1,703,149	1,241,888
Materials, supplies and other <i>(HEP: \$1,246 and \$1,070, respectively)</i>	2,853,425	1,879,131
	361,103	242,997
	3,214,528	2,122,128
Income taxes receivable	53,563	97,382
Prepayments and other <i>(HEP: \$5,699 and \$5,381, respectively)</i>	112,013	66,612
Total current assets	6,748,319	3,762,454
Properties, plants and equipment, at cost <i>(HEP: \$2,173,248 and \$2,037,527, respectively)</i>	10,146,652	8,448,207
Less accumulated depreciation <i>(HEP: \$(761,210) and \$(682,143)), respectively)</i>	(3,457,747)	(3,033,353)
	6,688,905	5,414,854
Operating lease right-of-use assets <i>(HEP: \$66,382 and \$69,134, respectively)</i>	351,068	396,191
Other assets: Turnaround costs	376,158	397,385
Goodwill <i>(HEP: \$431,985 and \$312,873, respectively)</i>	2,978,315	2,293,044
Intangibles and other <i>(HEP: \$360,768 and \$214,436, respectively)</i>	982,718	652,685
	4,337,191	3,343,114
Total assets	<u>\$ 18,125,483</u>	<u>\$ 12,916,613</u>
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable <i>(HEP: \$27,199 and \$28,954, respectively)</i>	\$ 2,334,107	\$ 1,613,484
Income taxes payable	7,818	25,156
Operating lease liabilities <i>(HEP \$4,204 and \$3,710, respectively)</i>	109,926	110,606
Current debt	306,959	—
Accrued liabilities <i>(HEP: \$39,110 and \$18,479, respectively)</i>	486,719	316,218
Total current liabilities	3,245,529	2,065,464
Long-term debt <i>(HEP: \$1,556,334 and \$1,333,049, respectively)</i>	2,948,513	3,072,737
Noncurrent operating lease liabilities <i>(HEP \$62,550 and \$65,799, respectively)</i>	254,215	308,747
Deferred income taxes <i>(HEP: \$374 and \$396, respectively)</i>	1,262,165	837,401
Other long-term liabilities <i>(HEP: \$55,373 and \$43,033, respectively)</i>	397,489	337,799
Commitments and contingencies (Note 19)		
Equity:		
HF Sinclair 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; 223,231,546 and 256,046,051 shares issued as of December 31, 2022 and December 31, 2021, respectively	2,232	2,560
Additional capital	6,468,775	4,220,075
Retained earnings	4,130,252	4,413,836
Accumulated other comprehensive income (loss)	(22,013)	2,671
Common stock held in treasury, at cost - 26,152,344 and 93,044,605 shares as of December 31, 2022 and December 31, 2021, respectively	(1,335,431)	(2,951,257)
Total HF Sinclair stockholders' equity	9,243,815	5,687,885
Noncontrolling interest	773,757	606,580
Total equity	10,017,572	6,294,465
Total liabilities and equity	<u>\$ 18,125,483</u>	<u>\$ 12,916,613</u>

Parenthetical amounts represent asset and liability balances attributable to Holly Energy Partners, L.P. ("HEP") as of December 31, 2022 and 2021. HEP is a variable interest entity.

See accompanying notes.

HF SINCLAIR CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)

	Years Ended December 31,		
	2022	2021	2020
Sales and other revenues	\$ 38,204,839	\$ 18,389,142	\$ 11,183,643
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)	30,680,013	15,567,052	9,158,805
Lower of cost or market inventory valuation adjustment	52,412	(310,123)	78,499
	30,732,425	15,256,929	9,237,304
Operating expenses (exclusive of depreciation and amortization)	2,334,893	1,517,478	1,300,277
Selling, general and administrative expenses (exclusive of depreciation and amortization)	426,485	362,010	313,600
Depreciation and amortization	656,787	503,539	520,912
Goodwill and long-lived asset impairments	—	—	545,293
Total operating costs and expenses	34,150,590	17,639,956	11,917,386
Income (loss) from operations	4,054,249	749,186	(733,743)
Other income (expense):			
Earnings (loss) of equity method investments	(260)	12,432	6,647
Interest income	30,179	4,019	7,633
Interest expense	(175,628)	(125,175)	(126,527)
Gain on business interruption insurance settlement	15,202	—	81,000
Gain on tariff settlement	—	51,500	—
Gain on sales-type leases	—	—	33,834
Gain (loss) on early extinguishment of debt	604	—	(25,915)
Gain (loss) on foreign currency transactions	(1,637)	(2,938)	2,201
Gain on sale of assets and other	13,337	98,128	7,824
	(118,203)	37,966	(13,303)
Income (loss) before income taxes	3,936,046	787,152	(747,046)
Income tax expense (benefit):			
Current	841,704	(4,672)	(55,420)
Deferred	53,168	128,570	(176,727)
	894,872	123,898	(232,147)
Net income (loss)	3,041,174	663,254	(514,899)
Less net income attributable to noncontrolling interest	118,506	104,930	86,549
Net income (loss) attributable to HF Sinclair stockholders	\$ 2,922,668	\$ 558,324	\$ (601,448)
Earnings (loss) per share:			
Basic	\$ 14.28	\$ 3.39	\$ (3.72)
Diluted	\$ 14.28	\$ 3.39	\$ (3.72)
Average number of common shares outstanding:			
Basic	202,566	162,569	161,983
Diluted	202,566	162,569	161,983

See accompanying notes.

HF SINCLAIR CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Years Ended December 31,		
	2022	2021	2020
Net income (loss)	\$ 3,041,174	\$ 663,254	\$ (514,899)
Other comprehensive income (loss):			
Foreign currency translation adjustment	(32,383)	(13,336)	6,226
Hedging instruments:			
Change in fair value of cash flow hedging instruments	(4,962)	(17,548)	(7,475)
Reclassification adjustments to net income (loss) on settlement of cash flow hedging instruments	5,288	17,579	2,604
Net unrealized gain (loss) on hedging instruments	326	31	(4,871)
Pension and other post-retirement benefit obligations:			
Actuarial gain (loss) on pension plans	(3,836)	2,104	1,862
Pension plans gain reclassified to net income (loss)	(208)	(407)	(422)
Actuarial gain (loss) on post-retirement healthcare plans	7,885	1,133	(1,129)
Post-retirement healthcare plans gain reclassified to net income (loss)	(3,440)	(3,328)	(3,564)
Actuarial gain (loss) on retirement restoration plan	349	2	(230)
Retirement restoration plan loss reclassified to net income (loss)	39	39	22
Net change in pension and other post-retirement benefit obligations	789	(457)	(3,461)
Other comprehensive loss before income taxes	(31,268)	(13,762)	(2,106)
Income tax benefit	(6,584)	(2,971)	(794)
Other comprehensive loss	(24,684)	(10,791)	(1,312)
Total comprehensive income (loss)	3,016,490	652,463	(516,211)
Less noncontrolling interest in comprehensive income	118,506	104,930	86,549
Comprehensive income (loss) attributable to HF Sinclair stockholders	<u>\$ 2,897,984</u>	<u>\$ 547,533</u>	<u>\$ (602,760)</u>

See accompanying notes.

HF SINCLAIR CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Years Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income (loss)	\$ 3,041,174	\$ 663,254	\$ (514,899)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	656,787	503,539	520,912
Goodwill and long-lived asset impairments	—	—	545,293
Lower of cost or market inventory valuation adjustment	52,412	(310,123)	78,499
Earnings of equity method investments, inclusive of distributions	19,769	—	1,084
(Gain) loss on early extinguishment of debt	(604)	—	25,915
Gain on sales-type leases	—	—	(33,834)
Gain on sale of assets	(2,118)	(89,765)	(201)
Deferred income taxes	53,168	128,570	(176,727)
Equity-based compensation expense	30,318	39,273	31,654
Change in fair value – derivative instruments	9,989	(34,096)	26,456
(Increase) decrease in current assets:			
Accounts receivable	(4,282)	(614,407)	254,684
Inventories	(224,421)	(344,559)	230,142
Income taxes receivable	42,641	(6,415)	(85,442)
Prepayments and other	(40,810)	(18,672)	(2,541)
Increase (decrease) in current liabilities:			
Accounts payable	194,424	612,410	(241,765)
Income taxes payable	(17,169)	23,158	(25,897)
Accrued liabilities	78,349	83,602	(85,708)
Turnaround expenditures	(144,759)	(214,431)	(94,692)
Other, net	32,291	(14,656)	4,998
Net cash provided by operating activities	3,777,159	406,682	457,931
Cash flows from investing activities:			
Additions to properties, plants and equipment	(485,043)	(725,073)	(270,877)
Additions to properties, plants and equipment – HEP	(38,964)	(88,336)	(59,283)
Acquisitions, net of cash acquired	(251,448)	(624,332)	—
Investment in equity company - HEP	—	—	(2,438)
Proceeds from sale of assets	3,344	106,357	1,554
HEP investment in Osage Pipe Line Company LLC	(13,000)	—	—
Distributions in excess of equity in earnings of equity investments	10,623	4,165	882
Net cash used for investing activities	(774,488)	(1,327,219)	(330,162)
Cash flows from financing activities:			
Borrowings under credit agreements	510,000	555,500	258,500
Repayments under credit agreements	(682,000)	(629,000)	(310,500)
Proceeds from issuance of senior notes	—	—	748,925
Proceeds from issuance of senior notes – HEP	400,000	—	500,000
Redemption of senior notes	(41,420)	—	—
Redemption of senior notes - HEP	—	—	(522,500)
Purchase of treasury stock	(1,371,700)	(7,058)	(7,642)
Dividends	(255,928)	(57,663)	(229,493)
Distributions to noncontrolling interest	(96,192)	(75,395)	(89,001)
Contribution from noncontrolling interests	—	23,194	23,899
Payments on finance leases	(11,713)	(3,990)	(2,995)
Deferred financing costs	(9,273)	(14,500)	(15,538)
Other, net	(2,533)	(2,891)	(429)
Net cash provided by (used for) financing activities	(1,560,759)	(211,803)	353,226
Effect of exchange rate on cash flow	(11,290)	(1,534)	2,161
Cash and cash equivalents:			
Increase (decrease) for the period	1,430,622	(1,133,874)	483,156
Beginning of period	234,444	1,368,318	885,162
End of period	\$ 1,665,066	\$ 234,444	\$ 1,368,318
Supplemental disclosure of cash flow information:			
Cash (paid) received during the period for:			
Interest	\$ (160,409)	\$ (136,429)	\$ (120,257)
Income taxes, net	\$ (816,379)	\$ 19,760	\$ (54,256)
Increase (decrease) in accrued and unpaid capital expenditures	\$ (31,714)	\$ (15,319)	\$ 73,867

See accompanying notes.

HF SINCLAIR CORPORATION

CONSOLIDATED STATEMENTS OF EQUITY

(In thousands)

	HF Sinclair Stockholders' Equity								
	Common Stock					Treasury Stock		Non-controlling Interest	Total Equity
	Shares	Amount	Additional Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Shares	Amount		
Balance at December 31, 2019	256,043	\$ 2,560	\$4,204,547	\$4,744,120	\$ 14,774	94,196	\$(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 shares under incentive compensation plans	3	—	(26,938)	—	—	(847)	26,938	—	—
Equity-based compensation	—	—	29,460	—	—	—	—	2,194	31,654
Purchase of treasury stock	—	—	—	—	—	283	(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	256,046	\$ 2,560	\$4,207,672	\$3,913,179	\$ 13,462	93,632	\$(2,968,512)	\$ 553,842	\$ 5,722,203
Net income	—	—	—	558,324	—	—	—	104,930	663,254
Dividends (\$0.35 declared per common share)	—	—	—	(57,663)	—	—	—	—	(57,663)
Distributions to noncontrolling interest holders	—	—	—	—	—	—	—	(75,395)	(75,395)
Other comprehensive loss, net of tax	—	—	—	—	(10,791)	—	—	—	(10,791)
Issuance of common shares under incentive compensation plans	—	—	(24,313)	—	—	(804)	24,313	—	—
Equity-based compensation	—	—	36,716	—	—	—	—	2,557	39,273
Purchase of treasury stock	—	—	—	—	—	217	(7,058)	—	(7,058)
Purchase of HEP units for restricted grants	—	—	—	—	—	—	—	(2,548)	(2,548)
Contributions from noncontrolling interests	—	—	—	—	—	—	—	23,194	23,194
Other	—	—	—	(4)	—	—	—	—	(4)
Balance at December 31, 2021	256,046	\$ 2,560	\$4,220,075	\$4,413,836	\$ 2,671	93,045	\$(2,951,257)	\$ 606,580	\$ 6,294,465
Net income	—	—	—	2,922,668	—	—	—	118,506	3,041,174
Dividends (\$1.20 declared per common share)	—	—	—	(255,928)	—	—	—	—	(255,928)
Other comprehensive loss, net of tax	—	—	—	—	(24,684)	—	—	—	(24,684)
Issuance of common shares for HFC Transactions	60,230	602	2,148,406	—	—	—	—	—	2,149,008
Issuance of common shares under incentive compensation plans	—	—	(42,962)	—	—	(849)	42,962	—	—
Equity-based compensation	—	—	28,474	—	—	—	—	1,844	30,318
Purchase of treasury stock	—	—	—	—	—	27,001	(1,378,390)	—	(1,378,390)
Retirement of treasury stock	(93,045)	(930)	—	(2,950,324)	—	(93,045)	2,951,254	—	—
Distributions to noncontrolling interest holders	—	—	—	—	—	—	—	(96,192)	(96,192)
Purchase of HEP units for restricted grants	—	—	—	—	—	—	—	(2,363)	(2,363)
Equity attributable to HEP common unit issuance, net of tax	—	—	95,047	—	—	—	—	223,392	318,439
Acquisition of remaining UNEV interests	—	—	19,735	—	—	—	—	(78,010)	(58,275)
Balance at December 31, 2022	<u>223,231</u>	<u>\$ 2,232</u>	<u>\$6,468,775</u>	<u>\$4,130,252</u>	<u>\$ (22,013)</u>	<u>26,152</u>	<u>\$(1,335,431)</u>	<u>\$ 773,757</u>	<u>\$10,017,572</u>

See accompanying notes.

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

Description of Business: On March 14, 2022 (the “Closing Date”), HollyFrontier Corporation (“HollyFrontier”) and Holly Energy Partners, L.P. (“HEP”) announced the establishment of HF Sinclair Corporation, a Delaware corporation (“HF Sinclair”), as the new parent holding company of HollyFrontier and HEP and their subsidiaries, and the completion of their respective acquisitions of Sinclair Oil Corporation (now known as Sinclair Oil LLC, “Sinclair Oil”) and Sinclair Transportation Company LLC (“STC”) from The Sinclair Companies (now known as REH Company and referred to herein as “REH Company”). On the Closing Date, pursuant to that certain Business Combination Agreement, dated as of August 2, 2021 (as amended on March 14, 2022, the “Business Combination Agreement”), by and among HollyFrontier, HF Sinclair, Hippo Merger Sub, Inc., a wholly owned subsidiary of HF Sinclair (“Parent Merger Sub”), REH Company, and Hippo Holding LLC (now known as Sinclair Holding LLC), a wholly owned subsidiary of REH Company (the “Target Company”), HF Sinclair completed its previously announced acquisition of the Target Company by effecting (a) a holding company merger in accordance with Section 251(g) of the Delaware General Corporation Law whereby HollyFrontier merged with and into Parent Merger Sub, with HollyFrontier surviving such merger as a direct wholly owned subsidiary of HF Sinclair (the “HFC Merger”) and (b) immediately following the HFC Merger, a contribution whereby REH Company contributed all of the equity interests of the Target Company to HF Sinclair in exchange for 60,230,036 shares of HF Sinclair common stock, resulting in the Target Company becoming a direct wholly owned subsidiary of HF Sinclair (the “HFC Transactions”). At the effective time of the HFC Merger, HollyFrontier became a wholly owned subsidiary of HF Sinclair, and all of HollyFrontier’s outstanding shares were automatically converted into equivalent corresponding shares of HF Sinclair. Pursuant to the HFC Merger, HF Sinclair became the successor issuer to HollyFrontier pursuant to Rule 12g-3(a) under the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), and replaced HollyFrontier as the public company trading on the New York Stock Exchange (“NYSE”) under the symbol “DINO.” See Note 2 and Note 4 for additional information.

References herein to HF Sinclair “we,” “our,” “ours,” and “us” with respect to time periods prior to March 14, 2022 refer to HollyFrontier and its consolidated subsidiaries and do not include the Target Company, STC or their respective consolidated subsidiaries (collectively, the “Acquired Sinclair Businesses”). References herein to HF Sinclair “we,” “our,” “ours,” and “us” with respect to time periods from and after March 14, 2022 include the operations of the Acquired Sinclair Businesses. Unless otherwise specified, the financial statements included herein include financial information for HF Sinclair, which for the time period from March 14, 2022 to December 31, 2022 includes the combined business operations of HollyFrontier and the Acquired Sinclair Businesses.

In these financial statements, the words “we,” “our,” “ours” and “us” refer only to HF Sinclair and its consolidated subsidiaries or to HF Sinclair 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 HF Sinclair, unless when used in disclosures of transactions or obligations between HEP and HF Sinclair 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 HF Sinclair. When used in descriptions of agreements and transactions, “HEP” refers to HEP and its consolidated subsidiaries.

We are an independent energy company that produces and markets high-value light products such as gasoline, diesel fuel, jet fuel, renewable diesel and other specialty products. We own and operate refineries located in Kansas, Oklahoma, New Mexico, Wyoming, Washington 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. We supply high-quality fuels to more than 1,500 branded stations and license the use of the Sinclair brand at more than 300 additional locations throughout the country. In addition, our subsidiaries produce and market base oils and other specialized lubricants in the United States, Canada and the Netherlands, and export products to more than 80 countries. Through our subsidiaries, we produce renewable diesel at two of our facilities in Wyoming and our facility in New Mexico. At December 31, 2022, we owned a 47% 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 Mountains geographic regions of the United States.

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Continued

On May 4, 2021, HollyFrontier Puget Sound Refining LLC (now known as HF Sinclair Puget Sound Refining LLC), a wholly owned subsidiary of HollyFrontier, entered into a sale and purchase agreement with Equilon Enterprises LLC d/b/a Shell Oil Products US (“Shell”) to acquire Shell’s Puget Sound refinery and related assets, including the on-site cogeneration facility and related logistics assets (the “Puget Sound Refinery”). The acquisition closed on November 1, 2021. See Note 2 for additional information.

On April 27, 2021, our wholly owned subsidiary, 7037619 Canada Inc., entered into a contract for sale of real property in Mississauga, Ontario for base consideration of \$98.8 million, or CAD 125 million. The transaction closed on September 15, 2021, and we recorded a gain on sale of assets totaling \$86.0 million for the year ended December 31, 2021, which was recognized in “Gain on sale of assets and other” on our consolidated statements of operations.

During the first quarter of 2021, we initiated a restructuring within our Lubricants and Specialty Products segment. As a result of this restructuring, we recorded \$7.8 million in employee severance costs for the year ended December 31, 2021, which were recognized primarily as selling, general and administrative expenses in our Lubricants and Specialty Products segment.

In the third quarter of 2020, we permanently ceased petroleum refining operations at our Cheyenne, Wyoming refinery (the “Cheyenne Refinery”) and subsequently began converting certain assets at our Cheyenne Refinery to renewable diesel production. In connection with the cessation of petroleum refining operations at our Cheyenne Refinery, we recognized \$1.7 million and \$25.8 million in decommissioning expense for the years ended December 31, 2022 and 2021, respectively. We also recognized \$1.0 million in employee severance costs for the year ended December 31, 2021. These charges were all recognized in operating expenses in our Corporate and Other segment.

During the second quarter of 2020, we recorded long-lived asset impairment charges of \$232.2 million related to our Cheyenne Refinery asset group. Also, we recognized \$24.7 million in decommissioning expense and \$3.8 million in employee severance costs for the year ended December 31, 2020. Additionally, we recorded a reserve of \$9.0 million against our repair and maintenance supplies inventory. 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.

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 (“HEP Cushing”), 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 constructed and operates 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.

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Continued

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 primarily consist of amounts due from customers that are primarily from sales of refined products and renewable diesel. 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 expected credit losses 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 expected credit losses when an account is deemed uncollectible. Our allowance for expected credit losses was \$7.7 million at December 31, 2022 and \$3.7 million at December 31, 2021.

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. Inventories related to our renewable business are stated at the lower of cost, using the LIFO method for feedstock and unfinished and finished renewable 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: 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, at cost" and "Accrued liabilities" and "Other long-term liabilities" on our consolidated balance sheet.

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Continued

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 on 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. Cash flows from all our derivative activity are reported in the operating section on our consolidated statement of cash flows. 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 \$61.8 million and \$52.5 million at December 31, 2022 and 2021, respectively, which are included in "Other long-term liabilities" on our consolidated balance sheets. Accretion expense was insignificant for the years ended December 31, 2022, 2021 and 2020. Asset retirement obligations assumed in the Sinclair Transactions, as defined in Note 2, were \$6.2 million.

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 group our long-lived assets as follows: (i) our refinery asset groups, which include certain HEP logistics assets, (ii) our renewables products asset groups (iii) our Lubricants and Specialty Products asset groups, (iv) our Marketing assets and (v) 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 such 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 year ended December 31, 2020.

HF SINCLAIR CORPORATION
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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 of these companies and contributions to and distributions from the joint ventures as adjustments to our investment balance.

The following table summarizes HEP's recorded investment compared to its share of underlying equity for each of its investee. The differences are being amortized as adjustments to HEP's pro-rata share of earnings in the joint ventures.

Balance at December 31, 2022			
	Underlying Equity	Recorded Investment Balance	Difference
	(In thousands)		
Equity Method Investments			
Osage Pipe Line Company, LLC	\$ 2,901	\$ 29,773	\$ (26,872)
Cheyenne Pipeline, LLC	27,655	40,019	(12,364)
Cushing Connect Terminal Holdings LLC	49,915	34,746	15,169
Pioneer Investments Corp.	23,835	133,182	(109,347)
Saddle Butte Pipeline III, LLC	67,349	32,884	34,465
Total	<u>\$ 171,655</u>	<u>\$ 270,604</u>	<u>\$ (98,949)</u>

Revenue Recognition: Revenues on refined product, branded fuel sales, renewable diesel 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.

HF SINCLAIR CORPORATION
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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 \$159.3 million, \$136.9 million and \$158.4 million for the years ended December 31, 2022, 2021 and 2020, 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.

We have intercompany notes that were issued to fund certain of our foreign businesses. Remeasurement adjustments resulting from the conversion of such intercompany financing amounts to functional currencies are recorded as gains or losses as a component of other income (expense) on our consolidated statements of operations. 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. We account for U.S. tax on global intangible low-taxed income in the period in which it is incurred.

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, 2022, 2021 and 2020, we received proceeds of \$42.1 million, \$43.5 million and \$44.9 million and subsequently repaid \$42.8 million, \$45.4 million and \$46.4 million, respectively, under these sell / buy transactions.

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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Accounting Pronouncements - Not Yet Adopted

In October 2021, Accounting Standards Update 2021-08, “Accounting for Contract Assets and Contract Liabilities from Contracts with Customers,” was issued requiring that an acquiring entity recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Accounting Standards Codification (“ASC”) 606, “Revenue from Contracts with Customers.” This standard is effective for fiscal years beginning after December 15, 2022, and early adoption is permitted. We do not anticipate that the adoption of this standard will have an impact on our consolidated financial statements.

NOTE 2: Acquisitions

On March 14, 2022, pursuant to the Business Combination Agreement, HF Sinclair completed its acquisition of the Target Company by effecting (a) the HFC Merger and (b) immediately following the HFC Merger, a contribution whereby REH Company contributed all of the equity interests of the Target Company to HF Sinclair in exchange for shares of HF Sinclair, resulting in the Target Company becoming a direct wholly owned subsidiary of HF Sinclair.

In connection with the closing of the HFC Transactions, HF Sinclair issued 60,230,036 shares of HF Sinclair common stock, par value \$0.01 per share, to REH Company, representing 27% of the pro forma equity of HF Sinclair with a value of approximately \$2,149 million based on HollyFrontier’s fully diluted shares of common stock outstanding and closing stock price on March 11, 2022. Pursuant to the Business Combination Agreement, REH Company made a \$77.5 million cash payment to HF Sinclair, inclusive of final working capital adjustments, which reduced the aggregate transaction value to approximately \$2,072 million. Of the 60,230,036 shares of HF Sinclair common stock, 2,570,000 shares are currently held in escrow to secure REH Company’s renewable identification numbers (“RINs”) credit obligations under Section 6.22 of the Business Combination Agreement. Additionally, on the Closing Date, and immediately prior to the consummation of the HFC Transactions, HEP completed its acquisition of STC, REH Company’s integrated crude and refined products midstream business, and issued 21,000,000 common limited partner units and paid cash consideration of \$329.0 million, inclusive of final working capital adjustments, to REH Company in exchange for all the outstanding equity interests of STC (the “HEP Transaction” and together with the HFC Transactions, the “Sinclair Transactions”). Of these 21,000,000 common limited partner units, 5,290,000 units are currently held in escrow to secure REH Company’s RINs credit obligations to HF Sinclair under Section 6.22 of the Business Combination Agreement. HF Sinclair, and not HEP, would be entitled to the HEP common units held in escrow in the event of REH Company’s breach of its RINs credit obligations under the Business Combination Agreement.

HollyFrontier’s (now HF Sinclair’s) senior management team continues to operate the combined company. Pursuant to that certain stockholders agreement (the “Stockholders Agreement”) by and among HF Sinclair, REH Company and the stockholders of REH Company (together with REH Company and each of their permitted transferees, the “REH Parties”), REH Company was granted the right to nominate, and has nominated, two directors to our Board of Directors at the Closing Date. The REH Company stockholders also agreed to certain customary lock up, voting and standstill restrictions, as well as customary registration rights, for the HF Sinclair common stock issued to the stockholders of REH Company. HF Sinclair is headquartered in Dallas, Texas, with combined business offices in Salt Lake City, Utah.

HF SINCLAIR CORPORATION
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Under the terms of the Business Combination Agreement, HF Sinclair acquired REH Company's refining, branded marketing, renewables, and midstream businesses. The branded marketing business supplies high-quality fuels to more than 1,300 Sinclair branded stations and licenses the use of the Sinclair brand at more than 300 additional locations throughout the United States. The renewables business includes the operation of a renewable diesel unit located in Sinclair, Wyoming. The refining business includes two Rocky Mountains-based refineries located in Casper, Wyoming and Sinclair, Wyoming. Under the terms of the Contribution Agreement (as defined in Note 3), HEP acquired STC, REH Company's integrated crude and refined products pipelines and terminal assets, including approximately 1,200 miles of integrated crude and refined product pipeline supporting the Sinclair refineries and third parties, eight product terminals and two crude terminals with approximately 4.5 million barrels of operated storage. In addition, HEP acquired STC's interests in three pipeline joint ventures for crude gathering and product offtake including: Saddle Butte Pipeline III, LLC (25.06% non-operated interest); Pioneer Investments Corp. (49.995% non-operated interest); and UNEV Pipeline (the 25% non-operated interest not already owned by HEP, resulting in UNEV Pipeline, LLC ("UNEV") becoming a wholly owned subsidiary of HEP). The addition of the Acquired Sinclair Businesses to the HollyFrontier business created a combined company with increased scale and ability to diversify and is expected to drive growth through the expanded refining and renewables business. In addition, the HFC Transactions added an integrated branded wholesale distribution network to our business.

The Sinclair Transactions were accounted for as a business combination using the acquisition method of accounting, with the assets acquired and liabilities assumed at their respective acquisition date fair values at the effective date, with the excess consideration recorded as goodwill.

The following tables present the purchase consideration and preliminary purchase price allocation of the assets acquired and liabilities assumed on March 14, 2022:

Purchase Consideration (in thousands except for per share amounts)	
Shares of HF Sinclair common stock issued	60,230
Closing price per share of HFC common stock ⁽¹⁾	\$ 35.68
Purchase consideration paid in HF Sinclair common stock	2,149,008
Shares of HEP common units issued to Sinclair	21,000
Closing price per share of HEP common units ⁽²⁾	\$ 16.62
Purchase consideration paid in HEP common units	349,020
Total equity consideration	2,498,028
Cash consideration paid by HEP	328,955
Cash consideration received by HFC	(77,507)
Total cash consideration	251,448
Total purchase consideration	<u>\$ 2,749,476</u>

(1) Based on the HollyFrontier closing stock price on March 11, 2022.

(2) Based on the HEP closing unit price on March 11, 2022.

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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(In thousands)

Assets Acquired	
Accounts receivable	\$ 467,530
Inventories: Crude oil and refined products	906,461
Inventories: Materials, supplies and other	39,350
Properties, plants and equipment	1,242,549
Operating lease right-of-use assets	4,585
Other assets: Intangibles and other	495,621
Total assets acquired	\$ 3,156,096
Liabilities Assumed	
Accounts payable	\$ 564,385
Operating lease liabilities	1,030
Accrued liabilities	84,298
Noncurrent operating lease liabilities	3,554
Deferred income taxes	351,189
Other long-term liabilities	88,098
Total liabilities assumed	\$ 1,092,554
Net assets acquired	\$ 2,063,542
Goodwill	\$ 685,934

The preliminary purchase price allocation resulted in the recognition of \$685.9 million in goodwill, of which \$119.1 million was related to HEP. The goodwill recognized is primarily attributable to operating and administrative synergies and net deferred tax liabilities arising from the differences between the estimated fair values of assets and liabilities and the tax basis of these assets and liabilities. There are qualitative assumptions of long-term factors that this acquisition creates for our stockholders, including increased scale and diversification that is expected to drive growth through the expanded refining and renewables businesses and the addition of an integrated branded wholesale distribution network. This goodwill is not deductible for income tax purposes.

The fair value measurements for properties, plants and equipment were based on significant inputs that are not observable in the market and, therefore, represent Level 3 measurements.

The fair value of properties, plants and equipment was based on the combination of the cost and market approaches. Key assumptions in the cost approach include determining the replacement cost by evaluating recent published data and adjusting replacement cost for physical deterioration, functional, and economic obsolescence. We used the market approach to measure the value of certain assets through an analysis of recent sales or offerings of comparable properties. The fair value of crude oil and refined products inventory was based on market prices as of the acquisition date.

Intangibles include the Sinclair trade name, fuel agreements and customer relationships totaling \$221.4 million that are being amortized on a straight-line basis over a range of four to twenty-year period. The intangible assets were valued using the income approach.

The fair value of equity method investments totaled \$234.3 million and was based on a combination of valuation methods including discounted cash flows and the guideline public company method.

Accrued liabilities include \$70.6 million of RINs credit obligations, including 2022 obligations through the Closing Date, which were valued based on market prices for RINs at the effective date, a Level 2 input. REH Company is financially responsible for satisfaction of RINs credit obligations for all periods prior to the closing. This receivable totaled \$68.4 million and was valued based on market prices for RINs at the effective date.

All other fair values discussed above were based on significant inputs that are not observable in the market and, therefore, represent Level 3 measurements.

HF SINCLAIR CORPORATION
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The fair values of all other current receivable and payables were equivalent to their carrying values due to their short-term nature.

These fair value estimates are preliminary and, therefore, the final fair values of assets acquired and liabilities assumed and the resulting effect on our financial position may change once all needed information has become available and we finalize our valuations.

Our consolidated financial and operating results reflect the Acquired Sinclair Businesses operations beginning March 14, 2022. Our results of operations included revenue and income from operations of \$9,835.0 million and \$865.1 million, respectively, for the period from March 14, 2022 through December 31, 2022 related to the Acquired Sinclair Businesses operations.

During the year ended December 31, 2022, we incurred \$52.9 million in incremental direct acquisition and integration costs that principally relate to legal, advisory and other professional fees and are presented as selling, general and administrative expenses in our statements of operations.

The following unaudited pro forma combined condensed financial data for the years ended December 31, 2022 and 2021 was derived from our historical financial statements giving effect to the Sinclair Transactions as if they had occurred on January 1, 2021. The below information reflects pro forma adjustments based on available information and certain assumptions that we believe are reasonable, including the depreciation of the fair-valued properties, plants and equipment acquired in the Sinclair Transactions and the estimated tax impacts of the pro forma adjustments.

Additionally, pro forma earnings include certain non-recurring charges, the substantial majority of which consist of transaction costs related to financial advisors, legal advisors and professional accounting services.

The pro forma results of operations do not include any cost savings or other synergies that may result from the Sinclair Transactions. The pro forma combined condensed financial data has been included for comparative purposes only and is not necessarily indicative of the results that might have occurred had the Sinclair Transactions taken place on January 1, 2021 and is not intended to be a projection of future results.

	Years Ended December 31,	
	2022	2021
	(In thousands)	
Sales and other revenues	\$ 39,210,338	\$ 22,767,827
Net income attributable to HF Sinclair stockholders	\$ 2,853,686	\$ 757,808

Puget Sound Refinery

On May 4, 2021, HollyFrontier Puget Sound Refining LLC (now known as HF Sinclair Puget Sound Refining LLC), a wholly owned subsidiary of HollyFrontier, entered into a sale and purchase agreement with Shell to acquire the Puget Sound Refinery. The acquisition closed on November 1, 2021 for aggregate cash consideration of \$624.3 million, which consists of a base cash purchase price of \$350.0 million, hydrocarbon inventory of \$277.9 million and other closing adjustments and accrued liabilities of \$3.6 million (the “Puget Sound Acquisition”).

This transaction was accounted for as a business combination, using the acquisition method, with the aggregate cash consideration allocated to the acquisition date fair value of assets and liabilities acquired.

In connection with the Puget Sound Acquisition, we incurred \$12.2 million of acquisition and integration costs during the year ended December 31, 2021, which are included in selling, general and administrative expenses on the consolidated statement of operations.

Fair values of assets acquired and liabilities assumed were as follows: inventories \$299.3 million, properties, plants and equipment \$394.2 million, other assets \$10.4 million, accrued and other current liabilities \$12.5 million and other long-term liabilities \$67.1 million.

The fair value measurements for properties, plants and equipment were based on significant inputs that are not observable in the market and, therefore, represent Level 3 measurements.

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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The fair value of properties, plants and equipment was based on the combination of the cost and market approaches. Key assumptions in the cost approach include determining the replacement cost by evaluating recent published data and adjusting replacement cost for economic and functional obsolescence. We used the market approach to measure the value of certain assets through an analysis of recent sales or offerings of comparable properties. The fair value of crude oil and refined products inventory was based on market prices as of the acquisition date.

Our consolidated financial and operating results reflect the Puget Sound Refinery operations beginning November 1, 2021. Our results of operations include revenue and loss from operations of \$603.1 million and \$8.3 million, respectively, for the period from November 1, 2021 through December 31, 2021 related to these operations.

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 57 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,	
	2022	2021
	(In thousands)	
Operating leases:		
Operating lease right-of-use assets	\$ 351,068	\$ 396,191
Operating lease liabilities	109,926	110,606
Noncurrent operating lease liabilities	254,215	308,747
Total operating lease liabilities	<u>\$ 364,141</u>	<u>\$ 419,353</u>
Finance leases:		
Properties, plants and equipment, at cost	\$ 81,454	\$ 75,885
Accumulated amortization	(21,434)	(8,945)
Properties, plants and equipment, net	<u>\$ 60,020</u>	<u>\$ 66,940</u>
Accrued liabilities	\$ 10,722	\$ 10,510
Other long-term liabilities	50,361	56,556
Total finance lease liabilities	<u>\$ 61,083</u>	<u>\$ 67,066</u>

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

	December 31,	
	2022	2021
Weighted average remaining lease term (in years)		
Operating leases	7.2	7.4
Finance leases	7.8	8.6
Weighted average discount rate		
Operating leases	4.2 %	3.8 %
Finance leases	4.2 %	3.9 %

The components of lease expense were as follows:

	Years Ended December 31,		
	2022	2021	2020
		(In thousands)	
Operating lease expense	\$ 116,769	\$ 117,292	\$ 121,608
Finance lease expense:			
Amortization of right-of-use assets	13,003	4,295	4,400
Interest on lease liabilities	2,593	733	415
Variable lease cost	4,448	3,645	3,580
Total lease expense	<u>\$ 136,813</u>	<u>\$ 125,965</u>	<u>\$ 130,003</u>

Supplemental cash flow information related to leases was as follows:

	Years Ended December 31,		
	2022	2021	2020
		(In thousands)	
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 126,048	\$ 129,577	\$ 126,313
Operating cash flows from finance leases	\$ 2,593	\$ 733	\$ 415
Financing cash flows from finance leases	\$ 11,713	\$ 3,990	\$ 2,995
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	\$ 61,403	\$ 147,718	\$ 18,823
Finance leases	\$ 6,149	\$ 64,334	\$ 4,085

HF SINCLAIR CORPORATION
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As of December 31, 2022, minimum future lease payments of our operating and finance lease obligations were as follows:

	Operating	Finance
	(In thousands)	
2023	\$ 120,995	\$ 13,234
2024	94,207	9,647
2025	44,132	8,564
2026	29,122	7,682
2027	17,931	6,419
Thereafter	127,714	26,845
Future minimum lease payments	434,101	72,391
Less: imputed interest	69,960	11,308
Total lease obligations	364,141	61,083
Less: current obligations	109,926	10,722
Long-term lease obligations	<u>\$ 254,215</u>	<u>\$ 50,361</u>

Lessor

Our consolidated statements of operations 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.

Lease income recognized was as follows:

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Operating lease revenues	\$ 14,346	\$ 15,281	\$ 22,636
Gain on sales-type leases	\$ —	\$ —	\$ 33,834
Sales-type lease interest income	\$ 2,515	\$ 2,545	\$ 1,928
Lease revenues relating to variable lease payments not included in measurement of the sales-type lease receivable	\$ 1,782	\$ 2,162	\$ 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.

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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Annual minimum undiscounted lease payments in which HEP is a lessor to third-party contracts as of December 31, 2022 were as follows:

	Operating	Sales-type
	(In thousands)	
2023	\$ 11,017	\$ 2,955
2024	11,017	2,955
2025	3,017	2,955
2026	—	2,955
2027	—	2,955
Thereafter	—	21,425
Total lease payment receipts	<u>\$ 25,051</u>	<u>36,200</u>
Less: imputed interest		(27,202)
		8,998
Unguaranteed residual assets at end of leases		25,182
Net investment in leases		<u>\$ 34,180</u>

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

	December 31, 2022	December 31, 2021
	(In thousands)	
Lease receivables	\$ 23,797	\$ 24,962
Unguaranteed residual assets	10,383	9,659
Net investment in leases	<u>\$ 34,180</u>	<u>\$ 34,621</u>

NOTE 4: Holly Energy Partners

HEP is a publicly held master limited partnership that owns and / or operates logistic and refinery 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 Mountains geographic regions of the United States. Additionally, as of December 31, 2022, HEP owned 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 that runs from Cushing, Oklahoma to our Tulsa West and Tulsa East facilities (collectively, the “Tulsa Refineries”); a 25.06% ownership interest in Saddle Butte Pipeline III, LLC, the owner of a pipeline from the Powder River Basin to Casper, Wyoming (the “Saddle Butte Pipeline”); and a 49.995% ownership interest in Pioneer Investments Corp., the owner of a pipeline from Sinclair, Wyoming to the North Salt Lake City, Utah Terminal (the “Pioneer Pipeline”).

At December 31, 2022, we owned a 47% 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 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, 2022. 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.

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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.

Sinclair Transportation Company Acquisition

On August 2, 2021, HEP, REH Company and STC, a wholly owned subsidiary of REH Company, entered into a contribution agreement (as amended on March 14, 2022, the "Contribution Agreement"), which closed on March 14, 2022. Pursuant to the Contribution Agreement, HEP acquired all of the outstanding equity interests of STC in exchange for 21,000,000 newly issued common limited partner units of HEP with a value of approximately \$349.0 million based on HEP's fully diluted common limited partner units outstanding and HEP's closing unit price on March 11, 2022, and cash consideration equal to \$329.0 million, inclusive of final working capital adjustments pursuant to the Contribution Agreement for an aggregate transaction value of \$678.0 million.

As a result of this common unit issuance and our resulting HEP ownership change, we adjusted additional capital and equity attributable to HEP's noncontrolling interest holders to reallocate HEP's equity among its unitholders.

As part of HEP's acquisition of STC, HEP acquired the 25.0% non-operated interest of UNEV not already owned by HEP and as such, UNEV, the owner of a pipeline running from Woods Cross, Utah to Las Vegas, Nevada and associated product terminals, became a wholly owned subsidiary of HEP.

HEP's existing senior management team continues to operate HEP. Pursuant to that certain unitholders agreement (the "Unitholders Agreement") by and among HEP, Holly Logistic Services, L.L.C., Navajo Pipeline Co., L.P. and the REH Parties, REH Company was granted the right to nominate, and has nominated, one director to the HEP Board of Directors at the Closing Date. REH Company's stockholders have also agreed to certain customary lock up restrictions and registration rights for the HEP common limited partner units to be issued to the stockholders of REH Company. HEP will continue to be named Holly Energy Partners, L.P.

Contemporaneous with the closing of the Sinclair Transactions, HEP and HollyFrontier amended certain intercompany agreements, including the master throughput agreement, to include within the scope of such agreements certain of the assets acquired by HEP pursuant to the Contribution Agreement.

Cushing Connect Joint Venture

In October 2019, HEP Cushing and 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 connects 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 was placed in service during the third quarter of 2021. Long-term commercial agreements have been entered into to support the Cushing Connect assets.

Cushing Connect entered into a contract with an affiliate of HEP to manage the 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 was shared proportionately among the partners. However, HEP was solely responsible for any Cushing Connect Pipeline construction costs that exceeded the budget by more than 10%. HEP's share of the cost of the Cushing Connect Terminal contributed by Plains and Cushing Connect Pipeline construction costs was approximately \$74 million.

Transportation Agreements

HEP serves our refineries under long-term pipeline, terminal and tankage throughput agreements and refinery processing tolling agreements expiring from 2023 through 2037. 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. 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, 2022, these agreements required minimum annualized payments to HEP of \$452.6 million.

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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.

NOTE 5: Revenues

Substantially all revenue-generating activities relate to sales of refined product, branded fuel sales, renewable diesel 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,		
	2022	2021	2020
	(In thousands)		
Revenues by type			
Refined product revenues			
Transportation fuels ⁽¹⁾	\$ 25,895,867	\$ 13,414,543	\$ 7,825,625
Specialty lubricant products ⁽²⁾	2,826,206	2,322,242	1,657,344
Asphalt, fuel oil and other products ⁽³⁾	2,147,710	948,581	672,371
Total refined product revenues	30,869,783	16,685,366	10,155,340
Excess crude oil revenues ⁽⁴⁾	2,342,288	1,547,696	884,248
Renewable diesel revenues ⁽⁵⁾	654,893	—	—
Transportation and logistic services	109,200	103,646	98,039
Marketing revenues ⁽⁶⁾	3,911,922	—	—
Other revenues ⁽⁷⁾	316,753	52,434	46,016
Total sales and other revenues	\$ 38,204,839	\$ 18,389,142	\$ 11,183,643

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Refined product revenues by market			
United States			
Mid-Continent	\$ 13,924,566	\$ 9,094,885	\$ 5,096,268
Southwest	4,965,298	3,477,562	2,310,432
Rocky Mountains	9,533,476	2,118,619	1,311,416
Northeast	1,037,771	824,900	552,069
Canada	1,063,961	836,317	616,683
Europe, Asia and Latin America	344,711	333,083	268,472
Total refined product revenues	\$ 30,869,783	\$ 16,685,366	\$ 10,155,340

- (1) Transportation fuels revenues are attributable to our Refining segment wholesale marketing 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 and Lubricants and Specialty Products segments of \$1,827.3 million and \$314.8 million, respectively, for the year ended December 31, 2022. For the year ended December 31, 2021 such revenues attributable to our Refining and Lubricants and Specialty Products were \$724.3 million and \$224.3 million, respectively. For the year ended December 31, 2020 such revenue attributable to our Refining and Lubricants and Specialty Products segments were \$533.5 million and \$135.4 million, respectively.
- (4) Excess crude oil revenues represent sales of purchased crude oil inventory that at times exceeds the supply needs of our refineries.
- (5) Renewable diesel revenues are attributable to our Renewables segment.

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(6) Marketing revenues consist primarily of branded gasoline and diesel fuel.

(7) 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 our Sonneborn operations. The following table presents changes to contract liabilities:

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Balance at January 1	\$ 9,278	\$ 6,738	\$ 4,652
Increase	32,040	32,301	28,746
Recognized as revenue	(30,596)	(29,761)	(26,660)
Balance at December 31	<u>\$ 10,722</u>	<u>\$ 9,278</u>	<u>\$ 6,738</u>

As of December 31, 2022, 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 2032. 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, which include branded sales volumes assumed upon our acquisition of the Acquired Sinclair Businesses:

	2023	2024	2025	Thereafter	Total
	(In thousands)				
Refined product sales volumes (barrels)	35,181	28,848	19,729	29,571	113,329

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, 2022 are presented below:

	2023	2024	2025	Total
	(In thousands)			
HEP contractual minimum revenues	\$ 11,017	\$ 11,017	\$ 3,017	\$ 25,051

For the years ended December 31, 2022 and 2021, we had one customer, Shell, together with certain of its affiliates, that accounted for 10% or more of our total annual revenues at approximately 15% and 13%, respectively. We had no customers which had accounted for over 10% of our annual revenues for the year ended December 31, 2020.

NOTE 6: Fair Value Measurements

Our financial instruments measured at fair value on a recurring basis consist of derivative instruments and RINs credit obligations.

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.

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The carrying amounts of derivative instruments and RINs receivable and credit obligations were as follows:

Financial Instrument	Carrying Amount	Fair Value by Input Level		
		Level 1	Level 2	Level 3
		(In thousands)		
December 31, 2022				
Assets:				
Commodity price swaps	\$ 342	\$ —	\$ 342	\$ —
Commodity forward contracts	2,949	—	2,949	—
RINS receivable ⁽¹⁾	81,232	—	81,232	—
Foreign currency forward contracts	15,359	—	15,359	—
Total assets	<u>\$ 99,882</u>	<u>\$ —</u>	<u>\$ 99,882</u>	<u>\$ —</u>
Liabilities:				
NYMEX futures contracts	\$ 2,750	\$ 2,750	\$ —	\$ —
Commodity collar contracts	6,275	—	6,275	—
Commodity forward contracts	2,987	—	2,987	—
RINs credit obligations ⁽¹⁾	81,232	—	81,232	—
Total liabilities	<u>\$ 93,244</u>	<u>\$ 2,750</u>	<u>\$ 90,494</u>	<u>\$ —</u>

Financial Instrument	Carrying Amount	Fair Value by Input Level		
		Level 1	Level 2	Level 3
		(In thousands)		
December 31, 2021				
Assets:				
Commodity forward contracts	\$ 286	\$ —	\$ 286	\$ —
Foreign currency forward contracts	6,177	—	6,177	—
Total assets	<u>\$ 6,463</u>	<u>\$ —</u>	<u>\$ 6,463</u>	<u>\$ —</u>
Liabilities:				
NYMEX futures contracts	\$ 1,269	\$ 1,269	\$ —	\$ —
Commodity forward contracts	566	—	566	—
RINs credit obligations ⁽²⁾	9,429	—	9,429	—
Total liabilities	<u>\$ 11,264</u>	<u>\$ 1,269</u>	<u>\$ 9,995</u>	<u>\$ —</u>

- (1) REH Company is financially responsible for satisfaction of RINs credit obligations for all periods prior to the closing of the Sinclair Transactions. See Note 2 for additional information on RINs credit obligations assumed in the Sinclair Transactions.
- (2) Represent obligations for RINs credits for which we did not have sufficient quantities at December 31, 2021 to satisfy our Environmental Protection Agency (“EPA”) regulatory blending requirements.

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.

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Level 2 Financial Instruments

Derivative instruments consisting of foreign currency forward contracts, commodity price swaps, commodity collar contracts 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 and commodity collars. 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. RINs credit obligations are valued based on current market RINs prices.

Nonrecurring Fair Value Measurements

During the years ended December 31, 2022 and 2021, we recognized assets and liabilities based on fair value measurements for the Sinclair Transactions and the acquisition of Puget Sound Refinery (see Note 2). 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, 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 3). 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.

NOTE 7: Earnings Per Share

Basic earnings per share is calculated as net income (loss) attributable to HF Sinclair 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 certain share-based awards. The following is a reconciliation of the denominators of the basic and diluted per share computations for net income (loss) attributable to HF Sinclair stockholders:

	Years Ended December 31,		
	2022	2021	2020
	(In thousands, except per share data)		
Net income (loss) attributable to HF Sinclair stockholders	\$ 2,922,668	\$ 558,324	\$ (601,448)
Participating securities' share in earnings ⁽¹⁾	29,465	7,465	1,811
Net income (loss) attributable to common shares	<u>\$ 2,893,203</u>	<u>\$ 550,859</u>	<u>\$ (603,259)</u>
Average number of shares of common stock outstanding	202,566	162,569	161,983
Average number of shares of common stock outstanding assuming dilution	<u>202,566</u>	<u>162,569</u>	<u>161,983</u>
Basic earnings (loss) per share	<u>\$ 14.28</u>	<u>\$ 3.39</u>	<u>\$ (3.72)</u>
Diluted earnings (loss) per share	<u>\$ 14.28</u>	<u>\$ 3.39</u>	<u>\$ (3.72)</u>

- (1) Unvested restricted stock unit awards and unvested performance share units that settle in HF Sinclair common stock represent participating securities because they participate in nonforfeitable dividends or distributions with the common stockholders of HF Sinclair. Participating earnings represent the distributed and undistributed earnings of HF Sinclair attributable to the participating securities. Unvested restricted stock unit awards and performance share units do not participate in undistributed net losses as they are not contractually obligated to do so.

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NOTE 8: Stock-Based Compensation

In connection with the Sinclair Transactions, we assumed all obligations of HollyFrontier under HollyFrontier's existing stock-based compensation plans, which includes the HF Sinclair Corporation 2007 Long-Term Incentive Compensation Plan (previously known as the HollyFrontier Corporation Long-Term Incentive Compensation Plan, the "2007 Plan") and the HF Sinclair Corporation Amended and Restated 2020 Long Term Incentive Plan (previously known as the HollyFrontier Corporation 2020 Long Term Incentive Plan, the "2020 Plan"). Awards are no longer granted, and as of December 1, 2022, none are outstanding, under the 2007 Plan. The 2007 Plan previously provided for, and the 2020 Plan currently provides for, the grant of unrestricted and restricted stock, restricted stock units, other stock based awards, stock options, performance awards, substitute awards, cash awards and stock appreciation rights. Subject to adjustment for certain events, an aggregate of 6,019,255 of these awards may be issued pursuant to awards granted under the 2020 Plan. We also have a stock compensation deferral plan which allows non-employee directors to defer settlement of vested stock granted under our share-based compensation plan. 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. Share-based awards paid in cash upon vesting are accounted for as liability awards and recorded at fair value at the end of each reporting period with a mark-to-mark adjustment recognized in earnings.

The stock-based compensation expense and associated tax benefit were as follows:

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Compensation expense:			
Restricted stock units	\$ 27,264	\$ 29,453	\$ 23,539
Performance stock units	8,683	12,591	6,130
Total compensation expense	<u>\$ 35,947</u>	<u>\$ 42,044</u>	<u>\$ 29,669</u>
Tax benefit recognized on compensation expense	\$ 8,918	\$ 10,545	\$ 3,965

Additionally, HEP maintains an equity-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 equity-based compensation plan was \$1.9 million, \$2.6 million and \$2.2 million for the years ended December 31, 2022, 2021 and 2020, 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 one to 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.

A summary of restricted stock unit activity during the year ended December 31, 2022 is presented below:

Restricted Stock Units	Grants	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2022	1,604,540	\$ 29.11
Granted	463,074	\$ 59.41
Vested	(804,846)	\$ 32.91
Forfeited	(206,893)	\$ 29.30
Outstanding at December 31, 2022	<u>1,055,875</u>	\$ 39.46

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For the years ended December 31, 2022, 2021 and 2020, restricted stock units vested having a grant date fair value of \$26.5 million, \$28.4 million and \$28.2 million, respectively. For the years ended December 31, 2021 and 2020, we granted restricted stock units having a weighted average grant date fair value of \$33.95 and \$22.20, respectively. As of December 31, 2022, there was \$27.7 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 1.4 years. For the years ended December 31, 2022, 2021 and 2020, we paid \$5.8 million, \$3.4 million and \$1.3 million, respectively, in cash equal to the value of the stock award on the vest date to certain employees to settle 96,005, 105,459 and 55,222 restricted stock units, respectively.

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 HF Sinclair 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, 2022 is presented below:

Performance Share Units	Grants	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2022	864,626	\$ 33.49
Granted	206,979	\$ 72.04
Vested	(134,685)	\$ 46.08
Forfeited	(165,723)	\$ 32.83
Outstanding at December 31, 2022	<u>771,197</u>	<u>\$ 41.78</u>

For the year ended December 31, 2022, we issued 151,315 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, 2021 and 2020, we issued common stock upon the vesting of the performance share units having a grant date fair value of \$4.5 million and \$6.2 million, respectively. As of December 31, 2022, there was \$21.7 million of total unrecognized compensation cost related to non-vested performance share units. That cost is expected to be recognized over a weighted-average period of 1.8 years. For the year ended December 31, 2022, we paid \$0.7 million in cash equal to the value of the stock award on the vest date to certain employees to settle 12,108 performance share units.

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NOTE 9: Inventories

Inventories consist of the following components:

	December 31,	
	2022	2021
	(In thousands)	
Crude oil	\$ 818,737	\$ 630,873
Other raw materials and unfinished products ⁽¹⁾	842,855	530,067
Finished products ⁽²⁾	1,252,984	726,930
Lower of cost or market reserve	(61,151)	(8,739)
Process chemicals ⁽³⁾	53,900	43,025
Repairs and maintenance supplies and other ⁽⁴⁾	307,203	199,972
Total inventory	<u>\$ 3,214,528</u>	<u>\$ 2,122,128</u>

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

The excess replacement cost over the LIFO value of our refinery inventories was \$39.0 million and \$111.1 million at December 31, 2022 and 2021, respectively. For the year ended December 31, 2021, we recorded a decrease to cost of products sold of \$318.9 million due to the effect of the change in the lower of cost or market reserve recorded on our refinery inventories at that time. 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.

Our renewables inventories that are valued at the lower of LIFO cost or market reflect a valuation reserve of \$61.2 million and \$8.7 million at December 31, 2022 and 2021, respectively. A new market reserve of \$61.2 million as of December 31, 2022 was 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 of cost of products sold totaling \$52.4 million and \$8.7 million for the years ended December 31, 2022 and 2021, respectively.

NOTE 10: Properties, Plants and Equipment

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

	December 31,	
	2022	2021
	(In thousands)	
Land, buildings and improvements	\$ 741,874	\$ 607,554
Refining facilities	6,346,422	4,839,926
Pipelines and terminals	2,267,052	1,956,008
Transportation vehicles	43,801	27,809
Other fixed assets	422,583	306,606
Construction in progress	324,920	710,304
	<u>10,146,652</u>	<u>8,448,207</u>
Accumulated depreciation	(3,457,747)	(3,033,353)
	<u>\$ 6,688,905</u>	<u>\$ 5,414,854</u>

We capitalized interest attributable to construction projects of \$6.2 million, \$15.2 million and \$4.1 million for the years ended December 31, 2022, 2021 and 2020, respectively.

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Depreciation expense was \$442.2 million, \$329.4 million and \$333.0 million for the years ended December 31, 2022, 2021 and 2020, respectively.

NOTE 11: Goodwill, Long-lived Assets and Intangibles

Goodwill and long-lived assets

As of December 31, 2022, our goodwill balance was \$3.0 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.

The following is a summary of our goodwill by segment:

	<u>Refining</u>	<u>Renewables</u>	<u>Marketing</u>	<u>Lubricants and Specialty Products</u>	<u>HEP</u>	<u>Total</u>
	(In thousands)					
Balance at December 31, 2021	\$ 1,733,472	\$ —	\$ —	\$ 246,699	\$ 312,873	\$ 2,293,044
Additional goodwill acquired	243,963	159,020	163,839	—	119,112	685,934
Foreign currency translation adjustment	—	—	—	(663)	—	(663)
Balance at December 31, 2022	<u>\$ 1,977,435</u>	<u>\$ 159,020</u>	<u>\$ 163,839</u>	<u>\$ 246,036</u>	<u>\$ 431,985</u>	<u>\$ 2,978,315</u>
Balance at December 31, 2022						
Goodwill	\$ 2,286,753	\$ 159,020	\$ 163,839	\$ 480,615	\$ 431,985	\$ 3,522,212
Accumulated impairment losses	(309,318)	—	—	(234,579)	—	(543,897)
	<u>\$ 1,977,435</u>	<u>\$ 159,020</u>	<u>\$ 163,839</u>	<u>\$ 246,036</u>	<u>\$ 431,985</u>	<u>\$ 2,978,315</u>

We performed our annual goodwill impairment testing quantitatively as of July 1, 2022 and determined there was no impairment of goodwill attributable to our reporting units. Additionally, there was no impairment of long-lived assets during the years ended December 31, 2022 and 2021. See below for discussion of our goodwill and long-lived assets impairment recognized in 2020.

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 2020 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.

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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 fourth quarter of 2020, 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 of 2020 for the Sonneborn reporting unit. No other reporting units required an interim impairment test during the fourth quarter of 2020.

The estimated fair values of our reporting units tested quantitatively 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.

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” on our consolidated balance sheets are as follows:

	Useful Life	December 31	
		2022	2021
		(In thousands)	
Customer relationships	10 - 20 years	\$ 346,354	\$ 237,856
Transportation agreements	30 years	59,933	59,933
Trademarks, patents and other	10 - 20 years	261,678	157,392
		667,965	455,181
Accumulated amortization		(204,239)	(156,123)
Total intangibles, net		\$ 463,726	\$ 299,058

Amortization expense was \$51.0 million, \$35.6 million and \$34.1 million for the years ended December 31, 2022, 2021 and 2020, respectively. Estimated future amortization expense related to the intangible assets at December 31, 2022 is as follows:

	(In thousands)
2023	\$ 55,293
2024	\$ 55,293
2025	\$ 55,293
2026	\$ 46,530
2027	\$ 44,317

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NOTE 12: Environmental

We expensed \$13.4 million, \$7.8 million and \$7.1 million for the years ended December 31, 2022, 2021 and 2020, respectively, for environmental remediation obligations. The accrued environmental liability reflected on our consolidated balance sheets was \$192.3 million and \$117.2 million at December 31, 2022 and 2021, respectively, of which \$170.0 million and \$99.1 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. Accrued environmental liabilities assumed in the Sinclair Transactions were \$72.2 million at the acquisition date and an associated receivable from third parties of \$21.5 million. 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

HF Sinclair Credit Agreement

On April 27, 2022, after giving effect to the consummation of the exchange offers and the issuance of the HF Sinclair Senior Notes (as defined below), HF Sinclair entered into a \$1.65 billion senior unsecured revolving credit facility maturing in April 2026 (the “HF Sinclair Credit Agreement”). The HF Sinclair 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. The HF Sinclair Credit Agreement replaced the \$1.35 billion senior unsecured credit facility of HollyFrontier, which was terminated on April 27, 2022. At December 31, 2022, we were in compliance with all covenants, had no outstanding borrowings and had outstanding letters of credit totaling \$2.3 million under the HF Sinclair Credit Agreement.

Indebtedness under the HF Sinclair Credit Agreement bears interest, at our option based on the currency of such indebtedness at either (a) a base rate equal to the highest of the Federal Funds Effective Rate (as defined in the HF Sinclair Credit Agreement) plus half of 1%, Spread Adjusted Term SOFR (as defined in the HF Sinclair Credit Agreement) for a one-month interest period plus 1% and the prime rate (as publicly announced from time to time by the administrative agent), as applicable, plus an applicable margin (ranging from 0.25% - 1.125%), (b) the CDOR Rate (as defined in the HF Sinclair Credit Agreement) plus an applicable margin (ranging from 1.25% to 2.125%), (c) the Spread Adjusted Term SOFR (as defined in the HF Sinclair Credit Agreement) plus an applicable margin (ranging from 1.25% to 2.125%) or (d) the Daily Simple RFR (as defined in the HF Sinclair Credit Agreement) plus an applicable margin (ranging from 1.25% to 2.125%). In each case, the applicable margin is based on HF Sinclair's debt rating assigned by Standard & Poor's Financial Services LLC and Moody's Investors Service, Inc.

HEP Credit Agreement

HEP has a \$1.2 billion senior secured revolving credit facility maturity in July 2025 (the “HEP Credit Agreement”). In August 2022, the HEP Credit Agreement was amended to, among other things, provide an alternative reference rate for LIBOR. The HEP Credit Agreement 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 an accordion feature that allows HEP to increase the commitments under the HEP Credit Agreement up to a maximum amount of \$1.7 billion. At December 31, 2022, HEP was in compliance with all of its covenants, had outstanding borrowings of \$668.0 million and no outstanding letters of credit under the HEP Credit Agreement.

Prior to the Investment Grade Date (as defined in the HEP Credit Agreement), indebtedness under the HEP Credit Agreement bears interest, at HEP's option, at either (a) the Alternate Base Rate (as defined in the HEP Credit Agreement) plus an applicable margin (ranging from 0.75% - 1.75%) or (b) Adjusted Term SOFR (as defined in the HEP Credit Agreement) plus an applicable margin (ranging from 1.75% - 2.75%). In each case, the applicable margin is based upon HEP's Total Leverage Ratio (as defined in the HEP Credit Agreement). The weighted average interest rate in effect under the HEP Credit Agreement on HEP's borrowings was 6.32% and 2.35% as of December 31, 2022 and 2021, 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.

HF SINCLAIR CORPORATION
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HollyFrontier Bond Exchange and HF Sinclair Senior Notes

On April 27, 2022, HF Sinclair completed its offers to exchange any and all outstanding HollyFrontier 2.625% senior notes maturing October 2023 (the “HollyFrontier 2.625% Senior Notes”), 5.875% senior notes maturing April 2026 (the “HollyFrontier 5.875% Senior Notes”) and 4.500% senior notes maturing October 2030 (the “HollyFrontier 4.500% Senior Notes”) (and, collectively, the “HollyFrontier Senior Notes”) for 2.625% senior notes maturing October 2023 (the “HF Sinclair 2.625% Senior Notes”), 5.875% senior notes maturing April 2026 (the “HF Sinclair 5.875% Senior Notes”) and 4.500% senior notes maturing October 2030 (the “HF Sinclair 4.500% Senior Notes”) (and, collectively, the “HF Sinclair Senior Notes”) to be issued by HF Sinclair and cash. Additionally, HF Sinclair solicited consents to adopt certain amendments to the indenture governing the HollyFrontier Senior Notes.

In connection with the exchange offers and consent solicitations, HollyFrontier amended the indenture governing the HollyFrontier Senior Notes to eliminate (i) substantially all of the restrictive covenants, (ii) certain of the events which may lead to an “Event of Default”, (iii) the SEC reporting covenant and (iv) with respect to the HollyFrontier 2.625% Senior Notes and the HollyFrontier 4.500% Senior Notes only, the offer to repurchase such senior notes upon certain change of control triggering events.

The HF Sinclair Senior Notes are unsecured and unsubordinated obligations of ours and rank equally with all our other existing and future unsecured and unsubordinated indebtedness. Each series of HF Sinclair Senior Notes has the same interest rate (including interest rate adjustment provisions, as applicable), interest payment dates, maturity date and redemption terms as the corresponding series of HollyFrontier Senior Notes. The HF Sinclair Senior Notes were issued in exchange for the HollyFrontier Senior Notes pursuant to a private exchange offer exempt from registration under the Securities Act of 1933, as amended (the “Securities Act”).

On September 12, 2022, HF Sinclair filed a registration statement, which was declared effective on September 21, 2022, to exchange the HF Sinclair Senior Notes for an equal principal amount of the respective series of the HF Sinclair Senior Notes (the “Registered HF Sinclair Senior Notes”). The Registered HF Sinclair Senior Notes are substantially identical to the HF Sinclair Senior Notes in all material respects except the Registered HF Sinclair Senior Notes are registered under the Securities Act and will not be subject to restrictions on transfer or to any increase in annual interest rate for failure to comply with the Registration Rights Agreement, dated April 27, 2022, and will not have the registration rights applicable to the HF Sinclair Senior Notes.

On October 21, 2022, HF Sinclair completed its offers to exchange HF Sinclair Senior Notes for Registered HF Sinclair Senior Notes.

Further, we may from time to time seek to retire some or all of our outstanding debt or debt agreements through cash purchases, and/or exchanges, open market purchases, privately negotiated transactions, tender offers or otherwise. Such transactions, if any, may be material and will depend on prevailing market conditions, our liquidity requirements and other factors.

During the fourth quarter of 2022, we made open market repurchases of HF Sinclair 2.625% Senior Notes and HollyFrontier 2.625% Senior Notes that resulted in the extinguishment of \$42.2 million in principal of the HF Sinclair 2.625% Senior Notes and fifteen thousand dollars in principal of the HollyFrontier 2.625% Senior Notes. Total cash consideration paid to repurchase the principal amount outstanding, excluding accrued interest, totaled \$41.4 million, and we recognized a \$0.6 million gain on the extinguishment of debt during the year ended December 31, 2022.

HF Sinclair Financing Arrangements

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 cash. 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 current leases mature in one year or less. 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 \$39.8 million and \$37.4 million at December 31, 2022 and 2021, respectively, and are included in “Accrued liabilities” on our consolidated balance sheets. See Note 6 for additional information on Level 2 inputs.

HF SINCLAIR CORPORATION
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HEP Senior Notes

In February 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 5.0% Senior Notes”). Subsequently, in February 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.

On April 8, 2022, HEP closed a private placement of \$400.0 million in aggregate principal amount of 6.375% senior notes maturing April 2027 (the “HEP 6.375% Senior Notes”) at par for net proceeds of approximately \$393.0 million, after deducting the initial purchasers’ discounts and commissions and estimated offering expenses. The net proceeds from the offering of the HEP 6.375% Senior Notes were used to partially repay outstanding borrowings under the HEP Credit Agreement.

The HEP 5.0% Senior Notes and the HEP 6.375% Senior Notes (collectively, 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, 2022. At any time when the HEP Senior Notes are rated investment grade by either Moody’s Investor Service, Inc. or S&P Global Ratings 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 at varying premiums over face value 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.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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The carrying amounts of outstanding debt are as follows:

	December 31,	
	2022	2021
	(In thousands)	
HollyFrontier		
2.625% Senior Notes	\$ 59,637	\$ 350,000
5.875% Senior Notes	202,900	1,000,000
4.500% Senior Notes	74,966	400,000
	<u>337,503</u>	<u>1,750,000</u>
HF Sinclair		
2.625% Senior Notes	\$ 248,190	\$ —
5.875% Senior Notes	797,100	—
4.500% Senior Notes	325,034	—
	<u>1,370,324</u>	<u>—</u>
Less current debt ⁽¹⁾	(306,959)	—
Unamortized discount and debt issuance costs ⁽¹⁾	(8,689)	(10,312)
Total HF Sinclair long-term debt	<u>1,392,179</u>	<u>1,739,688</u>
HEP Credit Agreement	668,000	840,000
HEP		
5.000% Senior Notes	500,000	500,000
6.375% Senior Notes	400,000	—
	<u>900,000</u>	<u>500,000</u>
Unamortized discount and debt issuance costs	(11,666)	(6,951)
Total HEP long-term debt	<u>1,556,334</u>	<u>1,333,049</u>
Total long-term debt	<u>\$ 2,948,513</u>	<u>\$ 3,072,737</u>

- (1) The 2.625% HollyFrontier Senior Notes and HF Sinclair 2.625% Senior Notes, inclusive of unamortized discount and debt issuance costs of \$0.9 million, are due October 2023 and are classified as Current debt as of December 31, 2022 on our consolidated balance sheets.

The fair values of the senior notes are as follows:

	December 31,	
	2022	2021
	(In thousands)	
HollyFrontier and HF Sinclair Senior Notes	\$ 1,655,726	\$ 1,912,753
HEP Senior Notes	\$ 852,658	\$ 502,705

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

HF SINCLAIR CORPORATION
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Principal maturities of outstanding debt as of December 31, 2022 are as follows:

Years Ending December 31,	(In thousands)
2023	\$ 307,827
2024	—
2025	668,000
2026	1,000,000
2027	400,000
Thereafter	900,000
Total	<u>\$ 3,275,827</u>

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, collar contracts, 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 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 had swap contracts serving as cash flow hedges against price risk on forecasted purchases of natural gas that matured as of December 31, 2021. 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 (loss). 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,			Statement of Operations Location	Years Ended December 31,		
	2022	2021	2020		2022	2021	2020
	(In thousands)						
Commodity contracts	\$ 326	\$ 31	\$ (4,871)	Sales and other revenues	\$ (5,288)	\$ (19,239)	\$ (5,168)
				Cost of products sold	—	—	4,281
				Operating expenses	—	1,660	(1,717)
Total	\$ 326	\$ 31	\$ (4,871)		\$ (5,288)	\$ (17,579)	\$ (2,604)

HF SINCLAIR 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, collar contracts and basis swap contracts to mitigate exposure to natural gas price volatility and forward purchase and sell contracts of refined products, 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 earnings.

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

Derivatives Not Designated as Hedging Instruments	Statement of Operations Location	Gain (Loss) Recognized in Earnings		
		Years Ended December 31,		
		2022	2021	2020
		(In thousands)		
Commodity contracts	Cost of products sold	\$ (17,189)	\$ (22,909)	\$ 18,646
	Operating expenses	(13,780)	—	—
	Interest expense	(4,420)	11,816	(4,250)
Foreign currency contracts	Gain (loss) on foreign currency transactions	27,826	(4,013)	(7,300)
	Total	<u>\$ (7,563)</u>	<u>\$ (15,106)</u>	<u>\$ 7,096</u>

As of December 31, 2022, we have the following notional contract volumes related to outstanding derivative instruments (all maturing in 2023):

	Total Outstanding Notional	Unit of Measure
<i>Derivatives not designated as hedging instruments:</i>		
NYMEX futures (WTI) - short	845,000	Barrels
Forward gasoline and diesel contracts - long	425,000	Barrels
Foreign currency forward contracts	432,161,594	U. S. dollar
Forward commodity contracts (platinum)	36,969	Troy ounces
Natural gas price swaps (basis spread) - long	5,110,000	MMBTU
Natural gas collar contracts	29,200,000	MMBTU

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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 on 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, 2022						
<i>Derivatives not designated as cash flow hedging instruments:</i>						
NYMEX futures contracts	\$ —	\$ —	\$ —	\$ 2,750	\$ —	\$ 2,750
Commodity price swap contracts	342	—	342	—	—	—
Commodity collar contracts	—	—	—	6,275	—	6,275
Commodity forward contracts	2,949	—	2,949	2,987	—	2,987
Foreign currency forward contracts	15,359	—	15,359	—	—	—
	<u>\$ 18,650</u>	<u>\$ —</u>	<u>\$ 18,650</u>	<u>\$ 12,012</u>	<u>\$ —</u>	<u>\$ 12,012</u>
Total net balance			<u>\$ 18,650</u>			<u>\$ 12,012</u>
Balance sheet classification:	Prepayment and other		<u>\$ 18,650</u>	Accrued liabilities		<u>\$ 12,012</u>

	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, 2021						
<i>Derivatives designated as cash flow hedging instruments:</i>						
Commodity forward contracts	—	—	—	238	—	238
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 238</u>	<u>\$ —</u>	<u>\$ 238</u>
<i>Derivatives not designated as cash flow hedging instruments:</i>						
NYMEX futures contracts	\$ —	\$ —	\$ —	\$ 1,269	\$ —	\$ 1,269
Commodity forward contracts	286	—	286	328	—	328
Foreign currency forward contracts	7,494	(1,317)	6,177	—	—	—
	<u>\$ 7,780</u>	<u>\$ (1,317)</u>	<u>\$ 6,463</u>	<u>\$ 1,597</u>	<u>\$ —</u>	<u>\$ 1,597</u>
Total net balance			<u>\$ 6,463</u>			<u>\$ 1,835</u>
Balance sheet classification:	Prepayments and other		<u>\$ 6,463</u>	Accrued liabilities		<u>\$ 1,835</u>

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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NOTE 15: Income Taxes

The provision for income taxes is comprised of the following:

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Current			
Federal	\$ 674,977	\$ (33,206)	\$ (59,452)
State	108,993	(1,802)	(5,391)
Foreign	57,734	30,336	9,423
Deferred			
Federal	38,535	94,353	(64,836)
State	21,121	1,386	(52,872)
Foreign	(6,488)	32,831	(59,019)
	<u>\$ 894,872</u>	<u>\$ 123,898</u>	<u>\$ (232,147)</u>

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

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Tax computed at statutory rate	\$ 826,570	\$ 165,302	\$ (156,880)
State income taxes, net of federal tax benefit	123,442	13,588	(41,566)
Noncontrolling interest in net income	(28,726)	(25,931)	(21,799)
Effect of change in state rate	(15,800)	(13,342)	—
CARES Act benefits	—	(10,384)	(19,837)
Foreign rate differential	6,608	331	(14,294)
Federal tax credits	(23,853)	(29,777)	—
US tax on non-US operations	12,920	18,547	—
Effect of nondeductible goodwill impairment charge	—	—	16,573
Other	(6,289)	5,564	5,656
	<u>\$ 894,872</u>	<u>\$ 123,898</u>	<u>\$ (232,147)</u>

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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, 2022 and 2021 are as follows:

	December 31, 2022		
	Assets	Liabilities	Total
	(In thousands)		
Deferred income taxes			
Properties, plants, equipment and intangibles (due primarily to tax in excess of book depreciation)	\$ —	\$ (1,032,048)	\$ (1,032,048)
Lease obligation	129,727	—	129,727
Accrued employee benefits	17,665	—	17,665
Accrued post-retirement benefits	9,951	—	9,951
Accrued environmental costs	37,868	—	37,868
Hedging instruments	3,260	—	3,260
Inventory differences	—	(230,112)	(230,112)
Deferred turnaround costs	—	(88,574)	(88,574)
Net operating loss and tax credit carryforwards	27,963	—	27,963
Investment in HEP	—	(134,160)	(134,160)
Valuation allowance	—	(3,691)	(3,691)
Other	—	(14)	(14)
Total	<u>\$ 226,434</u>	<u>\$ (1,488,599)</u>	<u>\$ (1,262,165)</u>

	December 31, 2021		
	Assets	Liabilities	Total
	(In thousands)		
Deferred income taxes			
Properties, plants, equipment and intangibles (due primarily to tax in excess of book depreciation)	\$ —	\$ (741,970)	\$ (741,970)
Lease obligation	131,567	—	131,567
Accrued employee benefits	17,322	—	17,322
Accrued post-retirement benefits	10,897	—	10,897
Accrued environmental costs	26,999	—	26,999
Hedging instruments	—	(652)	(652)
Inventory differences	—	(148,539)	(148,539)
Deferred turnaround costs	—	(100,585)	(100,585)
Net operating loss and tax credit carryforwards	63,967	—	63,967
Investment in HEP	—	(94,486)	(94,486)
Valuation allowance	—	(3,165)	(3,165)
Other	1,244	—	1,244
Total	<u>\$ 251,996</u>	<u>\$ (1,089,397)</u>	<u>\$ (837,401)</u>

We have tax benefits attributable to net operating losses of \$16.9 million in Luxembourg that can be carried forward 16 years which will begin expiring in 2034. We also have tax benefits attributable to net operating losses of \$6.9 million in the Netherlands that can be carried forward indefinitely. We have reflected a valuation allowance of \$3.7 million in 2022 and \$3.2 million in 2021 with respect to net operating carryforwards that primarily relate to losses in Luxembourg and China.

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

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Balance at January 1	\$ 54,605	\$ 54,899	\$ 56,621
Additions for tax positions of prior years	—	—	6
Reductions for tax positions of prior years	(53,023)	(49)	(1,500)
Settlements	—	(125)	—
Lapse of statute of limitations	(228)	(120)	(228)
Balance at December 31	<u>\$ 1,354</u>	<u>\$ 54,605</u>	<u>\$ 54,899</u>

At December 31, 2022, 2021 and 2020, there were \$1.4 million, \$54.6 million, and \$54.9 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 \$0.7 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 prior years. We filed suit related to these claims in the Federal District Court of Dallas in March of 2022; the suit was stayed pending the outcome of controlling cases in the U.S. Court of Appeals for the Fifth Circuit, which were decided in favor of the IRS and were not appealed. As such precedence is controlling for us, we intend to file a motion to dismiss the suit in the Federal District Court of Dallas in early 2023 and have reduced our unrecognized tax benefits by the expected unrecoverable amount.

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 2018. Other than the federal claim noted above and to the extent of the federal net operating loss carried back to 2015 from 2020, we have materially concluded all U.S. federal income tax matters for tax years through December 31, 2018. We are currently under audit with the Canada Revenue Agency for the 2018 tax year, and during the fourth quarter of 2022, an IRS audit was initiated for the federal income tax returns for the 2020 and 2021 tax years.

NOTE 16: Stockholders' Equity

As a result of the HFC Transactions, discussed in Note 2, each share of HollyFrontier common stock issued and outstanding immediately prior to the closing of the HFC Transactions (other than treasury shares which were cancelled pursuant to the Business Combination Agreement) was automatically converted into one validly issued, fully paid and non-assessable share of HF Sinclair common stock, having the same designations, rights, powers and preferences and the qualifications, limitations and restrictions as a share of HollyFrontier common stock immediately prior to the closing of the HFC Transactions.

In November 2019, our Board of Directors approved a \$1.0 billion share repurchase program, which replaced all existing share repurchase programs as of that time, authorizing us to repurchase common stock in the open market or through privately negotiated transactions. In June 2022, our Board of Directors determined that privately negotiated repurchases from REH Company (formerly known as The Sinclair Companies) are also authorized under the share repurchase program, subject to REH Company's interest in selling its shares and other limitations. As of December 31, 2022, we had repurchased \$975.0 million under this share repurchase program, of which \$500.0 million were repurchased pursuant to privately negotiated repurchases from REH Company.

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On September 21, 2022, our Board of Directors approved a new \$1.0 billion share repurchase program, which, effective September 26, 2022, replaced all existing share repurchase programs, including \$25.0 million remaining under the previously existing \$1.0 billion share repurchase program. This new share repurchase program authorizes us to repurchase common stock in the open market or through privately negotiated transactions. Privately negotiated repurchases from REH Company are also authorized under the share repurchase program, subject to REH Company's interest in selling its shares and other limitations. The timing and amount of share repurchases, including those from REH Company, will depend on market conditions and corporate, tax, regulatory and other relevant considerations. This program may be discontinued at any time by our Board of Directors. As of December 31, 2022, we repurchased \$338.0 million under this new share repurchase program, of which \$250.0 million was pursuant to a privately negotiated repurchase from REH Company. 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 year ended December 31, 2022, we made open market and privately negotiated purchases of 25,716,042 shares for \$1,313.0 million under our share repurchase programs, of which 14,407,274 shares were repurchased for \$750.0 million pursuant to privately negotiated repurchases from REH Company. As of December 31, 2022 we had remaining authorization to repurchase up to \$662.0 million under the new share repurchase program, of which we repurchased 913,883 shares for \$48.0 million year-to-date February 15, 2023.

On December 14, 2022, we agreed to repurchase an aggregate of 1,000,000 shares of our outstanding common stock from a registered broker for an aggregate purchase price of \$48.6 million (the "December Repurchase"). The purchase price was funded with cash on hand. The shares repurchased are held as treasury stock.

The December Repurchase was made in connection with the sale by REH Company of approximately 5,000,000 shares of common stock, inclusive of the 1,000,000 shares we repurchased, in an unregistered block trade permitted under applicable securities laws (such sale, the "Sale"). In connection with the Sale, REH Company agreed to customary "lock-up" restrictions that will expire 60 days following the date of the Sale, subject to waiver by the broker and certain exceptions, including, but not limited to, privately negotiated sales or transfers of common stock to us from REH Company.

The December Repurchase was made pursuant to separate authorization from our Board of Directors and not as part of our \$1.0 billion share repurchase program authorized by our Board of Directors on September 21, 2022, and accordingly, did not reduce the remaining authorization thereunder.

During the years ended December 31, 2022, 2021 and 2020, we withheld 278,025, 217,151, and 283,047 shares, respectively, of our common stock from certain employees in the amounts of \$16.5 million, \$7.1 million and \$7.6 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.

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NOTE 17: Other Comprehensive Income (Loss)

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

	<u>Before-Tax</u>	<u>Tax Expense (Benefit)</u> (In thousands)	<u>After-Tax</u>
Year Ended December 31, 2022			
Net change in foreign currency translation adjustment	\$ (32,383)	\$ (6,817)	\$ (25,566)
Net unrealized gain on hedging instruments	326	67	259
Net change in pension and other post-retirement benefit obligations	789	166	623
Other comprehensive loss attributable to HF Sinclair stockholders	<u>\$ (31,268)</u>	<u>\$ (6,584)</u>	<u>\$ (24,684)</u>
Year Ended December 31, 2021			
Net change in foreign currency translation adjustment	\$ (13,336)	\$ (2,793)	\$ (10,543)
Net unrealized gain on hedging instruments	31	8	23
Net change in pension and other post-retirement benefit obligations	(457)	(186)	(271)
Other comprehensive loss attributable to HF Sinclair stockholders	<u>\$ (13,762)</u>	<u>\$ (2,971)</u>	<u>\$ (10,791)</u>
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 HF Sinclair stockholders	<u>\$ (2,106)</u>	<u>\$ (794)</u>	<u>\$ (1,312)</u>

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

AOCI Component	Gain (Loss) Reclassified From AOCI			Statement of Operations Line Item
	Years Ended December 31,			
	2022	2021	2020	
	(In thousands)			
Hedging instruments:				
Commodity price swaps	\$ (5,288)	\$ (19,239)	\$ (5,168)	Sales and other revenues
	—	—	4,281	Cost of products sold
	—	1,660	(1,717)	Operating expenses
	(5,288)	(17,579)	(2,604)	
	(1,282)	(4,430)	(664)	Income tax benefit
	(4,006)	(13,149)	(1,940)	Net of tax
Other post-retirement benefit obligations:				
Pension obligations	208	407	422	Other, net
	50	103	108	Income tax expense
	158	304	314	Net of tax
Post-retirement healthcare obligations	3,440	3,328	3,564	Other, net
	834	839	909	Income tax expense
	2,606	2,489	2,655	Net of tax
Retirement restoration plan	(39)	(39)	(22)	Other, net
	(9)	(10)	(6)	Income tax benefit
	(30)	(29)	(16)	Net of tax
Total reclassifications for the period	\$ (1,272)	\$ (10,385)	\$ 1,013	

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

	Years Ended December 31,	
	2022	2021
	(In thousands)	
Foreign currency translation adjustment	\$ (33,427)	\$ (7,861)
Unrealized gain (loss) on pension obligations	(2,661)	1,449
Unrealized gain on post-retirement benefit obligations	14,075	9,342
Unrealized loss on hedging instruments	—	(259)
Accumulated other comprehensive income (loss)	\$ (22,013)	\$ 2,671

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. Effective June 30, 2022, we ceased to accrue additional benefits under these plans, at which time the plan was fully frozen. We expect that benefits will be settled by the end of 2024, at which point settlement accounting will occur. 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 and Sonneborn Netherlands plans for the years ended December 31, 2022 and 2021.

	Years Ended December 31,	
	2022	2021
	(In thousands)	
Change in plans' benefit obligations		
Pension plans benefit obligation - beginning of period	\$ 120,414	\$ 126,620
Service cost	1,839	4,455
Interest cost	3,086	2,740
Actuarial gain	(25,605)	(7,363)
Benefits paid	(2,306)	(4,211)
Transfer from other plans	164	706
Foreign currency exchange rate changes	(7,149)	(2,533)
Pension plans benefit obligation - end of year	<u>\$ 90,443</u>	<u>\$ 120,414</u>
Change in pension plans assets		
Fair value of plans assets - beginning of period	\$ 119,325	\$ 123,950
Return on plans assets	(26,218)	(2,228)
Employer contributions	3,486	3,542
Benefits paid	(2,306)	(4,211)
Transfer payments	164	706
Foreign currency exchange rate changes	(6,985)	(2,434)
Fair value of plans assets - end of year	<u>\$ 87,466</u>	<u>\$ 119,325</u>
Funded status		
Under-funded balance	<u>\$ (2,977)</u>	<u>\$ (1,089)</u>
Amounts recognized in consolidated balance sheets		
Other long-term liabilities	<u>\$ (2,977)</u>	<u>\$ (1,089)</u>
Amounts recognized in accumulated other comprehensive income (loss)		
Cumulative actuarial loss	<u>\$ (3,872)</u>	<u>\$ (1)</u>

The accumulated benefit obligation was \$90.4 million and \$118.4 million at December 31, 2022 and 2021, 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,	
	2022	2021
	(In thousands)	
Projected benefit obligation	\$ 90,443	\$ 35,963
Fair value of plan assets	\$ 87,466	\$ 33,966

	December 31,	
	2022	2021
	(In thousands)	
Accumulated benefit obligation	\$ 90,443	\$ 35,249
Fair value of plan assets	\$ 87,466	\$ 33,966

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The weighted average assumption used to determine the end of period benefit obligation for the PCLI plans for the year ended December 31, 2022 were discount rates of 3.70% to 4.44%. The weighted average assumptions used to determine the end of period benefit obligation for the PCLI plans for the year ended December 31, 2021 were a discount rate 3.00% and the rate of future compensation increases of 3.00%. For the years ended December 31, 2022 and 2021, the weighted average assumption used to determine end of period benefit obligations for Sonneborn were discount rates of 4.20% and 1.40%, respectively.

Net periodic pension expense consisted of the following components:

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Service cost - benefit earned during the period	\$ 1,839	\$ 4,455	\$ 3,929
Interest cost on projected benefit obligations	3,086	2,740	2,772
Expected return on plans assets	(3,223)	(3,031)	(4,578)
Amortization of gain	(208)	(407)	(422)
Curtailment	—	—	(137)
Contractual termination benefits	—	—	915
Net periodic pension expense	<u>\$ 1,494</u>	<u>\$ 3,757</u>	<u>\$ 2,479</u>

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

The following table presents the fair values of PCLI's pension plans' assets, by level within the fair value hierarchy, as of December 31, 2022 and 2021.

	December 31, 2022				December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
	(In thousands)							
Equity securities	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 6,802	\$ —	\$ 6,802
Fixed income	457	66,295	—	66,752	536	78,021	—	78,557
	<u>\$ 457</u>	<u>\$ 66,295</u>	<u>\$ —</u>	<u>\$ 66,752</u>	<u>\$ 536</u>	<u>\$ 84,823</u>	<u>\$ —</u>	<u>\$ 85,359</u>

See Note 6 for additional information on Level 1 and 2 inputs.

The expected long-term rate of return on plan assets is 3.50% for the PCLI pension plans and is based on a target investment of 100% in fixed income.

We expect to contribute \$1.5 million to the PCLI and Sonneborn pensions plans in 2023. Benefit payments, which reflect expected future service, are expected to be paid as follows: \$3.6 million in 2023, \$67.6 million in 2024, \$0.8 million in 2025, \$0.8 million in 2026, \$0.9 million in 2027 and \$5.4 million in 2028 to 2032. Benefit payments expected to be paid in 2024 include the estimate of the net present value of all expected benefit payments to be paid out once the PCLI union and non-union pension plans windup has been finalized.

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 at December 31, 2022.

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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, 2022 and 2021:

	Years Ended December 31,	
	2022	2021
	(In thousands)	
Change in plans' benefit obligation		
Post-retirement plans' benefit obligation - beginning of year	\$ 34,816	\$ 33,478
Service cost	2,081	2,324
Interest cost	990	782
Benefits paid	(582)	(706)
Actuarial gain	(7,884)	(1,133)
Foreign currency exchange rate changes	(743)	71
Post-retirement plans' benefit obligation - end of year	<u>\$ 28,678</u>	<u>\$ 34,816</u>
Change in plan assets		
Fair value of plan assets - beginning of year	\$ —	\$ —
Employer contributions	572	673
Participant contributions	10	33
Benefits paid	(582)	(706)
Fair value of plan assets - end of year	<u>\$ —</u>	<u>\$ —</u>
Funded status		
Under-funded balance	<u>\$ (28,678)</u>	<u>\$ (34,816)</u>
Amounts recognized in consolidated balance sheets		
Accrued liabilities	\$ (1,706)	\$ (832)
Other long-term liabilities	(26,972)	(33,984)
	<u>\$ (28,678)</u>	<u>\$ (34,816)</u>
Amounts recognized in accumulated other comprehensive income (loss)		
Cumulative actuarial gain (loss)	\$ 7,603	\$ (271)
Prior service credit	11,550	15,031
Total	<u>\$ 19,153</u>	<u>\$ 14,760</u>

Benefit payments, which reflect expected future service, are expected to be paid as follows: \$1.7 million in 2023; \$2.3 million in 2024; \$2.5 million in 2025; \$2.5 million in 2026; \$2.5 million in 2027; and \$12.5 million in 2028 through 2032.

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

	December 31,	
	2022	2021
Discount rate	4.95%-5.10%	2.29% - 3.10%
Current health care trend rate	6.00%-7.00%	6.00% - 7.25%
Ultimate health care trend rate	4.00%-4.00%	4.00% - 4.50%
Year rate reaches ultimate trend rate	2027-2041	2023 - 2041

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

	Years Ended December 31,		
	2022	2021	2020
	(In thousands)		
Service cost – benefit earned during the year	\$ 2,081	\$ 2,324	\$ 1,616
Interest cost on projected benefit obligations	990	782	870
Amortization of prior service credit	(3,472)	(3,481)	(3,481)
Amortization of (gain) loss	32	153	(83)
Net periodic post-retirement credit	<u>\$ (369)</u>	<u>\$ (222)</u>	<u>\$ (1,078)</u>

The components, other than service cost, of our net periodic post-retirement credit are recorded in Other, net on our consolidated statements of operations. 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, 2022, 2021 and 2020 in connection with this plan. The accrued liability reflected on the consolidated balance sheets was \$1.8 million and \$2.3 million at December 31, 2022 and 2021, respectively. As of December 31, 2022, the projected benefit obligation under this plan was \$1.8 million. Annual benefit payments of \$0.2 million are expected to be paid through 2032, 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 \$73.7 million, \$45.0 million and \$43.3 million for the years ended December 31, 2022, 2021 and 2020, 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.

During the year ended December 31, 2022, we recognized a gain of \$15.2 million, which is reflected in our Corporate and Other segment, from the settlement of our business interruption claim related to winter storm Uri that occurred in the first quarter of 2021.

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.

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Pursuant to the Business Combination Agreement, all pre-closing RINs obligations of REH Company's subsidiaries (which are now subsidiaries of HF Sinclair as a result of the HFC Transactions) remain with REH Company. REH Company is required to transfer to HF Sinclair the number of each applicable type of RIN required for REH Company to demonstrate compliance for any pre-closing obligations it retained by the deadlines set forth in the Business Combination Agreement. If REH Company does not deliver all the required RINs by the applicable deadline, then, within five days following the delivery of an invoice therefor, REH Company is required to pay to HF Sinclair the amount of all out-of-pocket costs and expenses incurred by HF Sinclair to comply with REH Company's pre-closing obligations prior to such deadline, including the price of any RINs purchased by HF Sinclair. In relation to this, 2,570,000 shares of HF Sinclair common stock and 5,290,000 HEP common units, in each case, out of the purchase consideration paid to REH Company, are held in escrow to secure REH Company's RINs credit obligations under the Business Combination Agreement. HF Sinclair, and not HEP, would be entitled to the HEP common units held in escrow in the event of REH Company's breach of its RINs credit obligations under the Business Combination Agreement.

During 2017, 2018 and 2019, the EPA granted the Cheyenne Refinery and the refinery in Woods Cross, Utah (the "Woods Cross Refinery") each a one-year small refinery exemption from the Renewable Fuel Standard ("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 Renewable Volume Obligation for the respective years. Upon each exemption granted, we increased our inventory of RINs and reduced our cost of products sold.

On April 7, 2022, the EPA issued a decision reversing the grant of small refinery exemptions for our Woods Cross and Cheyenne refineries for the 2018 compliance year. On June 3, 2022, the EPA issued a decision reversing the grant of small refinery exemptions for our Woods Cross and Cheyenne refineries for the 2016 compliance year and denying small refinery exemption petitions for our Woods Cross and Cheyenne refineries for the 2019 and 2020 compliance years. Various subsidiaries of HollyFrontier are currently pursuing legal challenges to the EPA's decisions to reverse its grant of small refinery exemptions for the 2016 and 2018 compliance years. The first lawsuit, filed against the EPA on May 6, 2022 and currently pending before the U.S. Court of Appeals for the DC Circuit, seeks to have the EPA's reversal of our 2018 small refinery exemption petitions overturned. The second lawsuit, filed against the EPA on August 5, 2022 and currently pending before the U.S. Court of Appeals for the DC Circuit, seeks to have the EPA's reversal of our 2016 small refinery exemption petitions overturned and to have the EPA's denial of our 2019 and 2020 small refinery exemption petitions reversed. In addition, for both the 2016 and 2018 compliance years, pursuant to the June 2022 and April 2022 decisions, respectively, the EPA established an alternative compliance demonstration for small refineries pursuant to which the EPA is not imposing any obligations for the small refineries whose exemptions were reversed. On June 24, 2022, Growth Energy filed two lawsuits in the U.S. Court of Appeals for the DC Circuit against the EPA challenging the alternative compliance demonstration for the 2016 and 2018 compliance years. On July 25, 2022, various subsidiaries of HollyFrontier intervened on behalf of the EPA to aid the defense of the EPA's alternative compliance demonstration decision. It is too early to predict the outcome of these matters. We are unable to estimate the costs we may incur, if any, at this time.

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 we recorded as "Gain on tariff settlement" on our consolidated statements of operations for the year ended December 31, 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 2023 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 2023 through 2040. At December 31, 2022, the minimum future transportation and storage fees under transportation agreements having terms in excess of one year are as follows:

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	(In thousands)
2023	\$ 214,628
2024	215,500
2025	214,560
2026	177,694
2027	175,438
Thereafter	1,161,836
Total	<u>\$ 2,159,656</u>

Transportation and storage costs incurred under these agreements totaled \$180.2 million, \$160.5 million and \$139.0 million for the years ended December 31, 2022, 2021 and 2020, 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.

NOTE 20: Segment Information

Our operations are organized into five reportable segments: Refining, Renewables, Marketing, Lubricants and Specialty Products and HEP. Our operations that are not included in one of these five reportable segments are included in Corporate and Other. Intersegment transactions are eliminated on 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.

As a result of the Sinclair Transactions that closed on March 14, 2022, the operations of the Acquired Sinclair Businesses are reported in the Refining, Renewables, Marketing and HEP segments.

The Refining segment represents the operations of our El Dorado, Tulsa, Navajo and Woods Cross refineries and HF Sinclair Asphalt Company LLC (“Asphalt”). Also, effective with our acquisition that closed on November 1, 2021, the Refining segment includes our Puget Sound refinery, and effective with our acquisition that closed on March 14, 2022, includes our Parco and Casper refineries. Refining activities involve the purchase and refining of crude oil and wholesale 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 Mountains extending into the Pacific Northwest geographic regions of the United States. Asphalt operates various asphalt terminals in Arizona, New Mexico and Oklahoma.

The Renewables segment represents the operations of the Cheyenne renewable diesel unit (“RDU”), which was mechanically complete in the fourth quarter of 2021 and operational in the first quarter of 2022, the pre-treatment unit (“PTU”) at our Artesia, New Mexico facility, which was completed and operational in the first quarter of 2022 and the Artesia RDU, which was completed and operational in the second quarter of 2022. Also, effective with our acquisition that closed on March 14, 2022, the Renewables segment includes the Sinclair RDU.

Effective with our acquisition that closed on March 14, 2022, the Marketing segment includes branded fuel sales to more than 1,300 Sinclair branded sites in the United States and licensing fees for the use of the Sinclair brand at more than 300 additional locations throughout the country. Additionally, the Marketing segment includes branded fuel sales to 131 non-Sinclair branded sites from legacy HollyFrontier agreements.

The Lubricants and Specialty Products segment represents Petro-Canada Lubricants Inc.’s (“PCLI”) 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 the operations of Red Giant Oil Company LLC, one of the largest suppliers of locomotive engine oil in North America. Also, 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.

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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 Mountains geographic regions of the United States. The HEP segment also includes 50% ownership interests in each of the Osage Pipeline, the Cheyenne Pipeline and Cushing Connect, a 25.06% ownership interest in the Saddle Butte Pipeline and a 49.995% ownership interest in the Pioneer Pipeline. 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.

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

The following is a summary of the financial information of our reportable segments reconciled to the amounts reported in the consolidated financial statements.

	<u>Refining</u>	<u>Renewables</u>	<u>Marketing</u>	<u>Lubricants and Specialty Products</u>	<u>HEP</u>	<u>Corporate, Other and Eliminations</u>	<u>Consolidated Total</u>
				(In thousands)			
Year Ended December 31, 2022							
Sales and other revenues:							
Revenues from external customers	\$ 30,379,696	\$ 654,893	\$ 3,911,922	\$ 3,149,128	\$ 109,200	\$ —	\$38,204,839
Intersegment revenues	4,033,213	360,606	—	9,472	438,280	(4,841,571)	—
	<u>\$ 34,412,909</u>	<u>\$ 1,015,499</u>	<u>\$ 3,911,922</u>	<u>\$ 3,158,600</u>	<u>\$ 547,480</u>	<u>\$ (4,841,571)</u>	<u>\$38,204,839</u>
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 28,270,195	\$ 974,167	\$ 3,845,625	\$ 2,333,156	\$ —	\$ (4,743,130)	\$30,680,013
Lower of cost or market inventory valuation adjustment	\$ —	\$ 52,412	\$ —	\$ —	\$ —	\$ —	\$ 52,412
Operating expenses	\$ 1,815,931	\$ 111,974	\$ —	\$ 277,522	\$ 210,623	\$ (81,157)	\$ 2,334,893
Selling, general and administrative expenses	\$ 146,660	\$ 3,769	\$ 2,954	\$ 168,207	\$ 17,003	\$ 87,892	\$ 426,485
Depreciation and amortization	\$ 405,065	\$ 52,621	\$ 17,819	\$ 83,447	\$ 96,683	\$ 1,152	\$ 656,787
Income (loss) from operations	\$ 3,775,058	\$ (179,444)	\$ 45,524	\$ 296,268	\$ 223,171	\$ (106,328)	\$ 4,054,249
Earnings of equity method investments	\$ —	\$ —	\$ —	\$ —	\$ (260)	\$ —	\$ (260)
Capital expenditures	\$ 162,280	\$ 225,274	\$ 9,275	\$ 34,887	\$ 38,964	\$ 53,327	\$ 524,007

HF SINCLAIR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Continued

	Refining	Renewables	Lubricants and Specialty Products	HEP	Corporate, Other and Eliminations ⁽²⁾	Consolidated Total
	(In thousands)					
Year Ended December 31, 2021						
Sales and other revenues:						
Revenues from external customers	\$ 15,734,870	\$ —	\$ 2,550,624	\$ 103,646	\$ 2	\$ 18,389,142
Intersegment revenues	623,688	—	9,988	390,849	(1,024,525)	—
	<u>\$ 16,358,558</u>	<u>\$ —</u>	<u>\$ 2,560,612</u>	<u>\$ 494,495</u>	<u>\$ (1,024,523)</u>	<u>\$ 18,389,142</u>
Cost of products sold (exclusive of lower of cost or market inventory valuation adjustment)	\$ 14,673,062	\$ —	\$ 1,815,802	\$ —	\$ (921,812)	\$ 15,567,052
Lower of cost or market inventory valuation adjustment	\$ (318,353)	\$ 8,739	\$ —	\$ —	\$ (509)	\$ (310,123)
Operating expenses	\$ 1,090,424	\$ 55,353	\$ 252,456	\$ 170,524	\$ (51,279)	\$ 1,517,478
Selling, general and administrative expenses	\$ 127,563	\$ —	\$ 170,155	\$ 12,637	\$ 51,655	\$ 362,010
Depreciation and amortization	\$ 334,365	\$ 1,672	\$ 79,767	\$ 86,998	\$ 737	\$ 503,539
Income (loss) from operations	\$ 451,497	\$ (65,764)	\$ 242,432	\$ 224,336	\$ (103,315)	\$ 749,186
Earnings of equity method investments	\$ —	\$ —	\$ —	\$ 12,432	\$ —	\$ 12,432
Capital expenditures	\$ 160,431	\$ 510,836	\$ 30,878	\$ 88,336	\$ 22,928	\$ 813,409
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)	—
	<u>\$ 9,539,189</u>	<u>\$ —</u>	<u>\$ 1,803,210</u>	<u>\$ 497,848</u>	<u>\$ (656,604)</u>	<u>\$ 11,183,643</u>
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	\$ 3,861	\$ 216,068	\$ 147,692	\$ (55,389)	\$ 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 impairment ⁽¹⁾	\$ 241,760	\$ —	\$ 286,575	\$ 16,958	\$ —	\$ 545,293
Income (loss) from operations	\$ (664,425)	\$ (3,861)	\$ (209,192)	\$ 227,764	\$ (84,029)	\$ (733,743)
Earnings of equity method investments	\$ —	\$ —	\$ —	\$ 6,647	\$ —	\$ 6,647
Capital expenditures	\$ 152,726	\$ 65,147	\$ 32,473	\$ 59,283	\$ 20,531	\$ 330,160

- (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 \$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.

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, 2022.

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 2022 that would need to be reported on Form 8-K that have not previously been reported.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable

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 2023 annual meeting of stockholders 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 2023 annual meeting of stockholders 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 2023 annual meeting of stockholders 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 2023 annual meeting of stockholders 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 2023 annual meeting of stockholders and is incorporated herein by reference.

PART IV

Item 15. Exhibit and Financial Statement Schedules

(a) Documents filed as part of this report

(1) Index to Consolidated Financial Statements

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Consolidated Balance Sheets at December 31, 2022 and 2021	81
Consolidated Statements of Operations for the years ended December 31, 2022, 2021 and 2020	82
Consolidated Statements of Comprehensive Income for the years ended December 31, 2022, 2021 and 2020	83
Consolidated Statements of Cash Flows for the years ended December 31, 2022, 2021 and 2020	84
Consolidated Statements of Equity for the years ended December 31, 2022, 2021 and 2020	85
Notes to Consolidated Financial Statements	86

(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 listed in the Index to Exhibits.

HF SINCLAIR CORPORATION

INDEX TO EXHIBITS

Exhibits are numbered to correspond to the exhibit table
in Item 601 of Regulation S-K

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 HollyFrontier Corporation'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 HollyFrontier Corporation'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 HollyFrontier Corporation'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 HollyFrontier Corporation'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 HollyFrontier Corporation's Current Report on Form 8-K filed November 13, 2018, File No. 1-03876).
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 HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2018. File No. 1-03876).
2.7†	Sale and Purchase Agreement, dated as of May 4, 2021, by and between Equilon Enterprises LLC d/b/a Shell Oil Products US and HollyFrontier Puget Sound Refining LLC (incorporated by reference to Exhibit 2.1 of HollyFrontier Corporation's Current Report on Form 8-K filed May 4, 2021, File No. 1-03876).
2.8†	Waiver and Amendment to Sale and Purchase Agreement, dated as of October 31, 2021, by and among HollyFrontier Puget Sound Refining LLC and Equilon Enterprises LLC d/b/a Shell Oil Products US (incorporated by reference to Exhibit 2.2 of HollyFrontier Corporation's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2021, File No. 1-03876).
2.9†	Business Combination Agreement, dated as of August 2, 2021, by and among HollyFrontier Corporation, Hippo Parent Corporation, Hippo Merger Sub, Inc., The Sinclair Companies, and Hippo Holding LLC (incorporated by reference to Exhibit 2.1 of HollyFrontier Corporation's Current Report on Form 8-K filed August 3, 2021, File No. 1-03876).
2.10†	Amendment to Business Combination Agreement, dated as of March 14, 2022, by and among HollyFrontier Corporation, Hippo Parent Corporation, Hippo Merger Sub, Inc., The Sinclair Companies and Hippo Holding LLC (incorporated by reference to Exhibit 2.1 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-41325).
3.1	Amended and Restated Certificate of Incorporation of HF Sinclair Corporation (incorporated by reference to Exhibit 3.1 of Registrant's Current Report on Form 8-K12B filed March 14, 2022, File No. 1-41325).
3.2	Second Amended and Restated By-Laws of HF Sinclair Corporation (incorporated by reference to Exhibit 3.1 of Registrant's Current Report on Form 8-K filed February 17, 2023, File No. 1-41325).
4.1	Indenture, dated March 22, 2016, between HollyFrontier Corporation and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.1 of HollyFrontier Corporation'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 HollyFrontier Corporation'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 HollyFrontier Corporation's Current Report on Form 8-K dated September 28, 2020, File No. 1-03876).

HF SINCLAIR CORPORATION INDEX TO EXHIBITS

Exhibit Number	Description
4.4	Third Supplemental Indenture, dated April 8, 2022, among HollyFrontier Corporation and Computershare Trust Company, N.A., as agent for Wells Fargo, Bank National Association (incorporated by reference to Exhibit 4.1 of Registrant's Current Report on Form 8-K filed April 8, 2022, File No. 1-41325).
4.5	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).
4.6	Indenture, dated April 8, 2022, 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 April 8, 2022, File No. 1-32225).
4.7	First Supplemental Indenture, dated as of May 22, 2022, among UNEV Pipeline, LLC, Holly Energy Partners, L.P. and Holly Energy Finance Corp. and the other Guarantors party thereto and U.S. Bank Trust Company, National Association, as trustee, related to Holly Energy Partners, L.P.'s 6.375% Senior Notes due 2027 (incorporated by reference to Exhibit 4.9 of Holly Energy Partner, L.P.'s Registration Statement on Form S-3 filed May 23, 2022, File No. 333-265154).
4.8	First Supplemental Indenture, dated as of March 14, 2022, among Sinclair Transportation Company LLC, Sinclair Logistics LLC, Sinclair Pipeline Company LLC, Holly Energy Partners, L.P. and Holly Energy Finance Corp. and the other Guarantors party thereto and U.S. Bank Trust Company, National Association, as trustee, related to Holly Energy Partners, L.P.'s 5.000% Senior Notes due 2028 (incorporated by reference to Exhibit 4.2 of Holly Energy Partners, L.P.'s Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-32225).
4.9	Second Supplemental Indenture, dated as of May 22, 2022, among UNEV Pipeline, LLC, Holly Energy Partners, L.P. and Holly Energy Finance Corp. and the other Guarantors party thereto and U.S. Bank Trust Company, National Association, as trustee, related to Holly Energy Partners, L.P.'s 5.000% Senior Notes due 2028 (incorporated by reference to Exhibit 4.7 of Registrant's Registration Statement on Form S-3 filed May 23, 2022, File No. 333-265154).
4.10	Indenture, dated as of April 27, 2022, among HF Sinclair Corporation and Computershare Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.1 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325).
4.11	First Supplemental Indenture, dated as of April 27, 2022, among HF Sinclair Corporation and Computershare Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.2 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325).
4.12	Form of 2.625% Senior Notes due 2023 (incorporated by reference to Exhibit 4.3 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325 (included in Exhibit 4.2 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325)).
4.13	Form of 5.875% Senior Notes due 2026 (incorporated by reference to Exhibit 4.4 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325 (included in Exhibit 4.2 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325)).
4.14	Form of 4.500% Senior Notes due 2030 (incorporated by reference to Exhibit 4.5 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325 (included in Exhibit 4.2 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325)).
4.15	Registration Rights Agreement, dated as of April 27, 2022, among HF Sinclair Corporation, Scotia Capital (USA) Inc., SMBC Nikko Securities America, Inc. and the additional parties listed thereto (incorporated by reference to Exhibit 4.6 of Registrant's Current Report on Form 8-K filed April 27, 2022, File No. 1-41325).
4.16	Description of Common Stock (incorporated by reference to Exhibit 4.1 of Registrant's Current Report on Form 8-K12B filed March 14, 2022, File No. 1-41325).
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).

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INDEX TO EXHIBITS

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 HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2010, File No. 1-03876).
10.3	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).
10.4	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 HollyFrontier Corporation's Current Report on Form 8-K filed March 16, 2015, File No. 1-03876).
10.5	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 HollyFrontier Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2019, File No. 1-03876).
10.6	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 HollyFrontier Corporation's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020, File No. 1-03876).
10.7	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 HollyFrontier Corporation's Current Report on Form 8-K dated February 11, 2021, File No. 1-03876).
10.8	Twenty-Second Amended and Restated Omnibus Agreement, entered into and effective as of March 14, 2022, by and among HF Sinclair Corporation, Holly Energy Partners, L.P., and certain of their respective subsidiaries (incorporated by reference to Exhibit 10.2 of Registrant's Current Report on Form 8-K12B filed March 14, 2022, File No. 1-41325).
10.9†	Senior Unsecured Multi-Year Revolving Credit Agreement, dated as of April 27, 2022, among HF Sinclair Corporation, as borrower, MUFG Bank, Ltd., 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 April 27, 2022, File No. 1-41325).
10.10	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 HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2015, File No. 1-03876).
10.11	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 HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2016, File No. 1-03876).
10.12	Eighth Amended and Restated Master Throughput Agreement entered into and effective as of March 14, 2022, by and among HollyFrontier Refining & Marketing LLC, Sinclair Oil LLC and Holly Energy Partners - Operating, L.P. (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K12B filed March 14, 2022, File No. 1-41325).
10.13	First Amendment to Eighth Amended and Restated Master Throughput Agreement by and among HollyFrontier Refining & Marketing LLC, Sinclair Oil LLC and Holly Energy Partners – Operating, L.P., dated as of October 28, 2022 (incorporated by reference to Exhibit 10.10 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2022, File No. 1-41325).

HF SINCLAIR CORPORATION INDEX TO EXHIBITS

Exhibit Number	Description
10.14*	Second Amendment to Eighth Amended and Restated Master Throughput Agreement, by and between HF Sinclair Refining & Marketing LLC and Holly Energy Partners – Operating, L.P., dated as of December 22, 2022.
10.15	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 HollyFrontier Corporation's Current Report on Form 8-K filed October 21, 2015, File No. 1-03876).
10.16	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 of HollyFrontier Corporation's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).
10.17	Seventh Amended and Restated Master Lease Agreement entered into and effective as of March 14, 2022, by and among certain subsidiaries of HF Sinclair Corporation and Holly Energy Partners, L.P. (incorporated by reference to Exhibit 10.3 of Registrant's Current Report on Form 8-K12B filed March 14, 2022, File No. 1-41325).
10.18	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 HollyFrontier Corporation's Current Report on Form 8-K filed November 3, 2015, File No. 1-03876).
10.19	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 of the HollyFrontier Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017, File No. 1-03876).
10.20	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 of HollyFrontier Corporation's Current Report on Form 8-K filed October 4, 2016, File No. 1-03876).
10.21	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 of the HollyFrontier Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017, File No. 1-03876).
10.22	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 HollyFrontier Corporation's Current Report on Form 8-K filed November 1, 2018, File No. 1-03876).
10.23	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 of HollyFrontier Corporation's Current Report on Form 8-K filed August 10, 2016, File No. 1-03876).
10.24	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 HollyFrontier Corporation's Current Report on Form 8-K filed November 1, 2018, File No. 1-03876).
10.25	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 HollyFrontier Corporation's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).
10.26	Asset Lease Agreement, entered into as of February 8, 2021, effective as of January 1, 2021, by and between Cheyenne Logistics LLC and Cheyenne Renewable Diesel Company LLC (incorporated by reference to Exhibit 10.4 of HollyFrontier Corporation's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).
10.27	Letter Agreement entered into on 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 10.2 of HollyFrontier Corporation's Current Report on Form 8-K filed February 11, 2021, File No. 1-03876).
10.28†	Stockholders Agreement, dated as of August 2, 2021, by and among Hippo Parent Corporation, The Sinclair Companies, and the stockholders set forth on Schedule I thereto, as may be amended from time to time (incorporated by reference to Exhibit 10.1 of HollyFrontier Corporation's Current Report on Form 8-K filed August 3, 2021, File No. 1-03876).

**HF SINCLAIR CORPORATION
INDEX TO EXHIBITS**

Exhibit Number	Description
10.29	Stock Purchase Agreement, dated as of November 10, 2022, by and among HF Sinclair Corporation and REH Company (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed November 14, 2022, File No. 1-41325).
10.30	Stock Purchase Agreement, dated as of October 3, 2022, by and among HF Sinclair Corporation and REH Company (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed October 4, 2022, File No. 1-41325).
10.31	Stock Purchase Agreement, dated as of September 28, 2022, by and among HF Sinclair Corporation and REH Company (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed September 29, 2022, File No. 1-41325).
10.32	Stock Purchase Agreement, dated as of September 20, 2022, by and among HF Sinclair Corporation and REH Company (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed September 22, 2022, File No. 1-41325).
10.33	Stock Purchase Agreement, dated as of August 24, 2022, by and among HF Sinclair Corporation and REH Company (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed August 25, 2022, File No. 1-41325).
10.34	Stock Purchase Agreement, dated as of August 15, 2022, by and among HF Sinclair Corporation and REH Company (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed August 16, 2022, File No. 1-41325).
10.35	Stock Purchase Agreement, dated as of August 10, 2022, by and among HF Sinclair Corporation and REH Company (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed August 11, 2022, File No. 1-41325).
10.36†	Escrow Agreement, dated as of March 14, 2022, by and among The Sinclair Companies, HF Sinclair Corporation (f/k/a Hippo Parent Corporation), and American Stock Transfer & Trust Company, LLC (incorporated by reference to Exhibit 10.2 of Registrant's Schedule 13D filed March 24, 2022, File No. 5-93610).
10.37	Transition Services Agreement, dated as of March 14, 2022, between HF Sinclair Corporation (f/k/a Hippo Parent Corporation), and The Sinclair Companies (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K/A filed March 16, 2022, File No. 1-41325).
10.38	Assignment and Assumption Agreement entered into and effective as of March 14, 2022, by and between HollyFrontier Corporation and HF Sinclair Corporation (incorporated by reference to Exhibit 10.4 of Registrant's Current Report on Form 8-K12B filed March 14, 2022, File No. 1-41325).
10.39+	Mutual Separation Agreement and Release of Claims by and among HF Sinclair Corporation, HollyFrontier Corporation, Holly Logistic Services, L.L.C., HollyFrontier Payroll Services, Inc., and Holly Energy Partners, L.P., on behalf of themselves and their respective parents, subsidiaries and affiliates and Richard Voliva, dated September 15, 2022 (incorporated by reference to Exhibit 10.9 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2022, File No. 1-41325).
10.40+	Retirement Agreement and Release between HF Sinclair Corporation, HollyFrontier Refining & Marketing LLC, HollyFrontier Renewables Holding Company LLC and HollyFrontier Payroll Services, Inc. and Thomas G. Creery dated July 24, 2022 (incorporated by reference to Exhibit 10.2 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2022, File No. 1-41325).
10.41+	Amendment to Retirement Agreement and Release between HF Sinclair Corporation, HF Sinclair Refining & Marketing LLC, HF Sinclair Renewables Holding Company LLC and HF Sinclair Payroll Services, Inc. and Thomas G. Creery dated January 30, 2023 (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed January 30, 2023, File No. 1-41325).
10.42+	Letter Agreement between HF Sinclair Corporation and Michael C. Jennings dated February 15, 2023 (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed February 15, 2023, File No. 1-41325).
10.43+	Successor Transition Agreement and Release of Claims between HF Sinclair Corporation, HollyFrontier Corporation and HF Sinclair Payroll Services, Inc. and Michael C. Jennings dated February 15, 2023 (incorporated by reference to Exhibit 10.2 of Registrant's Current Report on Form 8-K filed February 15, 2023, File No. 1-41325).

**HF SINCLAIR CORPORATION
INDEX TO EXHIBITS**

Exhibit Number	Description
10.44+	HF Sinclair Corporation 2007 Long-Term Incentive Compensation Plan (formerly named the HollyFrontier Corporation Long-Term Incentive Compensation Plan) (incorporated by reference to Exhibit 10.4 of HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2008, File No. 1-03876).
10.45+	First Amendment to HF Sinclair Corporation 2007 Long-Term Incentive Compensation Plan (formerly named the HollyFrontier Corporation Long-Term Incentive Compensation Plan) (incorporated by reference to Exhibit 10.5 of HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2008, File No. 1-03876).
10.46+	Second Amendment to HF Sinclair Corporation 2007 Long-Term Incentive Compensation Plan (formerly named the HollyFrontier Corporation Long-Term Incentive Compensation Plan) (incorporated by reference to Exhibit 10.1 of HollyFrontier Corporation's Current Report on Form 8-K filed May 18, 2011, File No. 1-03876).
10.47+	Third Amendment to HF Sinclair Corporation 2007 Long-Term Incentive Compensation Plan (formerly named the HollyFrontier Corporation Long-Term Incentive Compensation Plan) (incorporated by reference to Exhibit 4.6 of HollyFrontier Corporation's Registration Statement on Form S-8 filed November 9, 2012, File No. 333-184877).
10.48+	Fourth Amendment to HF Sinclair Corporation 2007 Long-Term Incentive Compensation Plan (formerly named the HollyFrontier Corporation Long-Term Incentive Compensation Plan) (incorporated by reference to Exhibit 10.2 of HollyFrontier Corporation's Current Report on Form 8-K filed May 15, 2015, File No. 1-03876).
10.49+	Fifth Amendment to HF Sinclair Corporation 2007 Long-Term Incentive Compensation Plan (formerly named the HollyFrontier Corporation Long-Term Incentive Plan) (incorporated by reference to Exhibit 10.1 of HollyFrontier Corporation's Current Report on Form 8-K filed May 16, 2016, File No. 1-03876).
10.50+	Sixth Amendment to HF Sinclair Corporation 2007 Long-Term Incentive Compensation Plan (formerly named the HollyFrontier Corporation Long-Term Incentive Compensation Plan) (incorporated by reference to Exhibit 99.8 of Registrant's Registration Statement on Form S-8 filed March 21, 2022, File No. 333-263721).
10.51+	HF Sinclair Corporation Amended and Restated 2020 Long Term Incentive Plan (formerly named the HollyFrontier Corporation 2020 Long Term Incentive Plan) (incorporated by reference to Exhibit 99.1 of Registrant's Registration Statement on Form S-8 filed March 21, 2022, File No. 333-263721).
10.52+	HF Sinclair Corporation 2007 Long-Term Incentive Plan UK Sub-Plan (formerly named the HollyFrontier Corporation Long-Term Incentive Plan UK Sub-Plan) (incorporated by reference to Exhibit 10.11 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-41325).
10.53+	HF Sinclair Corporation 2020 Long-Term Incentive Plan Sub-Plan for UK Employees (formerly named the HollyFrontier Corporation 2020 Long-Term Incentive Plan Sub-Plan for UK Employees) (incorporated by reference to Exhibit 10.12 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-41325).
10.54+	HF Sinclair Corporation Employee Form of Change in Control Agreement (incorporated by reference to Exhibit 10.2 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-41325).
10.55+	Form of Performance Share Unit Agreement (incorporated by reference to Exhibit 10.3 of HollyFrontier Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020, File No. 1-03876).
10.56+	Form of Performance Share Unit Agreement (incorporated by reference to Exhibit 10.41 of HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 1, 2020, File No. 1-03876).
10.57+	Form of Performance Share Unit Agreement (incorporated by reference to Exhibit 10.47 of HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2021, File No. 1-03876).
10.58+	Form of Performance Share Unit Agreement (incorporated by reference to Exhibit 10.13 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-41325).
10.59+*	Form of Performance Share Unit Agreement.
10.60+*	Form of Restricted Stock Unit Agreement (for non-employee directors).
10.61+*	Form of Notice of Grant of Restricted Stock Unit Agreement (for non-employee directors).
10.62+	Form of Restricted Stock Unit Agreement (for employees) (incorporated by reference to Exhibit 10.2 of HollyFrontier Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020, File No. 1-03876).

HF SINCLAIR CORPORATION
INDEX TO EXHIBITS

Exhibit Number	Description
10.63+	Form of Restricted Stock Unit Agreement (for employees) (incorporated by reference to Exhibit 10.49 of HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2020, File No. 1-03876).
10.64+	Form of Notice of Grant of Restricted Stock Units (for employees) (incorporated by reference to Exhibit 10.50 of HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2020, File No. 1-03876).
10.65+	Form of Restricted Stock Units (for employees) (incorporated by reference to Exhibit 10.16 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-41325).
10.66+	Form of Notice of Grant of Restricted Stock Units (for employees) (incorporated by reference to Exhibit 10.17 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-41325).
10.67+*	Form of Restricted Stock Unit Agreement (for employees).
10.68+*	Form of Notice of Grant of Restricted Stock Units (for employees).
10.69+	Form of Restricted Stock Unit Agreement (for employees) (incorporated by reference to Exhibit 10.55 of HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2021, File No. 1-03876).
10.70+	Form of Notice of Grant of Restricted Stock Unit (for employees) (incorporated by reference to Exhibit 10.56 of HollyFrontier Corporation's Annual Report on Form 10-K for its fiscal year ended December 31, 2021, File No. 1-03876).
10.71+*	HF Sinclair Corporation Executive Nonqualified Deferred Compensation Plan (formerly the HollyFrontier Corporation Executive Nonqualified Deferred Compensation Plan).
10.72+*	HF Sinclair Corporation Director's Stock Compensation Deferral Plan (formerly the HollyFrontier Corporation Director's Stock Compensation Deferral Plan).
10.73+	HF Sinclair Corporation Form of Indemnification Agreement to be entered into with officers and directors of HF Sinclair Corporation and its subsidiaries (incorporated by reference to Exhibit 10.1 of Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, File No. 1-41325).
10.74	HF Sinclair Corporation Severance Pay Plan and Summary Plan Description and Form of Participation Agreement, dated as of November 8, 2022 (incorporated by reference to Exhibit 10.1 of Registrant's Current Report on Form 8-K filed November 9, 2022, File No. 1-41325).
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.

HF SINCLAIR CORPORATION
INDEX TO EXHIBITS

Exhibit Number	Description
101++	The following financial information from Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2022, formatted as inline XBRL (Inline Extensible Business Reporting Language): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (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.

**HF SINCLAIR CORPORATION
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.

HF SINCLAIR CORPORATION

(Registrant)

Date: February 28, 2023

/s/ Michael C. Jennings

Michael C. Jennings

Chief Executive Officer

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 and Director	February 28, 2023
<u>/s/ Atanas H. Atanasov</u> Atanas H. Atanasov	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 28, 2023
<u>/s/ Indira Agarwal</u> Indira Agarwal	Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 28, 2023
<u>/s/ Franklin Myers</u> Franklin Myers	Chairman of the Board	February 28, 2023
<u>/s/ Anne-Marie N. Ainsworth</u> Anne-Marie N. Ainsworth	Director	February 28, 2023
<u>/s/ Anna C. Catalano</u> Anna C. Catalano	Director	February 28, 2023
<u>/s/ Leldon Echols</u> Leldon Echols	Director	February 28, 2023
<u>/s/ Manuel J. Fernandez</u> Manuel J. Fernandez	Director	February 28, 2023
<u>/s/ Rhoman J. Hardy</u> Rhoman J. Hardy	Director	February 28, 2023
<u>/s/ R. Craig Knocke</u> R. Craig Knocke	Director	February 28, 2023
<u>/s/ Robert J. Kostelnik</u> Robert J. Kostelnik	Director	February 28, 2023
<u>/s/ James H. Lee</u> James H. Lee	Director	February 28, 2023
<u>/s/ Ross B. Matthews</u> Ross B. Matthews	Director	February 28, 2023
<u>/s/ Norman J. Szydlowski</u> Norman J. Szydlowski	Director	February 28, 2023
<u>/s/ Timothy Go</u> Timothy Go	Director, President and Chief Operating Officer	February 28, 2023

Corporate Information

Corporate Officers

Michael C. Jennings

Chief Executive Officer

Timothy Go

President and Chief Operating Officer

Atanas H. Atanasov

Executive Vice President and
Chief Financial Officer

Vaishali S. Bhatia

Executive Vice President,
General Counsel and Secretary

Steven C. Ledbetter

Executive Vice President, Commercial

Valerie Pompa

Executive Vice President, Operations

Board Of Directors

Franklin Myers

Chairperson of the Board of
HF Sinclair Corporation

Michael C. Jennings

Chief Executive Officer of HF Sinclair
Corporation and Chairperson of the
Board and Chief Executive Officer
and President of Holly Logistic
Services, L.L.C.

Anne-Marie N. Ainsworth

Former President and Chief Executive
Officer of the general partner of
Oiltanking Partners, L.P. and of
Oiltanking Holding Americas, Inc.

Anna C. Catalano

Former Group Vice President,
Marketing of BP plc

Leldon E. Echols

Former Executive Vice President
and Chief Financial Officer of
Centex Corporation

Manuel J. Fernandez

Former Managing Partner of the
Dallas office and Market Leader for
the Southwest Region of KPMG

Timothy Go

President and Chief Operating Officer
of HF Sinclair Corporation

Rhoman J. Hardy

Former Senior Vice President,
Shell Chemicals and Products,
U.S. Gulf Coast, Shell USA, Inc.

R. Craig Knocke

Director of Turtle Creek Trust
Company, Chief Investment Manager
and Portfolio Manager of Turtle
Creek Management, LLC and Principal
and a non-controlling manager and
member of TCTC Holdings, LLC.

Robert J. Kostelnik

Principal at Glenrock Recovery
Partners, LLC

James H. Lee

Managing General Partner and
Principal Owner of Lee, Hite &
Wisda Ltd.

Ross B. Matthews

Chief Operating Officer of
REH Company (formerly known
as The Sinclair Companies)

Norman J. Szydlowski

Former President, CEO and
Director of SemGroup Corporation

Corporate Office

HF Sinclair Corporation
2828 North Harwood, Suite 1300
Dallas, Texas 75201-1507
214.871.3555
www.HFSinclair.com

Auditors

Ernst & Young LLP | Dallas, Texas

Stock Exchange Listing

New York Stock Exchange Ticker Symbol:
DINO

Stock Transfer Agent and Registrar

EQ Shareowner Services
1110 Centre Point Curve, Suite 101
Mendota Heights, Minnesota 55120
1.800.401.1957
www.shareowneronline.com

Correspondence or questions concerning
share holdings, transfers, lost certificates,
dividends, or address or registration
changes should be directed to EQ
Shareowner Services.

Annual Meeting

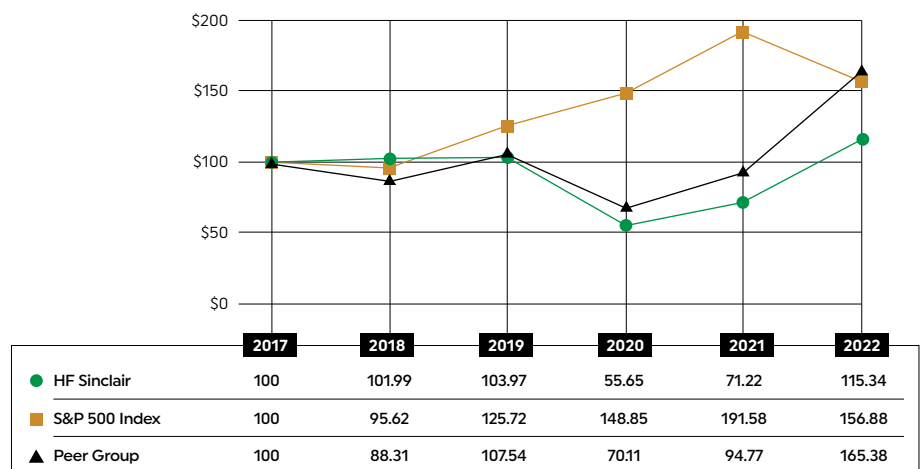
The Annual Meeting of Stockholders
will be held at 8:30 a.m. Central Daylight
Time, on May 24, 2023, in a virtual meeting
format only via live audio webcast at www.virtualshareholdermeeting.com/DINO2023.

SEC Filings

A direct link to the filings of HF Sinclair
Corporation at the U.S. Securities and
Exchange Commission website is available
on the HF Sinclair Corporation website,
www.HFSinclair.com, on the Investor
Relations page.

Stock Performance

Set forth is a line graph comparing, for the period commencing December 31, 2017, and ending December 31, 2022, the annual percentage change in cumulative total stockholder return on HF Sinclair Corporation common stock to the cumulative total stockholder return of the S&P Composite 500 Stock Index and an industry peer group chosen by the Company. The stock price performance depicted in the following graph is not necessarily indicative of future price performance of HF Sinclair common stock. The graph will not be deemed to be incorporated by reference in any filing by the Company under the Securities Act of 1933 or the Securities Exchange of 1934, except to the extent that the Company specifically incorporates such graph by reference. The amounts shown assume that the value of the investment in HF Sinclair Corporation and each index was \$100 on December 31, 2017, and that all dividends were reinvested.



The Peer Group consists of CVR Energy, Inc., Delek US Holdings, Inc., Marathon Petroleum Corporation, PBF Energy Inc., Phillips 66 and Valero Energy Corporation.

