Valero Energy Corporation Annual Report 2024

Form 10-K (NYSE:VLO)

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2023

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 001-13175

Valero

VALERO ENERGY CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**74-1828067**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

One Valero Way
San Antonio, Texas 78249
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(210) 345-2000**

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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	VLO	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None.

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 Act). Yes ☐ No ☑

The aggregate market value of the voting and non-voting common stock held by non-affiliates was approximately $ 41.4 billion based on the last sales price quoted as of June 30, 2023 on the New York Stock Exchange, the last business day of the registrant's most recently completed second fiscal quarter.

As of February 16, 2024, 332,481,908 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

We intend to file with the Securities and Exchange Commission a definitive Proxy Statement for our Annual Meeting of Stockholders scheduled for May 15, 2024, at which directors will be elected. Portions of the 2024 Proxy Statement are incorporated by reference in PART III of this Form 10-K and are deemed to be a part of this report.

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The terms “Valero,” “we,” “our,” and “us,” as used in this report, may refer to Valero Energy Corporation, one or more of its consolidated subsidiaries, or all of them taken as a whole. The term “DGD,” as used in this report, may refer to Diamond Green Diesel Holdings LLC, its wholly owned consolidated subsidiary, or both of them taken as a whole. In this Form 10-K, we make certain forward-looking statements, including statements regarding our plans, strategies, objectives, expectations, intentions, and resources under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. You should read our forward-looking statements together with our disclosures beginning on page 39 of this report under the heading “CAUTIONARY STATEMENT FOR THE PURPOSE OF SAFE HARBOR PROVISIONS OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995.” Note references in this report to Notes to Consolidated Financial Statements can be found beginning on page 77, under “ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.”

PART I

ITEMS 1. and 2. BUSINESS AND PROPERTIES

OUR BUSINESS

We are a Fortune 500 company based in San Antonio, Texas. Our corporate offices are at One Valero Way, San Antonio, Texas, 78249, and our telephone number is (210) 345-2000. We were incorporated in Delaware in 1981 under the name Valero Refining and Marketing Company. We changed our name to Valero Energy Corporation in 1997. Our common stock trades on the New York Stock Exchange (NYSE) under the trading symbol “VLO.”

We are a multinational manufacturer and marketer of petroleum-based and low-carbon liquid transportation fuels and petrochemical products, and we sell our products primarily in the United States (U.S.), Canada, the United Kingdom (U.K.), Ireland, and Latin America. We own 15 petroleum refineries located in the U.S., Canada, and the U.K. with a combined throughput capacity of approximately 3.2 million barrels per day (BPD). We are a joint venture member in DGD[1], which owns two renewable diesel plants located in the Gulf Coast region of the U.S. with a combined production capacity of approximately 1.2 billion gallons per year, and we own 12 ethanol plants located in the Mid-Continent region of the U.S. with a combined production capacity of approximately 1.6 billion gallons per year. We manage our operations through our Refining, Renewable Diesel, and Ethanol segments. See “OUR OPERATIONS” below for additional information about the operations, products, and properties of each of our reportable segments.

OUR COMPREHENSIVE LIQUID FUELS STRATEGY

Overview

We strive to manage our business to responsibly meet the world’s growing demand for reliable and affordable energy. We believe that liquid transportation fuels—both petroleum-based and low-carbon—help meet that demand, and we expect that they will continue to be an essential source of transportation fuels well into the future. Our strategic actions have enabled us to be a low-cost, efficient, and reliable supplier of these liquid transportation fuels to much of the world.

[1] DGD is a joint venture with Darling Ingredients Inc. (Darling) and we consolidate DGD’s financial statements. See Note 12 of Notes to Consolidated Financial Statements regarding our accounting for DGD.

Most of our petroleum refineries operate in locations with current operating cost and/or other advantages, as described below under "OUR OPERATIONS—*Refining*," and we believe our refineries are positioned to meet the strong worldwide demand for petroleum-based products. Through our refining business, we believe that we have developed expertise in liquid fuels manufacturing and a platform for the marketing and distribution of liquid fuels, and we seek to leverage this expertise and platform to expand and optimize our low-carbon fuels businesses. We expect that low-carbon liquid fuels will continue to be a growing part of the energy mix, and we have made multibillion-dollar investments to develop and grow our low-carbon renewable diesel and ethanol businesses, as described below under "OUR OPERATIONS—*Renewable Diesel*," and "*—Ethanol*." These businesses have made us the world's largest producer of low-carbon transportation fuels and have helped governments across the world achieve their greenhouse gas (GHG) emissions reduction targets, and we continue to seek low-carbon fuel opportunities.

Regulations, Policies, and Standards Driving Low-Carbon Fuel Demand

Governments across the world 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. These regulations, policies, and standards include, but are not limited to, the RFS, LCFS, CFR, and similar programs (collectively, the Renewable and Low-Carbon Fuel Programs). These programs are defined and discussed below under "U.S. Environmental Protection Agency (EPA) Renewable Fuel Standard (RFS) Program," "California Low Carbon Fuel Standard (LCFS)," and "Canada Low-Carbon Fuel Programs." While many of these regulations, policies, and standards result in additional costs to our refining business, they have created opportunities for us to develop our low-carbon fuel businesses, and they should continue to help drive the demand for our low-carbon fuels (such as renewable diesel, ethanol, and other low-carbon fuel products). We believe that our ability to supply these low-carbon fuels can play an important role in helping achieve GHG emissions reduction targets in a reliable manner.

The U.S., California, and Canada low-carbon fuel regulations, policies, and standards discussed below currently have the most significant impact on our business. However, other municipal, state, and national governments across the world, including in many of the jurisdictions in which we operate, have issued, or are considering issuing, similar low-carbon fuel regulations, policies, and standards. See "ITEM 1A. RISK FACTORS—Legal, Government, and Regulatory Risks— *We are subject to risks arising from the Renewable and Low-Carbon Fuel Programs, and other regulations, policies, international certifications, and standards impacting the demand for and traceability of low-carbon fuels*." In addition, see Note 1 of Notes to Consolidated Financial Statements regarding our accounting for the costs of the blending programs under "Costs of Renewable and Low-Carbon Fuel Programs," Note 20 for disclosure of the costs of the blending programs under "Renewable and Low-Carbon Fuel Programs Price Risk," and Note 17 for disclosure of our blender's tax credits under "*Segment Information*."

U.S. Environmental Protection Agency (EPA) Renewable Fuel Standard (RFS) Program

The EPA created the RFS program pursuant to the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007. Under the RFS program, by November 30 of each year, the EPA is required to set annual quotas for the volume of renewable fuels that must be blended into petroleum-based transportation fuels consumed in the U.S. The quotas are set by class of renewable fuel (i.e., biomass-based diesel, cellulosic biofuel, advanced biofuel, and total renewable fuel) and are collectively referred to as the renewable volume obligation (RVO). The RVO must be met by obligated parties, who are the producers and importers of the petroleum-based transportation fuels consumed in the U.S. Obligated parties demonstrate compliance annually by retiring the appropriate number of renewable identification numbers (RINs) associated with each class of renewable fuel to satisfy their RVO. A RIN is effectively a compliance credit that is assigned to each gallon of qualifying renewable fuel produced in, or

imported into, the U.S. RINs are obtained by blending those renewable fuels into petroleum-based transportation fuels, and obligated parties can also achieve compliance by purchasing RINs in the open market.

We are an obligated party under this program and our Refining segment incurs obligations as a result of being a producer and importer of petroleum-based transportation fuels consumed in the U.S., but we also generate RINs under this program as a result of being a producer of qualifying renewable fuels through our Renewable Diesel and Ethanol segments. Therefore, there is a cost to our refining business from this program because in order to comply with our RVO we must either purchase qualifying renewable fuels for blending or purchase RINs in the open market, but we also generate revenue through our Renewable Diesel and Ethanol segments from this program because we produce and sell qualifying renewable fuels.

California Low Carbon Fuel Standard (LCFS)

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. The 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. CIs are determined using a CARB-developed life cycle GHG emissions analysis model, and CI pathways are certified by the CARB after low-carbon fuel producers submit operational data to demonstrate the life cycle GHG emissions. The certified CIs for both low-carbon and petroleum-based fuels are compared to a declining annual benchmark. Fuels below the benchmark generate credits, while fuels above the benchmark generate deficits. The lower the fuel's CI score compared to the benchmark, the greater number of credits generated. 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.

Our Refining segment produces and imports petroleum-based transportation fuels in California and thus must blend low-CI fuels or purchase credits to meet the CI benchmark. However, fuels produced by our Renewable Diesel and Ethanol segments 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 products. In addition, the demand for some of these low-carbon transportation fuels tends to drive higher values for those fuels compared to petroleum-based transportation fuels due to their lower CI scores. We seek to pursue opportunities to further lower the CI of many of our products, including our low-carbon fuels. See "*Our Low-Carbon Projects*" below.

Canada Low-Carbon Fuel Programs

In July 2022, Canada's federal environmental agency issued the Clean Fuel Regulations (CFR) program to require primary suppliers of gasoline or diesel that is produced in or imported into Canada to reduce the CI of those products. Annual CI reduction requirements prescribed by the CFR program can be satisfied by using compliance credits that a primary supplier creates (through blending low CI fuels) or that are purchased by them. The obligation to achieve prescribed CI reduction requirements began on July 1, 2023. The CFR program is in addition to Canada's provincial programs (such as in Quebec and Ontario), which require the utilization of low-carbon fuels, and is similar to the LCFS program.

As a primary supplier of gasoline and diesel in Canada, our Refining segment is subject to Canada's low-carbon fuel programs described above and thus must blend low-CI fuels or purchase credits to meet the

annual CI reduction requirements. As noted above under "California Low Carbon Fuel Standard (LCFS)," fuels produced by our Renewable Diesel and Ethanol segments have lower CI scores than traditional petroleum-based transportation fuels, and we benefit from the increased demand for these low-carbon products as a result of Canada's low-carbon fuel programs.

U.S. Federal Tax Incentives

The U.S. federal government has enacted tax incentives to encourage the production of low-carbon fuels and/or reduce GHG emissions. 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 Renewable Diesel 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 (the IRA) extends Section 6426 through December 31, 2024 and then replaces it with Section 45Z of the Code, which provides a clean fuel production credit for years 2025 through 2027. Tax credits will be able to be claimed under Section 45Z for the production and sale of clean fuels (such as biodiesel, renewable diesel, and alternative fuels, including sustainable aviation fuel (SAF)).[2] In addition, Section 45Q of the Code provides federal income tax credits to certain taxpayers who capture and sequester, store, or use qualified carbon oxides (e.g., carbon dioxide).

We continually evaluate such federal tax incentives, and may strategically pursue certain opportunities to optimize the potential benefits therefrom. For example, as discussed below under "*Our Low-Carbon Projects,*" the carbon capture and sequestration projects under evaluation at certain of our ethanol plants would be expected to increase the value of the ethanol product produced at those plants by helping to decrease its CI score and through the expected generation of Section 45Q tax credits. Our recently announced SAF project is expected to produce low-carbon jet fuel and generate Section 45Z tax credits, which should increase the value of that product.

Our Low-Carbon Projects

As of December 31, 2023, we have invested $5.4 billion[3] in our low-carbon fuels businesses, and we expect additional growth opportunities in this area. We completed the expansion of DGD's first renewable diesel plant in 2021 and, in the fourth quarter of 2022, we completed construction of DGD's second renewable diesel plant. These expansions increased DGD's combined production capacity of renewable diesel to approximately 1.2 billion gallons per year and renewable naphtha to approximately 50 million gallons per year. See "OUR OPERATIONS— *Renewable Diesel*" below for additional information about the expansion of our renewable diesel business.

In January 2023, we announced that DGD approved a large-scale SAF project. The project remains on schedule with completion expected in the first quarter of 2025 for a total cost of $315 million, with half of

[2] DGD expects to produce synthetic paraffinic kerosene (SPK), a renewable blending component, using the Hydrotreated Esters and Fatty Acids (HEFA) process. SPK is also commonly referred to as "SAF" or "neat SAF." Current aviation regulations allow SPK to be blended up to 50 percent with conventional jet fuel for use in an aircraft. This blend is commonly referred to as "SAF" or "blended SAF." This document refers to both SPK and blended SAF as SAF.

[3] Our investment in our low-carbon fuels businesses consists of $3.6 billion in capital investments to build our renewable diesel business (including SAF), and $1.8 billion to build our ethanol business. Capital investments in renewable diesel represent 100 percent of the capital investments made by DGD. See also "ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS—LIQUIDITY AND CAPITAL RESOURCES—*Our Capital Resources*—Capital Investments," which is incorporated by reference into this item for our definition of capital investments.

the cost attributable to us. Upon completion, the DGD Port Arthur Plant (as defined below under "OUR OPERATIONS—*Renewable Diesel*") will have the optionality to upgrade approximately 50 percent of its current 470 million gallon renewable diesel annual production capacity to SAF. With the completion of this project, DGD is expected to become one of the largest manufacturers of SAF in the world. The production of a lower CI jet fuel should result in the generation of Section 45Z tax credits and a higher value for this product.

We previously announced our participation in a then-proposed large-scale carbon capture and sequestration pipeline system with Navigator Energy Services (Navigator) in the Mid-Continent region of the U.S. that was expected to capture, transport, and store carbon dioxide that results from the ethanol manufacturing process at our eight ethanol plants located in Iowa, Minnesota, Nebraska, and South Dakota. In October 2023, Navigator announced that it decided to cancel this project.

We continue to evaluate investments in economic, low-carbon projects, including carbon capture and sequestration, low-carbon hydrogen, and alcohol-to-jet fuel, that are intended to lower the CI of our products. For example, certain of our ethanol plants are located near geology believed to be suitable for sequestering carbon dioxide, and we are evaluating stand-alone projects to sequester carbon dioxide that results from the ethanol manufacturing process at those plants. We also continue to evaluate various other projects to sequester carbon dioxide.

See "ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS—LIQUIDITY AND CAPITAL RESOURCES— *Our Capital Resources*—Capital Investments" for further discussion of our capital investments associated with low-carbon projects.

ENVIRONMENTAL MANAGEMENT SYSTEMS

We have well-developed management structures that are central to our decision making and risk management, including three programs that support our environmental management as follows:

- Our Commitment to Excellence Management System (CTEMS) is a proprietary systematic approach to planning, executing, checking, and acting to improve everyday work activities at many of our refineries and plants. CTEMS has nine major elements: leadership accountability, protecting people and the environment, people and skills development, operations reliability and mechanical integrity, technical excellence and knowledge management, change management, business competitiveness, external stakeholder relationships, and assurance and review. Risks related to regulatory issues and physical threats to our refineries and plants are among those assessed as we implement CTEMS.

- Environmental Excellence and Risk Assessment (EERA) elevates the environmental audit and compliance functions to an environmental excellence vision. Its main goal is to assess the design and effectiveness of environmental performance regarding specific excellence objectives, and to facilitate continuous improvement across our operations. EERA defines more than 100 expectations and involves a proprietary five-step process using due diligence on data and field assessments reviewed by a combination of external and internal subject matter experts.

- Our Fuels Management System (FMS) provides operational safeguards, software, training, and protocols for uniformity across our refineries and plants to reinforce our compliance with applicable fuels regulations. Built on the success of FMS, our Low Carbon Assurance Program

(LCAP) was implemented to further delineate and strengthen our internal processes to assure compliance with applicable low-carbon fuels regulations, policies, and standards. LCAP defines key regulatory requirements, management expectations, and internal regulatory assurances relating to transportation fuels regulated by low-carbon fuels regulations, policies, and standards.

OUR OPERATIONS

Our operations are managed through the following reportable segments:

- our *Refining* segment, which includes the operations of our petroleum refineries, the associated activities to market our refined petroleum products, and the logistics assets that support those operations;

- our *Renewable Diesel* segment, which includes the operations of DGD and the associated activities to market renewable diesel and renewable naphtha; and

- our *Ethanol* segment, which includes the operations of our ethanol plants and the associated activities to market our ethanol and co-products.

Financial information about these segments is presented in Note 17 of Notes to Consolidated Financial Statements, which is incorporated by reference into this item.

See "ITEM 1A. RISK FACTORS—Risks Related to Our Business, Industry, and Operations—*Our financial results are affected by volatile margins, which are dependent upon factors beyond our control, including the price of feedstocks and the market price at which we can sell our products*,"—"*We are subject to risks arising from industry and market developments that could decrease the demand for our products*,"—"*We are subject to risks arising from the potential disruption of our ability to obtain feedstocks*,"—"*Our investments in joint ventures and other entities decrease our ability to manage risk*," and —"Legal, Government, and Regulatory Risks—*We are subject to risks arising from the Renewable and Low-Carbon Fuel Programs, and other regulations, policies, international certifications, and standards impacting the demand for and traceability of low-carbon fuels*," which are incorporated by reference into this item.

Refining

Refineries

Overview

Our 15 petroleum refineries are located in the U.S., Canada, and the U.K., and they have a combined feedstock throughput capacity of approximately 3.2 million BPD. The following table presents the locations of these refineries and their feedstock throughput capacities as of December 31, 2023.

Refinery	Location	Throughput Capacity (a) (BPD)
U.S.:		
Benicia	California	170,000
Wilmington	California	135,000
Meraux	Louisiana	135,000
St. Charles	Louisiana	340,000
Ardmore	Oklahoma	90,000
Memphis	Tennessee	195,000
Corpus Christi (b)	Texas	370,000
Houston	Texas	255,000
McKee	Texas	200,000
Port Arthur	Texas	410,000
Texas City	Texas	260,000
Three Rivers	Texas	100,000
Canada:		
Quebec City	Quebec	235,000
U.K.:		
Pembroke	Wales	270,000
Total		3,165,000

(a) Throughput capacity represents estimated capacity for processing crude oil, intermediates, and other feedstocks. Total estimated crude oil capacity is approximately 2.6 million BPD.
(b) Represents the combined capacities of two refineries – the Corpus Christi East and Corpus Christi West Refineries.

- *California*
  - *Benicia Refinery*. Our Benicia Refinery is located northeast of San Francisco on the Carquinez Straits of San Francisco Bay. It processes sour crude oils into California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) and Conventional Blendstock for Oxygenate Blending (CBOB) gasolines, CARB diesel, diesel, jet fuel, and asphalt. Gasoline production is primarily CARBOB, which meets CARB specifications when blended with ethanol. The refinery receives feedstocks via a marine dock and pipelines and distributes most of its products via pipeline and truck.

  - *Wilmington Refinery*. Our Wilmington Refinery is located near Los Angeles. It processes a blend of heavy and high-sulfur crude oils and produces CARBOB and CBOB gasolines, CARB diesel, diesel, jet fuel, and asphalt. The refinery receives feedstocks via pipelines connected to marine terminals and docks and distributes its products via pipeline to various terminals.

- *Louisiana*
  - *Meraux Refinery*. Our Meraux Refinery is located approximately 15 miles southeast of New Orleans on the Mississippi River. It processes sour and sweet crude oils and produces gasoline, diesel, jet fuel, and high-sulfur fuel oil. The refinery receives feedstocks at its dock and has access to the Louisiana Offshore Oil Port and distributes its products via its dock and the Colonial Pipeline. The refinery is located about 40 miles from our St. Charles Refinery, allowing for integration of feedstocks and refined petroleum product blending.

  - *St. Charles Refinery*. Our St. Charles Refinery is located approximately 25 miles west of New Orleans on the Mississippi River. It processes sour crude oils and other feedstocks and produces gasoline and diesel. The refinery receives feedstocks via its docks and has access to the Louisiana Offshore Oil Port and distributes its products via its docks and our Parkway Pipeline and the Bengal Pipeline, both of which access the Plantation Pipeline and Colonial Pipeline.

- *Oklahoma*
  - *Ardmore Refinery*. Our Ardmore Refinery is located approximately 100 miles south of Oklahoma City. It processes primarily sweet crude oils and produces gasoline and diesel. The refinery receives feedstocks via pipelines and distributes its products via rail, truck, and the Magellan Pipeline system.

- *Tennessee*
  - *Memphis Refinery*. Our Memphis Refinery is located on the Mississippi River. It processes primarily sweet crude oils and produces gasoline, diesel, and jet fuel. The refinery receives feedstocks via the Diamond Pipeline, the Dakota Access Pipeline, and barge and distributes its products via truck, barge, and the Shorthorn Pipeline.

- *Texas*
  - *Corpus Christi East and West Refineries*. Our Corpus Christi East and West Refineries are located on the Corpus Christi Ship Channel. The East Refinery processes sour crude oil and the West Refinery processes sweet crude oil, sour crude oil, and residual fuel oil, and both refineries produce gasoline, aromatics, jet fuel, diesel, and asphalt. The refineries receive feedstocks via docks on the Corpus Christi Ship Channel and pipelines. The refineries' physical locations allow for the transfer of various feedstocks and blending components between them. The refineries distribute their products via truck, ship, barge, and pipeline.

  - *Houston Refinery*. Our Houston Refinery is located on the Houston Ship Channel. It processes sweet crude and intermediate oils and produces gasoline, jet fuel, and diesel. The refinery receives feedstocks via pipeline, ship, and barge and distributes its products via pipeline, including the Colonial Pipeline and Explorer Pipeline.

  - *McKee Refinery*. Our McKee Refinery is located in the Texas Panhandle. It processes primarily sweet crude oils and produces gasoline, diesel, jet fuel, and asphalt. The refinery receives feedstocks via pipeline and distributes its products primarily via pipeline and rail.

  - *Port Arthur Refinery*. Our Port Arthur Refinery is located on the Texas Gulf Coast approximately 90 miles east of Houston. It processes heavy sour crude oils and other feedstocks and produces gasoline, diesel, jet fuel, and residual fuel oil. The refinery receives feedstocks via rail, ship, barge, and pipeline and distributes its products via pipeline, including the Colonial Pipeline and

Explorer Pipeline, and via ship and barge. The refinery's new coker was completed in the second quarter of 2023.

- *Texas City Refinery*. Our Texas City Refinery is located southeast of Houston on the Texas City Ship Channel. It processes crude oils and produces gasoline, diesel, and jet fuel. The refinery receives feedstocks via pipeline and by ship and barge using docks on the Texas City Ship Channel and distributes its products via ship and barge, as well as via pipeline, including the Colonial Pipeline and Explorer Pipeline.

- *Three Rivers Refinery*. Our Three Rivers Refinery is located in South Texas between Corpus Christi and San Antonio. It primarily processes sweet crude oils and produces gasoline, diesel, jet fuel, and aromatics. The refinery receives feedstocks via pipeline and truck and distributes its products primarily via pipeline.

- *Canada*
  - *Quebec Refinery*. Our Quebec Refinery is located in Lévis (near Quebec City). It processes sweet crude oils and produces gasoline, diesel, jet fuel, heating oil, and low-sulfur fuel oil. The refinery receives feedstocks via ship at its marine dock on the St. Lawrence River (some of which is sourced from our crude oil terminal in Montreal that receives crude oil from western Canada) and distributes its products via our pipeline to our Montreal East terminal and other terminals and via rail, ship, and truck.

- *U.K.*
  - *Pembroke Refinery*. Our Pembroke Refinery is located in the County of Pembrokeshire in South West Wales. It processes primarily sweet crude oils and produces gasoline, diesel, jet fuel, heating oil, and low-sulfur fuel oil. The refinery receives its feedstocks via ship and barge through docks on the Milford Haven Waterway and distributes its products via ship, barge, truck, and our Mainline Pipeline.

Feedstock Supply

Our crude oil and other feedstocks are purchased through a combination of term and spot contracts. Our term supply contracts are at market-related prices and feedstocks are purchased directly or indirectly from various national oil companies as well as international and U.S. oil companies. The contracts generally permit the parties to amend the contracts (or terminate them), effective as of the next scheduled renewal date, by giving the other party proper notice within a prescribed period of time (e.g., 60 days, 6 months) before expiration of the current term. The majority of the crude oil purchased under our term contracts is purchased at the producer's official stated price (i.e., the "market" price established by the seller for all purchasers) and not at a negotiated price specific to us.

Marketing

Overview

We sell refined petroleum products in both the wholesale rack and bulk markets. These sales include products that are manufactured in our refining operations, as well as products purchased or received on exchange from third parties. Most of our refineries have access to marine facilities, and they interconnect with common-carrier pipeline systems, allowing us to sell products in the U.S., Canada, the U.K., Ireland, Latin America, and other parts of the world.

Wholesale Rack Sales

We sell our products on a wholesale basis through an extensive rack marketing network. The principal purchasers of our products from terminal truck racks are wholesalers, distributors, retailers, and truck-delivered end users throughout the U.S., Canada, the U.K., Ireland, and Latin America.

The majority of our rack volume is sold through unbranded channels. The remainder is sold to distributors and dealers that are members of the Valero family of brands that operate branded sites in the U.S., Canada, the U.K., Ireland, and Mexico. These sites are independently owned and are supplied by us under multi-year contracts. Approximately 7,000 outlets carry our brand names. For branded sites, products are sold under the Valero®, Beacon®, Diamond Shamrock®, and Shamrock® brands in the U.S., the Ultramar® brand in Canada, the Valero® and Texaco® brands in the U.K. and Ireland, and the Valero® brand in Mexico.

Bulk Sales

We also sell our products through bulk sales channels in the U.S. and international markets. Our bulk sales are made to various petroleum companies, traders, and bulk end users, such as railroads, airlines, and utilities. Our bulk sales are distributed primarily via pipeline, ship, and barge to major tank farms and trading hubs.

Logistics

We own logistics assets (crude oil pipelines, product pipelines, terminals, tanks, marine docks, truck rack bays, and other assets) that support our refining operations and export capabilities. Demand for transportation fuels in Latin America is expected to continue to grow. To support our wholesale rack operations in Latin America, we have invested in or grown our access to terminals in Mexico and Peru. Our U.S. Gulf Coast refineries are well positioned to support export growth to Latin America, and all of our refineries with waterborne access are well positioned to support export growth in other countries around the world.

Renewable Diesel

Our Relationship with DGD

DGD is a joint venture that we consolidate. We entered into the DGD joint venture in 2011 and it began operations in 2013. See Note 12 of Notes to Consolidated Financial Statements regarding our accounting for DGD. We operate DGD's renewable diesel plants and perform certain management functions for DGD as an independent contractor under an agreement with DGD.

Renewable Diesel Plants

DGD owns two renewable diesel plants. The first DGD plant began operations in 2013 and is located next to our St. Charles Refinery (the DGD St. Charles Plant). The second DGD plant commenced operations in the fourth quarter of 2022 and is located next to our Port Arthur Refinery (the DGD Port Arthur Plant, and together with the DGD St. Charles Plant, the DGD Plants). The DGD Plants produce renewable diesel and renewable naphtha. Renewable diesel is a low-carbon liquid transportation fuel that is interchangeable with petroleum-based diesel. Renewable naphtha is used to produce renewable gasoline and renewable plastics. These products are produced from waste and renewable feedstocks using a pre-treatment process and an advanced hydroprocessing-isomerization process. The market value of the renewable diesel can vary based on regional policies, feedstock preferences, and CI scores. Waste feedstocks (predominantly animal fats, used cooking oils, and inedible distillers corn oils) are the preferred feedstocks due to their lower CI scores; however, vegetable oils and other renewable feedstocks are also used. While several other companies have made, or have announced interest in making, investments in renewable diesel projects, the DGD Plants are currently two of only a small number of operational facilities that have the capacity to process 100 percent waste and renewable feedstocks, and this feedstock flexibility currently provides a margin advantage.

The DGD Plants receive waste and renewable feedstocks primarily by rail, trucks, ships, and barges owned by third parties. DGD is party to a raw material supply agreement with Darling under which Darling is obligated to offer to DGD a portion of its feedstock requirements at market pricing, but DGD is not obligated to purchase all or any part of its feedstock from Darling. Therefore, DGD pursues the most optimal feedstock supply available.

DGD began an expansion of the DGD St. Charles Plant in 2019 and operations commenced in the fourth quarter of 2021. This expansion increased the DGD St. Charles Plant's renewable diesel production capacity by approximately 410 million gallons per year, which, at that time, brought DGD's renewable diesel production capacity to approximately 700 million gallons per year, and provided DGD with the ability to produce approximately 30 million gallons per year of renewable naphtha.

The DGD Port Arthur Plant, which has a production capacity of approximately 470 million gallons of renewable diesel and approximately 20 million gallons of renewable naphtha per year, commenced operations in the fourth quarter of 2022. DGD's combined renewable diesel and renewable naphtha production capacities increased to approximately 1.2 billion gallons and 50 million gallons, respectively, per year.

Marketing

DGD sells renewable diesel and renewable naphtha under the Diamond Green Diesel® brand primarily to be blended with petroleum-based diesel and gasoline, respectively, and to end users for use in their operations. DGD distributes its renewable diesel and renewable naphtha via ship and rail domestically and to international markets.

Ethanol

Ethanol Plants

Our ethanol business began in 2009 with the purchase of our first ethanol plants. We have since grown the business by purchasing additional ethanol plants. Our 12 ethanol plants are located in the Mid-Continent region of the U.S., and they have a combined ethanol production capacity of approximately 1.6 billion gallons per year. Our ethanol plants are dry mill facilities that process corn to produce ethanol and various co-products, including livestock feed (dry distillers grains, or DDGs, and syrup) and inedible distillers corn oils.

The following table presents the locations of our ethanol plants, their annual production capacities for ethanol (in millions of gallons) and DDGs (in tons), and their annual corn processing capacities (in millions of bushels) as of December 31, 2023.

State	City	Ethanol Production Capacity	DDG Production Capacity	Corn Processing Capacity
Indiana	Bluffton	135	355,000	47
	Linden	135	355,000	47
	Mount Vernon	100	263,000	35
Iowa	Albert City	135	355,000	47
	Charles City	140	368,000	49
	Fort Dodge	140	368,000	49
	Hartley	140	368,000	49
	Lakota (a)	110	289,000	38
Minnesota	Welcome	140	368,000	49
Nebraska	Albion	135	355,000	47
Ohio	Bloomingburg	135	355,000	47
South Dakota	Aurora	140	368,000	49
Total		1,585	4,167,000	553

(a) This plant was previously configured to produce a higher-grade ethanol product, as opposed to fuel-grade ethanol, and its production capacity was approximately 55 million gallons per year of ethanol. During the third quarter of 2023, the plant resumed production of fuel-grade ethanol.

We source our corn supply from local farmers and commercial elevators. Our plants receive corn primarily via rail and truck.

Marketing

We sell our ethanol under term and spot contracts in bulk markets in the U.S. We also export our ethanol into the global markets and have access to logistics assets that are well positioned to support export growth. We distribute our ethanol primarily by rail (using some railcars owned by us), truck, ship, and barge. We sell DDGs primarily to animal feed customers in the U.S., Mexico, and Asia, which are distributed primarily via rail, truck, ship, and barge.

Seasonality

Demand for gasoline, diesel, and asphalt is higher during the spring and summer months than during the winter months in most of our markets, primarily due to seasonal increases in highway traffic and construction. The demand for renewable diesel has not significantly fluctuated by season. Ethanol is

primarily blended into gasoline, and as a result, ethanol demand typically moves in line with the demand for gasoline.

GOVERNMENT REGULATIONS

We incorporate by reference into this item the disclosures on government regulations, including environmental regulations, contained in the following sections of this report:

- "—OUR COMPREHENSIVE LIQUID FUELS STRATEGY— *Regulations, Policies, and Standards Driving Low-Carbon Fuel Demand*";
- "ITEM 1A. RISK FACTORS—Legal, Government, and Regulatory Risks"; and
- "ITEM 3. LEGAL PROCEEDINGS—ENVIRONMENTAL ENFORCEMENT MATTERS."

Our business is heavily regulated, and our costs for compliance with government regulations are significant and can be material, especially costs associated with the Renewable and Low-Carbon Fuel Programs disclosed in Notes 19 and 20 of Notes to Consolidated Financial Statements, which are incorporated by reference into this item. In addition, see Note 1 of Notes to Consolidated Financial Statements regarding our accounting for the costs of these programs under "Costs of Renewable and Low-Carbon Fuel Programs."

Our capital expenditures attributable to compliance with government regulations, including environmental regulations, did not have a material effect on our total capital expenditures in 2023, and we currently do not expect that compliance with government regulations, including environmental regulations, will have material effects on our total capital expenditures in 2024.

HUMAN CAPITAL

We believe that our employees provide a competitive advantage for our success. We seek to foster a strong team culture that supports our employees, and we strive to provide a safe, healthy, and rewarding work environment for our employees with opportunities for professional growth and long-term financial stability.

Headcount

On December 31, 2023, we had 9,908 employees. These employees were located in the following countries:

Country	Number of Employees
U.S.	8,239
Canada	657
U.K. and Ireland	843
Mexico and Peru	169
Total	9,908

Of our total employees as of December 31, 2023, 1,774 were covered by collective bargaining or similar agreements and 9,886 were in permanent full-time positions. See also "ITEM 1A. RISK FACTORS—General Risk Factors —*Our business may be negatively affected by work stoppages, slowdowns, or strikes, as well as by new legislation or an inability to attract and retain sufficient labor, and increased costs related thereto*."

Company Culture and Human Capital (People) Strategy

Our company culture and our well-defined expectations of ethics and behavior guide the daily work of our employees and support our efforts to produce exceptional company results. The six values that define our culture are *Safety, Accountability, Teamwork, Do the Right Thing, Caring, and Excellence*.

Our people strategy and programs are designed and implemented in support of our business and strategic objectives. In building and fostering great teams, we are guided by the following:

- We strive to hire and promote top-talent employees with team-oriented work ethics and values;
- Our pay, benefits, and support programs are designed to attract and retain excellent employees and to reward innovation, ingenuity, and excellence;
- We seek to provide a best-in-class work environment built on a foundation of respect, accountability, and trust;
- We promote a culture of learning intended to drive excellence at all levels of the organization and to foster career-long growth and development opportunities for employees; and
- We continually assess employee performance, organizational structures, and succession plans to support operational excellence, efficiency, and effectiveness.

We believe that having employees from different backgrounds with a variety of talents, experience, education, and perspectives helps create diverse, innovative, and engaged teams, which provide strengths

and advantages for our success. To this end, we are committed to equal employment opportunity and, as a federal contractor, are committed to engaging in effective outreach and recruitment. Our policy is to ensure equal employment opportunity without illegal discrimination or harassment based on race, color, religion, national origin, age, sex, marital status, physical or mental disability, veteran status, or any other characteristic protected under applicable law. Our outreach and recruiting efforts include analyzing and broadening where we recruit and the business partnerships we foster, and ensuring our recruiting teams are trained on objective hiring, along with the importance of hiring candidates who add to our team culture.

From our intern program to our board of directors (Board), and at all levels in between, we strive to build dynamic and engaged teams. We evaluate the effectiveness of our outreach, recruiting, and retention efforts, in part, by reviewing the demographics of our intern program and of our existing employee population each year, in accordance with our obligations as a federal contractor. Our intern class of 2023 was 39 percent female while 47 percent represented a racial or ethnic minority. Of our total employees as of December 31, 2023, approximately 30 percent of our global professional employees were female, 10 percent of our global hourly employees were female, and 19 percent of total global employees were female. Approximately 38 percent of our U.S. employees represent racial or ethnic minorities. We are also committed to hiring and retaining veterans and reservists of the U.S. Armed Forces, who represented 12 percent of our U.S. employees as of December 31, 2023. Additionally, seven of our 12 current Board members are either female and/or a racial or ethnic minority.

Safety

We believe that safety and reliability are extremely important, not only for the protection of our employees and communities, and the cultural values we aspire to as a company, but also for operational success, as a decrease in the number of employee and process safety events should generally reduce unplanned shutdowns and increase the operational reliability of our refineries and plants. This, in turn, should also translate into a safer workplace with fewer environmental incidents and stronger community relations. We strive to improve safety and reliability performance by offering year-round safety training programs for our employees and contractors and by seeking to promote the same expectations and culture of safety. We also seek to enhance our safety performance by conducting safety audits, quality assurance visits, and comprehensive safety and risk assessments at our refineries and plants.

To assess safety performance, we measure our annual total recordable incident rate (TRIR), which includes data with respect to our employees and contractors and is defined as the number of recordable injuries per 200,000 working hours. We also annually measure our Tier 1 Process Safety Event Rate, which is a metric defined by the American Petroleum Institute that identifies process safety events per 200,000 total employee and contractor working hours. We use these measures and believe they are helpful in assessing our safety performance because they evaluate performance relative to the numbers of hours being worked. These metrics are also used by others in our industry, which allows for a more objective comparison of our performance. Our refinery employee and contractor TRIR for 2023 was 0.39 and 0.24, respectively, and our refinery Tier 1 Process Safety Event Rate for 2023 was 0.05.

Compensation and Benefits

We believe that it is important to provide our employees with competitive compensation and benefits. The benefits we offer to employees, depending on work location and eligibility status, include, among others, healthcare plans that are generally available to all employees, extended sick leave, new-parent leave, access to financial planning, programs to support dual-working parents at different stages of their careers, caregiver support networks (including an on-site child care center at our headquarters) and support for children and parents with disabilities, a company 401(k) matching program, various company-sponsored

pension plans, on-site employee wellness centers (also available to eligible dependents at our headquarters), tuition reimbursement programs, fitness center access or a stipend, and employee recognition programs.

We believe that it is important to reward employee performance and have an annual bonus program that rewards achievements of various operational, financial, and strategic objectives. While such objectives include typical financial performance metrics, we believe performance in areas such as sustainability, human capital management, environmental stewardship (including health, safety, and environment), compliance, corporate citizenship, and community are also important, and our annual bonus program rewards achievements in these areas.

Our compensation programs are designed with consideration of fair treatment and equal pay concepts, and are built upon a foundational philosophy of market-competitive and performance-based pay. Pay equity of our U.S. professional employees is analyzed biennially by an independent consultant retained by us.

Training and Development

We offer a comprehensive training and development program for our employees in subjects such as engineering and technical excellence, safety, environmental, maintenance and machinery/equipment repair, ethics, leadership, and employee performance. We also require all employees to complete training on technical matters, such as cybersecurity and information technology security, and various compliance and corporate conduct matters, including business ethics, conflicts of interest, and anti-bribery and anti-corruption, among others. Our employee development initiatives include customized professional and technical curriculums, efforts to engage our leadership in the employee's development process, and providing employee performance discussions. We offer a robust virtual training curriculum, which allows for greater availability and access for employees located across our many facilities and enables timely training.

Wellness

We strive to promote the health and well-being of our employees and their families. Our Total Wellness Program serves as the umbrella program for all aspects of employee wellness and the vehicle through which many of the benefits referenced above are provided. Under our Total Wellness Program, employees' emotional, physical, and financial well-being are prioritized through comprehensive resources and subsidized services, including an annual wellness assessment, on-site clinics and fitness centers, an employee assistance program, educational sessions on financial wellness, retirement planning, and a variety of other topics.

Our confidential employee assistance program offers a wide range of support to employees and their families, including counseling services, substance abuse and recovery, stress management, child and elder care support, and self-care programs to address behavioral health challenges. We continually evaluate our benefit offerings to support improved health and wellness outcomes for our people and to help determine the most appropriate allocation of company resources.

PROPERTIES

Our principal properties are described in “OUR OPERATIONS” above and that information is incorporated by reference into this item. We believe that our properties are generally adequate for our operations and that our refineries and plants are maintained in a good state of repair. As of December 31, 2023, we were the lessee under a number of cancelable and noncancelable leases for certain properties. Our leases are discussed in Note 5 of Notes to Consolidated Financial Statements, which is incorporated by reference into this item. Financial information about our properties is presented in Note 6 of Notes to Consolidated Financial Statements, which is incorporated by reference into this item.

AVAILABLE INFORMATION

Our website address is www.valero.com. Information (including any presentation or report) on our website is not part of, and is not incorporated into, this report or any other report or document we may file with or furnish to the U.S. Securities and Exchange Commission (SEC), whether made before or after the date of this annual report on Form 10-K and irrespective of any general incorporation language therein, unless specifically identified in such filing as being incorporated by reference in such filing. Furthermore, references to our website URLs are intended to be inactive textual references only. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statement, and other filings and reports, as well as any amendments to those filings and reports, filed with or furnished to the SEC are available on our website (under Investors > Financials > SEC Filings) free of charge, soon after we file or furnish such material. In addition, the SEC maintains a website address (http://www.sec.gov) where you may access these filings and reports.

Additionally, on our website (under Investors > ESG), we post our C*orporate Governance Guidelines* and other governance policies, codes of ethics, and the charters of the committees of our Board. In this same location, we also publish our 2023 ESG Report, which includes our 2023 SASB Report, our report disclosing certain U.S. employment data that corresponds to our 2022 U.S. Equal Employment Opportunity Information (EEO-1) Report (filed in 2023), our 2035 GHG emissions reductions and displacement target and other disclosures, and our TCFD Reports. These documents are available in print to any stockholder that makes a written request to Valero Energy Corporation, Attn: Secretary, P.O. Box 696000, San Antonio, Texas 78269-6000. Our ESG Overview is also available on our website (under Responsibility > ESG: Environmental, Social and Governance) and disclosures concerning our political engagement, climate lobbying, and trade associations are available on our website (under Investors > ESG). These reports and disclosures are not a part of this annual report on Form 10-K, are not deemed filed with the SEC, and are not to be incorporated by reference into any of our filings with the SEC, whether made before or after the date of this annual report on Form 10-K and irrespective of any general incorporation language therein, unless specifically identified in such filing as being incorporated by reference in such filing.

ITEM 1A. RISK FACTORS

You should carefully consider the following risk factors in addition to the other information included in this report. Each of these risks could adversely affect our business, financial condition, results of operations, and/or liquidity, as well as, in certain cases, the value of an investment in our securities. Although the risks are organized by headings and each risk is discussed separately, many are interrelated.

Risks Related to Our Business, Industry, and Operations

Our financial results are affected by volatile margins, which are dependent upon factors beyond our control, including the price of feedstocks and the market price at which we can sell our products.

Our financial results are affected by the relationship, or margin, between our product prices and the prices for crude oil, corn, and other feedstocks that we purchase, which can vary based on global, regional, and local market conditions, as well as by type and class of product. Historically, product margins have been volatile, and we believe they will continue to be volatile in the future. Our cost to acquire feedstocks and the price at which we can ultimately sell products depend upon several factors beyond our control, including regional and global supplies of and demand for feedstocks (such as crude oil, waste and renewable feedstocks, and corn), liquid transportation fuels (such as gasoline, diesel, renewable diesel, and ethanol), and other products. These in turn depend on, among other things, the availability and quantity of feedstocks and liquid transportation fuels imported into the countries in which we operate, the production levels of suppliers, levels of product inventories, productivity and growth (or the lack thereof) of the U.S. and global economies, the U.S. government's relationships with foreign governments, political affairs, the extent of government regulation, and the events described in many of the other risk factors below. The ability of the members of the Organization of Petroleum Exporting Countries (OPEC) to agree on and to maintain crude oil price and production controls has also had, and is likely to continue to have, a significant impact on the market prices of crude oil and certain of our products. Additionally, the regulations, policies, and standards discussed under "ITEMS 1. and 2. BUSINESS AND PROPERTIES—OUR COMPREHENSIVE LIQUID FUELS STRATEGY—*Regulations, Policies, and Standards Driving Low-Carbon Fuel Demand*" have had, and are likely to continue to have, a significant impact on the market prices of the feedstocks for, and products produced by, our low-carbon fuels businesses. Any adverse change in these regulations, policies, and standards (including, for example, changes in the price of carbon or other inputs that affect the value of our low-carbon fuels, such as approved fuel pathways, credits, or incentives) could have a material adverse effect on the margins we receive for our low-carbon fuels.

Some of these factors can vary by region and may change quickly, adding to market volatility, while others may have longer-term effects. The longer-term effects of these and other factors on product margins are uncertain. We do not produce crude oil, waste, renewable feedstocks (except inedible distillers corn oils), corn, or other primary feedstocks, and must purchase nearly all of the feedstocks we process. We generally purchase our feedstocks long before we process them and sell the resulting products. Price level changes during the period between purchasing feedstocks and selling the resulting products has had, and could continue to have, a significant effect on our financial results. A decline in market prices for our products and feedstocks has had, and could again have, a negative impact to the carrying value of our inventories. Factors outside of our control, such as economic uncertainty, inflation (and the potential for increased prices to create demand destruction), persistently high interest rates, public health crises (such as the COVID-19 pandemic), and political unrest or hostilities, have affected, and could continue to affect, economic activity and growth levels of the U.S. and other countries. A decrease in the demand for and consumption of our products due to lower economic activity and growth

levels has caused, and could again cause, declines in our revenues and margins and could negatively impact our growth prospects and capital allocation decisions.

Additionally, a significant portion of our profitability is derived from the ability to purchase and process crude oil feedstocks that historically have been cheaper than benchmark crude oils. These crude oil feedstock differentials vary significantly depending on many factors, including overall economic conditions and trends and conditions within the markets for crude oil and refined petroleum products. Previous declines in such differentials have had, and any future declines will likely again have, a negative impact on our results of operations.

We are subject to risks arising from industry and market developments that could decrease the demand for our products.

A reduction in the demand for our products could result from a transition by consumers to alternative fuel vehicles, such as electric vehicles (EVs) and hybrid vehicles, whether as a result of government mandates or incentives, industry developments, or consumer or investor sentiment towards fossil fuels and GHG emissions. New developments may make alternative fuel vehicles more affordable or desirable, including improvements in battery and storage technology, increases in driving ranges, increased availability of charging stations and other infrastructure, expanded and more reliable supply chains, and improvements in hydrogen fuel cell technology. Any such developments could increase consumer acceptance and result in greater market penetration of alternative fuel vehicles.

There may be new entrants into the low-carbon fuels industry that could meet demand for lower-carbon transportation fuels and modes of transportation in a more efficient or less costly manner than our technologies and products. For example, several other companies have made, or announced interest in making, investments in renewable diesel, SAF, and other low-carbon projects. As these projects develop, we will face increased competition, including for feedstocks and customers, which could reduce our product margins and limit the growth and profitability of our low-carbon fuels businesses. While it is not currently possible to predict the ultimate form, timing, or extent of any such developments, any such event could materially and adversely affect our business, financial condition, results of operations, and liquidity.

We are subject to risks arising from sentiment towards climate change, fossil fuels, GHG emissions, environmental justice, and other environmental, social, and governance (ESG) matters.

In recent years, a number of advocacy groups, both in the U.S. and internationally, have campaigned for government and private action to promote climate and other ESG-related changes, particularly at public companies, through activities including investment, engagement, and voting practices. These activities have included promoting the divestment of securities of fossil fuel companies, pressuring fossil fuel companies to commit to future output reductions, and pressuring lenders, insurers, and other market participants to limit or curtail activities with fossil fuel companies. As a result, we believe some parties have reduced or ceased lending to, investing in, or insuring fossil fuel companies. If these or similar efforts are continued, our ability to access capital markets, obtain new investment or financing, or to fully insure our operations may be negatively impacted.

These activities have also aimed to increase the attention on and demand for action related to various ESG matters, which has contributed to increasing societal, investor, and legislative focus and pressure on ESG practices and disclosures, including those related to climate change, GHG emissions targets, business resilience under the assumptions of demand-constrained scenarios, net-zero ambitions, GHG reduction

plans, actions related to human capital management, political activities, environmental justice, racial equity audits, and governance standards. For example, ESG-focused activism has increased in the fossil fuel industry and has resulted in more frequent attempts to effect business or governance changes through mechanisms such as stockholder proposals, vote-no campaigns, and exempt proxy solicitations. As a result, we have faced, and expect to continue to face, increasing pressure regarding our ESG and climate-related disclosures, including our GHG emissions targets and ambition (including our methodologies and timelines with respect thereto), negative publicity, prescriptive stockholder requests, and demands for ESG-focused engagement. ESG has also become an increasingly politically charged issue, and "anti-ESG" sentiment and increased scrutiny and skepticism of ESG policies and practices have resulted in, and could continue to result in, additional demands and strains on companies.

Responding to such ESG-focused activism has been, and will likely continue to be, costly and time-consuming. Such response efforts have resulted in, and could continue to result in, the implementation of certain practices and disclosures that may present a heightened level of legal and regulatory risk, or that threaten our credibility with other investors and stakeholders. The methodologies and standards for tracking and reporting on ESG matters are relatively new, have not been standardized, and continue to evolve. As a result, our ESG-related metrics, targets, ambitions, and other disclosures, may not necessarily be calculated or presented in the same manner or be comparable to similarly titled measures presented by us in other contexts, or by other companies or third-party estimates or disclosures, and our interpretation of reporting standards may differ from those of others. While we believe that our ESG disclosures and methodologies reflect our business strategy and are reasonable at the time made or used, as our business or applicable methodologies, standards, or regulations develop and evolve, we may revise or cease reporting or using certain disclosures and methodologies if we determine that they are no longer advisable or appropriate, or are otherwise required to do so.

Our operations depend on the reliable supply of natural gas and electricity, which exposes us to various risks.

Our operations depend on the reliable supply of natural gas and electricity. We consume significant amounts of natural gas and electricity to operate our refineries and plants, and natural gas and electricity prices have a measurable effect on the total cost of our operations. We also purchase other commodities whose prices may vary depending on the prices of natural gas or electricity. The volatility of prices for both natural gas and electricity represent an ongoing challenge to our operating results. Additionally, the availability and cost of natural gas and electricity have been, and could continue to be, affected by numerous events, such as government regulations, weather (e.g., hurricanes and periods of considerable heat or cold, such as Winter Storm Uri in 2021), logistics interruptions, electric grid outages, cybersecurity incidents, intermittent electricity generation (particularly from wind and solar), hostilities, sanctions, human error, and supply and demand imbalances for natural gas and electricity. For example, the real-time market structure of the primary grid provider in Texas exposes many of our refineries and operations located in Texas to "scarcity pricing" during periods of supply and demand imbalance. As electrification continues to grow, or if there are increased restrictions or costs imposed on the ability of utilities or power suppliers to utilize certain energy sources (such as through restrictions on fossil fuel or nuclear-generated electricity or ESG pressure not to use such sources of electricity generation), there will likely be increased strains on and risks to the integrity, reliability, and resilience of electrical grids, and increased volatility and tightness in natural gas and electricity supplies across the world. These events could negatively affect the cost, reliability, and availability of our natural gas and electricity supplies and may cause sporadic outages disrupting our operations. Growing electrification and rapidly developing and increasing technology use (such as artificial intelligence, computer processing, cryptocurrency mining, and cloud storage, and the data centers and power supplies required to support these activities) will also

likely increase the intermittency and decrease the reliability of electricity supplies, particularly for grids highly dependent upon wind and solar power, which would exacerbate the foregoing challenges. Additionally, increased government regulations and public opposition to pipeline construction and electricity generation and transmission projects have resulted in, and could continue to result in, the underinvestment in, or unavailability of, the infrastructure and logistics assets needed to obtain natural gas feedstocks and electricity in a reliable and cost-efficient manner. Although we actively manage these risks through contracting and hedging our exposure to price volatility as appropriate, and by pursuing projects that reduce our reliance on third parties and fortify the resilience of our assets, increases in prices for natural gas and electricity, or disruptions to our supply thereof, have in the past, and could again, materially and adversely affect our business, financial condition, results of operations, and liquidity.

We are subject to risks arising from the potential disruption of our ability to obtain feedstocks.

We source our petroleum-based and low-carbon fuels feedstocks from suppliers throughout the world. We are, therefore, subject to the political, geographic, and economic risks attendant to doing business with suppliers located in, and supplies originating from, different areas across the world, including global geopolitical and other conflicts and tensions that may impact trade flows and increase transportation costs. If one or more of our supply contracts were terminated, or if political or other events were to disrupt our traditional feedstock supply, we believe that adequate alternative supplies would be available, but it is possible that we would be unable to find adequate or optimal alternative sources of supply. Our refineries and plants without access to waterborne deliveries or offtake must rely on rail, pipeline, or ground transportation and thus may be more susceptible to such risks. If we are unable to obtain adequate or optimal volumes or are able to obtain such volumes only at unfavorable prices, our business, financial condition, results of operations, and liquidity could be materially and adversely affected, including from reduced sales volumes of products or higher operating costs. The U.S. government can also prevent or restrict us from doing business in or with other countries. For example, U.S. sanctions targeting Russia, Iran, and Venezuela limit, but do not necessarily ban, the ability of most U.S. companies to engage in petroleum-related transactions involving these countries. U.S. and other government sanctions and actions by governments and private market participants to refrain from purchasing or transporting crude oil and petroleum-based products from particular countries (such as in response to the Russia-Ukraine conflict) have impacted, and may continue to impact, trade flows, and have limited, and may continue to limit, our access to business opportunities in various countries.

Although Darling, the other joint venture member in DGD, supplies some of DGD's waste feedstock at competitive pricing, DGD must still secure a significant amount of its waste and renewable feedstock requirements from other sources. If Darling's supply is disrupted or if supply from other sources becomes limited or only available on unfavorable terms, DGD could be required to develop alternate sources of supply, and it could be required to increase its utilization of waste and renewable feedstocks that produce lower-margin products. As the volume of renewable diesel and other low-carbon fuels produced continues to increase, the competition for feedstocks will likely increase, and DGD will also likely be required to source a greater amount of its waste and renewable feedstocks from international sources, which would increase its exposure to the political, geographic, regulatory, and economic risks associated with international sourcing of supplies. A disruption to DGD's feedstock supply could adversely impact its and our business, financial condition, results of operations, and liquidity.

Our Ethanol segment relies on corn sourced from local farmers and commercial elevators in the Mid-Continent region of the U.S. The corn supply for our Ethanol segment is acutely exposed to the effects that weather and other environmental events occurring in that region can have on the amount or timing of crop production. Crop production is also affected by government policies (such as farming subsidies) and

by market events (such as changes in fertilizer prices and rail disruptions). Reductions or delays in crop production from these or similar events could reduce and disrupt the supply of, or otherwise increase our costs to obtain, corn for our Ethanol segment, and such events have occurred periodically.

We are subject to risks arising from our operations outside the U.S. and generally to worldwide political and economic developments.

We operate and sell some of our products outside of the U.S., particularly in Canada, the U.K., Ireland, Mexico, and Peru, and are subject to disruptions in any of these markets, including due to actual or alleged violations of law; expropriation or impoundment of assets; failure of foreign governments and state-owned entities to honor their contracts; property disputes; economic instability; restrictions on the transfer of funds; duties and tariffs; profits, windfall, or other taxes or penalties; transportation delays; import and export controls; labor unrest; security issues involving key personnel; government decisions, orders, mandates, investigations, regulations, and issuances or revocations of permits and authorizations; the effects of military conflicts; and changing regulatory and political environments, including changes to U.S. and international laws and treaties governing foreign trade and related matters. The occurrence of any such event could result in the halting, curtailing, or cessation of operations at impacted facilities; commercial restrictions; delay, denial, or cancellation of projects, permits, and authorizations; and increased costs, fines, penalties, and burdens; any of which could result in a material adverse effect on our business, financial condition, results of operations, and liquidity. Although we actively seek to manage these risks, we have experienced some of these events in the past and could experience additional events in the future.

We are subject to interruptions and increased costs as a result of logistical disruptions and our reliance on third-party transportation of our feedstocks and products.

In addition to our own logistics assets, we use the services of third parties to transport feedstocks to our refineries and plants and to transport our products to market. If we experience prolonged interruptions of supply or increases in costs to deliver our products to market, or if the ability of the logistics assets used to transport our feedstocks or products is disrupted because of labor issues, weather events, dock availability, water levels of key waterways for trade, rail disruptions, cybersecurity incidents, accidents, derailments, collisions, fires, explosions, spills, public health crises, hostilities, or other government or third-party actions (including protests), it could have a material adverse effect on our business, financial condition, results of operations, and liquidity. Although we actively seek to manage these risks, we have experienced some of these events in the past and could experience additional events in the future.

Competitors that produce their own supply of feedstocks, own their own retail sites, or have greater financial resources may have a competitive advantage.

The refining and marketing industry is highly competitive with respect to both feedstock supply and refined petroleum product markets. We compete with many companies for available supplies of crude oil and other feedstocks, and for third-party retail outlets for our petroleum-based products. We do not produce any of our primary feedstocks (except inedible distillers corn oils) and we do not have a company-owned retail network. Some of our competitors, however, obtain a significant portion of their feedstocks from company-owned production and some have extensive networks of retail sites. Such competitors are at times able to offset losses from liquid transportation fuels production operations with such other operations, and may be better positioned to withstand periods of depressed product margins or feedstock disruptions. Some of our competitors also have materially greater financial and other resources

than we have and may have a greater ability to bear the economic risks inherent in all phases of our industry.

We are subject to risks arising from an interruption in any of our refineries or plants.

Our refineries, DGD plants, and ethanol plants are our principal operating assets and are subject to planned and unplanned downtime and interruptions. Our operations could also be subject to significant interruption if one or more of our refineries or plants were to experience a major accident or mechanical failure, be damaged by severe weather or natural disasters (such as hurricanes) or man-made disasters (such as cybersecurity incidents or acts of terrorism), or otherwise be forced to shut down or curtail operations. If any refinery or plant, or related logistics assets, were to experience an interruption in operations, our earnings could be materially and adversely affected (to the extent not recoverable through insurance) because of lost productivity and repair and other costs. Significant interruptions in our operations could also lead to increased volatility in the price of our feedstocks and many of our products. We have experienced some of these events in the past, and although we focus on maintaining safe, stable, and reliable operations, we may experience additional events in the future.

Large capital and other strategic projects can take many years to complete, and the political and regulatory environments or other market conditions may change or deteriorate over time.

We engage in capital and other strategic projects based on many factors, including the forecasted project economics, political and regulatory environments, and the expected return on the capital to be employed. Large-scale projects take many years to complete, during which time the political and regulatory environment or other market conditions may change from our forecast. Supply chain disruptions may also delay projects or increase the costs associated therewith. As a result, such projects may not be completed on schedule or budget, or at all, and we may not fully realize our expected returns, which could negatively impact our business, financial condition, results of operations, and liquidity.

In addition, challenges to or opposition of fossil fuel infrastructure projects continue to make the approval and completion of such projects more difficult and costly. Despite government support for and acknowledgement of the importance of certain low-carbon fuels and technologies, such as carbon capture and sequestration, there has also been growing regional political and environmental opposition among various groups in certain geographies to many such projects. Such opposition may be taken into account by government or judicial officials in granting the relevant permits or authorizations, and has previously resulted in, and could again result in, permits and authorizations being challenged, delayed, denied, revoked, appealed, or conditionally granted. In certain instances, this has resulted in, and could again result in, the cancellation or restructuring of projects.

Our investments in joint ventures and other entities decrease our ability to manage risk.

We conduct some of our operations through joint ventures in which we share control over certain economic, legal, and business interests with other joint venture members. We also conduct some of our operations through entities in which we have a minority or no equity ownership interest, such as the variable interest entities (VIEs) described in Note 12 of Notes to Consolidated Financial Statements. The other joint venture members and the third-party equity holders of the VIEs have certain economic, business, or legal interests, opportunities, or goals that are inconsistent with or different from our interests, opportunities, and goals, have different liquidity needs or financial condition characteristics than our own, are subject to different legal or contractual obligations than we are, and may be unable to meet their obligations. For example, while we operate the DGD Plants and perform certain day-to-day

operating and management functions for DGD, we do not have full control of every aspect of DGD's business and certain significant decisions concerning DGD, including acquiring or disposing of assets above a certain value threshold, making certain changes to its business plan, raising debt or equity capital, altering its distribution policy, and making certain other transactions, require approval from Darling. While we consolidate certain VIEs, we do not have full control of every aspect of these VIEs, or the actions taken by their third-party equity holders, some of which have affected, and could continue to affect, our business, legal position, financial condition, results of operations, and liquidity. Failure by us, an entity in which we have a joint venture interest, or the VIEs to adequately manage the risks associated with such entities, and any differences in views among us and other joint venture members or the third-party equity holders in the VIEs, could prevent or delay actions that are in the best interest of us, the joint venture, or the VIE, and could have a material adverse effect on our business, financial condition, results of operations, and liquidity.

We may incur losses and additional costs as a result of our hedging transactions.

We currently use derivative instruments as described in Note 19 of Notes to Consolidated Financial Statements, and we expect to continue their use in the future. If the instruments we use to hedge our exposure to various types of risk are not effective or increase our exposure to unexpected events or risks, we may incur losses, and have experienced certain losses in the past. In addition, we may be required to incur additional costs in connection with any future regulation of derivative instruments applicable to us.

Legal, Government, and Regulatory Risks

We are subject to risks arising from legal, political, and regulatory developments regarding climate, GHG emissions, and the environment.

Many government authorities across the world have imposed, and may impose in the future, policies or regulations designed to facilitate less petroleum-dependent modes of transportation (e.g., increases in fuel economy or efficiency standards, low-carbon fuel standards, restrictions and bans on vehicles using liquid fuels, tariffs, tax incentives, and EV subsidies), which could reduce demand for our petroleum-based products and/or all liquid transportation fuels. For example, CARB has approved a series of regulations designed to phase out sales of internal combustion engine vehicles in California. CARB's current Scoping Plan identifies strategies to reduce liquid petroleum consumption in California by 94 percent, and CARB is actively engaged in a series of rulemaking efforts intended to fulfill these objectives. The European Union (EU), U.K., Canada, and Quebec have each adopted what they refer to as "zero-emissions vehicle" mandates and other government authorities across the world, such as Mexico, and other U.S. states have also announced, or are considering, plans and/or restrictions regarding the sale of new internal combustion engine vehicles, stricter tailpipe emissions standards, and limitations on or penalties for the use of petroleum-based products and certain biofuel feedstocks.

The U.S. federal government under the current presidential administration has also been aggressive in the scope, magnitude, and number of actions it has taken to address GHG emissions and other environmental matters, including efforts to limit or eliminate petroleum-dependent modes of transportation. For example, the current administration utilizes a "whole of government" approach to climate change and environmental justice that seeks to organize and deploy the full capacity of the U.S. federal government in novel and coordinated ways to limit or eliminate the use of most petroleum-based products. The current administration has also issued a number of related executive orders, including orders requiring agencies to review environmental actions taken by the previous administration and directing the U.S. federal government to use its scale and procurement power to achieve a number of aspirational net-zero

emissions goals, including seeking to limit or eliminate petroleum-based fuels by imposing mandates of so-called 100 percent zero-emission vehicle acquisitions, such as EVs and other alternative fuel vehicles, by 2035 and 100 percent zero-emission light-duty vehicle acquisitions by 2027.

These actions have contributed to, and may continue to spur, a number of U.S. federal rulemakings and other actions that disfavor petroleum-dependent modes of transportation, many of which ignore or downplay the full life cycle carbon footprint of EVs, and thereby seek to inappropriately advantage them over internal combustion engine vehicles. For example, the EPA issued its “Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emission Standards,” revising the GHG emissions standards for light-duty vehicles for 2023 and later model years at a level that cannot be achieved by internal combustion engine vehicles through improvements in combustion efficiency. The National Highway Traffic Safety Administration (NHTSA) also similarly issued its “CAFE Standards for MY 2024-26 Passenger Cars and Light Trucks,” increasing the corporate average fuel economy and carbon dioxide standards for certain passenger cars and light-duty trucks such that automakers cannot demonstrate compliance without increasing the sales of EVs. Together, these federal regulations seek to increase the market penetration of EVs and other alternative fuel vehicles, such that these vehicles would be expected to comprise 17 percent of model year 2026 passenger vehicle sales. The EPA states that its rule is projected to reduce gasoline consumption by more than 360 billion gallons by 2050, reaching a 15 percent reduction in annual U.S. gasoline consumption in 2050. Moreover, in April 2023, the EPA announced new, more ambitious proposed standards for model years 2027 to 2032 that the agency expects will drive 67 percent of new light- and medium-duty vehicles, 50 percent of heavy-duty vocational vehicles, 35 percent of short-haul tractors, and 25 percent of long-haul tractors sold in the U.S. to be EVs or other alternative fuel vehicles by 2032. In July 2023, NHTSA also proposed increasing both the fuel economy standard for passenger cars and light trucks for model years 2027 to 2032 and the fuel efficiency standards for heavy-duty pickup trucks and vans for model years 2030 to 2035. Additionally, in November 2023, the Federal Highway Administration finalized rules that require certain U.S. state departments of transportation and metropolitan planning organizations to establish declining tailpipe carbon dioxide emissions targets for motor vehicles. Most recently, in December 2023, the EPA announced final rules intended to sharply reduce emissions of methane and other air pollution from oil and gas operations. Within such rules, the EPA nearly quadrupled its estimate of the “social cost” of carbon dioxide, a measure that is often used by certain U.S. federal agencies as part of their analyses of the costs and benefits of more stringent climate regulation, which could result in stricter climate rules and regulations that disfavor internal combustion engine vehicles and liquid transportation fuels. The IRA, which was passed in August 2022, also includes substantial subsidies to promote EVs and other alternative fuel vehicles.

In addition to these U.S. federal measures, in March 2022, the EPA reinstated a waiver of preemption under federal law authorizing California to implement its “Advanced Clean Cars I” rule requiring sales of increasing percentages of alternative fuel vehicles, thereby also reviving other U.S. states’ ability to adopt standards identical to California’s. In November 2022, California approved its “Advanced Clean Cars II” rulemaking, which similarly requires an increasing percentage of “zero-emission” light-duty vehicle sales through 2035, at which time 100 percent of light-duty vehicle sales in California must be zero-emission vehicles. In May 2023, CARB requested the EPA grant a waiver of preemption for Advanced Clean Cars II, and the EPA opened CARB’s request for public hearing and comment in December 2023. Several other states have already adopted, or are expected to adopt, similar regulations or mandates. California is also pursuing similar zero-emission vehicle mandates for medium- and heavy-duty vehicles via its “Advanced Clean Trucks” rulemaking, which received a preemption waiver from the EPA in March 2023, and its “Advanced Clean Fleets” rulemaking, for which CARB applied to the EPA for a preemption waiver in November 2023, and it is foreseeable that the EPA may waive preemption to allow Advanced

Clean Fleets to take effect in California and in those states that elect to follow the California program. Additionally, in July 2023, CARB announced a “Clean Truck Partnership” with various U.S. truck and engine manufacturers and the Truck and Engine Manufacturers Association that is aimed at advancing the development of EVs or other alternative fuel vehicles for the commercial trucking industry regardless of whether the regulatory mandate survives legal challenge. While these measures are being litigated, we face a risk that automakers will move forward with changing their manufacturing and marketing based on their expectations that they will be forced to transition to electrification in the transportation sector.

Moreover, there have been various international climate accords and multilateral agreements aimed at reducing GHG emissions, including the Kyoto Protocol in 2005, the Paris Agreement in 2015, and the United Nations Climate Summit in Dubai, United Arab Emirates (COP 28) in 2023, which, although not legally binding, have in certain instances resulted in, and are expected to continue to result in, additional government, regulatory, and private industry actions that are adverse to our industry. Incentives to conserve energy or use renewable energy sources in many locations where we currently operate, or may operate in the future, could also negatively impact our industry. Government authorities across the world have also announced, or are considering, profits or windfall taxes or penalties on fossil fuel companies, or have announced or imposed GHG emissions fees and other regulations that are adverse to refinery operations, could increase costs, and limit profitability. For example, in September 2022, the EU passed legislation imposing a profits tax and penalty on certain fossil fuel companies. Similar taxes and penalties have been proposed or adopted in California, such as Senate Bill No. 2 (such statute, together with any regulations contemplated or issued thereunder, SBx 1-2), which authorizes California to set a maximum gross gasoline refining margin and a penalty for refiners that exceed it.

These legal, political, and regulatory developments, as well as other similarly focused laws and regulations, such as, among others, the California and Quebec cap-and-trade programs, the U.K. Emissions Trading Scheme, the U.K. Renewable Transport Fuel Obligation, the South Coast Air Quality Management District’s Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations, CARB’s Control Measure for Ocean-Going Vessels At Berth Rule, reductions in the National Ambient Air Quality Standards, bans or restrictions on certain chemicals, feedstocks, products, or processes, and other laws related to climate, GHG emissions, or environmental, health, or safety matters, have resulted in, and are expected to continue to result in, increased costs and capital expenditures, among other impacts, to (i) operate and maintain our facilities (including restrictions on certain refinery operations and requirements to modify our operations), (ii) install new emission controls or other equipment at our facilities, and (iii) administer and manage any emissions or blending programs, including obtaining emission credits, allowances, or allotments. Such risks are particularly acute in California due to the pace and scope of anti-fossil fuel developments there.

Many of these legal, political, regulatory, and international accord matters and developments are subject to considerable uncertainty due to a number of factors, including technological and economic feasibility, pending or anticipated legal challenges, and potential changes in law, regulation, or policy, and it is not currently possible to predict the ultimate effects of many of these matters and developments on us. However, such events could adversely restrict or affect our refinery operations and limit our profitability; cause us to make changes with respect to our business plan, strategy, operations, and assets, including our current financial and accounting estimates and assumptions; cause a reduction in demand for our products; and result in negative publicity and litigation; each of which could materially and adversely affect our business, financial condition, results of operations, and liquidity.

We are subject to risks arising from the Renewable and Low-Carbon Fuel Programs, and other regulations, policies, international certifications, and standards impacting the demand for and traceability of low-carbon fuels.

As described under "ITEMS 1. and 2. BUSINESS AND PROPERTIES—OUR COMPREHENSIVE LIQUID FUELS STRATEGY —*Regulations, Policies, and Standards Driving Low-Carbon Fuel Demand*," government authorities across the world 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. We strategically market our low-carbon fuels based on regional policies, regulations, feedstock preferences, CI scores, and our ability to obtain fuel pathways, credits, certifications, and incentives. A significant portion of our low-carbon fuels are sold in California, Canada, and the U.K. Regarding the RFS, in June 2023, the EPA announced final rules that increase RVOs for 2023, 2024, and 2025. While the final rules did not adopt the "eRIN" provisions included in its December 2022 proposal, which would have allocated RINs from renewable electricity used to power EVs and other alternative fuel vehicles to the vehicle manufacturer, the EPA noted that it will continue to work on potential paths forward for an eRIN program.

We are exposed to the volatility in the market price of RINs, LCFS credits, and other credits, as described in Note 20 of Notes to Consolidated Financial Statements. We cannot predict the future prices of RINs, LCFS credits, or other credits. Prices for RINs, LCFS credits, and other credits are dependent upon a variety of factors, including, as applicable, EPA and state regulations, regulations of other countries and jurisdictions, the availability of RINs, LCFS credits, and other credits for purchase, transportation fuel production levels (which can vary significantly each quarter), approved CI pathways, and CI scores. Future RVOs, RFS changes, and small refinery exemption petition denials may also affect RIN prices. For example, if the RVOs for cellulosic biofuel are high relative to D3 RIN generation, RIN prices may rise, and the EPA may or may not issue cellulosic waiver credits in time to moderate price spikes, if at all. If an insufficient number of RINs, LCFS credits, or other credits are available for purchase (or available only at increased prices), or if we are otherwise unable to meet the EPA's RFS mandates or our other obligations under the Renewable and Low-Carbon Fuel Programs (for example, if there were to be demand destruction for gasoline, diesel, and renewable fuels resulting from displacement of internal combustion engine vehicles with EVs that results in production falling short of established RVOs, an acceleration of the blendwall, or other significant deviations from projected volumes), our business, financial condition, results of operations, and liquidity could be adversely affected. The adoption of an eRIN program could also increase RIN price volatility and result in other adverse impacts that cannot be fully predicted at this time.

In addition to the RFS and LCFS, we operate in multiple jurisdictions that have issued, or are considering issuing, similar low-carbon fuel regulations, policies, and standards, such as the CFR. The RFS, LCFS, 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 and monitoring, which impose substantial administrative burdens. In addition to regulation, demand is growing for renewable fuels certified through voluntary certification bodies such as the International Sustainability and Carbon Certification system, which presents business opportunities, but also entails additional administrative burdens. Our low-carbon fuels businesses could be materially and adversely affected if (i) these regulations, policies, and standards are adversely changed, not enforced, or discontinued, (ii) the benefits therefrom (such as Section 45Q, Section 45Z, and the blender's tax credits) are reduced or discontinued, (iii) any of the products we produce are deemed not to qualify for compliance therewith or are not in sufficient demand, or (iv) we are unable to satisfy or maintain the conditions of any approved

pathways or certifications. Such changes could also negatively impact the plans, expectations, assumptions, and projections with respect to our low-carbon projects and our GHG emissions targets and ambition, and could have a material adverse impact on the timing of completion, project returns, and other outcomes with respect to such projects.

Applicable environmental, health, and safety laws expose us to various risks.

Our operations are subject to extensive environmental, health, and safety laws and regulations, including those relating to the discharge of materials into the environment, waste management, pollution prevention measures, GHG emissions, and characteristics and composition of fuels. Certain of these laws and regulations have in the past imposed, and could again impose, obligations on us to conduct assessment or remediation efforts at our refineries and plants, as well as at formerly owned properties or third-party sites where we have taken wastes for disposal or where our wastes may have migrated. The principal environmental risks associated with our operations are emissions into the air, handling of waste, and releases into the soil, surface water, or groundwater. Such laws have imposed, and may again impose, liability on us for the conduct of third parties or for actions that complied with applicable requirements when taken, regardless of negligence or fault.

Because environmental, health, and safety laws and regulations are becoming more stringent and new environmental, health, and safety laws and regulations are continuously being enacted or proposed, and are being interpreted and applied in new and controversial ways, the level of costs required for environmental matters has increased and is expected to continue to increase in the future. Additionally, U.S. and state regulatory agencies have become increasingly aggressive in the scope and frequency of, and the magnitude and type of the relief sought by, the enforcement and investigative actions they have pursued under applicable environmental, health, and safety laws and regulations, particularly with respect to fossil fuel companies. This has been particularly acute in California. Such enforcement and investigative actions have resulted in, and are expected to continue to result in, increased costs, expenses, and negative publicity. Despite our efforts to maintain safe and environmentally responsible operations, in certain instances we have faced, and may continue to face, changing regulatory interpretations, regulatory fines or penalties, and liability for personal injury, property, and natural resource damage, environmental justice impacts, and assessment and remediation costs due to actual or alleged emissions, pollution, and/or contamination. We are also exposed to potential liability and costs related to regulated chemicals and other regulated materials, such as various perfluorinated compounds, per- and polyfluoroalkyl substances, benzene, MTBE, and petroleum hydrocarbons, at or from our current and formerly owned facilities (and new or additional regulations with respect to such materials may arise in the near future). Such liabilities and costs could materially and adversely affect our business, financial condition, results of operations, and liquidity.

We are subject to risks arising from litigation, regulatory proceedings, and mandatory disclosure requirements related to climate change and other ESG matters, or aimed at the fossil fuel industry.

We could face increased climate-related litigation with respect to our operations, disclosures, or products. Governments and private parties across the world have filed lawsuits or initiated regulatory action against fossil fuel companies. Such lawsuits and actions often allege non-compliance with applicable laws or regulations, or damages as a result of climate change, and seek damages and/or abatement under various tort and other theories, including under human rights or constitutional provisions. We have been named as a co-defendant in a lawsuit in state court by a county in Oregon seeking significant damages and abatement under various tort theories (including deceptive disclosures). We intend to vigorously defend against the allegations. However, the ultimate outcome and impact to us of such litigation cannot be

predicted with certainty at this time, and we could incur substantial legal costs and reputational damage associated with defending such matter, and an adverse ruling could require us to pay significant damages. Similar lawsuits may be filed in other jurisdictions.

Governments and private parties are also increasingly filing lawsuits or initiating regulatory action based on allegations that certain public statements and disclosures by companies regarding climate change and other ESG matters are false or misleading "greenwashing" that violate deceptive trade practices, consumer protection statutes, or other similar laws and regulations, or are fraudulent or misleading under applicable corporate, securities, stock exchange, or other similar laws and regulations. Similar issues can also arise relating to aspirational statements, such as net-zero or carbon neutrality targets, or alignment with certain third-party frameworks or standards that are made without an adequate basis to support such statements. Governments, such as the states of New York and Vermont, have also sought to establish various climate change adaptation cost recovery programs, under which "responsible parties" could bear the costs of climate mitigation investments. These lawsuits and actions present a high degree of uncertainty regarding the extent to which fossil fuel companies face an increased risk of liability and reputational damage stemming from climate change or other ESG matters.

In addition to voluntary disclosures in response to investor and stakeholder requests, many governments have also proposed or adopted regulations that impose disclosure obligations with respect to various climate change and other ESG matters. For example, in March 2022, the SEC proposed sweeping and novel disclosure obligations with respect to climate change and GHG emissions reporting for U.S. publicly-traded companies. Also, in November 2022, various U.S. federal agencies jointly proposed an amendment to the Federal Acquisition Regulation that would require government contractors to publicly disclose their GHG emissions, respond to a climate disclosure questionnaire, and set and disclose GHG emissions reduction goals, in each case based on or utilizing specified private third-party frameworks or standards that have not been widely adopted. In addition, in October 2023, California adopted the (i) Climate Corporate Data Accountability Act (SB 253), (ii) Climate-Related Financial Risk Act (SB 261), and (iii) voluntary Carbon Market Disclosures Business Regulation Act (AB 1305), which impose a host of different broad and far-reaching climate disclosure obligations, including with respect to GHG emissions, climate financial-risk reporting, and statements regarding GHG emissions reductions. Other U.S. states have announced or proposed similar regulations. Other countries where we operate or do business, such as the U.K., have also passed laws requiring, or announced their intention to mandate, various climate disclosures and targets by companies. Some governments have also adopted regulations, or are launching investigations and requesting information, based on pricing practices in the fossil fuel industry. For example, in September 2022, California adopted the Oil Refinery Cost Disclosure Act (SB 1322), which requires refineries in California to report monthly on the volume and cost of the crude oil they buy, the quantity and price of the wholesale gasoline they sell, and the gross gasoline margin per barrel, among other information, some or all of which data could become publicly available. Some customers and third parties we do business with have begun requesting product-specific GHG emissions disclosures from us in connection with their own GHG emissions reporting. Our efforts to comply with these and other requests and regulations expose us to risk by requiring disclosure of information that (i) may be protected trade secrets and/or competitively sensitive information, (ii) exposes us to litigation and government regulatory actions and investigations, (iii) is inconsistent with other government regulations or our current disclosures that may utilize different methodologies or standards, (iv) is subject to many assumptions and inherent calculation difficulties, such as accuracy and completeness, and (v) may impact our business relationships, credibility, and reputation.

As described in Note 2 of Notes to Consolidated Financial Statements, in March 2023, California adopted SBx 1-2, which imposes increased and substantial reporting requirements on our business, including

daily, weekly, monthly, and annual reporting of detailed operational and financial data on all aspects of our operations in California, much of it at the transaction level. In October 2023, in response to Governor Newsom's direction, the California Energy Commission (CEC) voted to start both a proceeding to evaluate whether to establish a maximum margin and associated penalty and a rulemaking process focused on rules relating to the timing of refinery turnarounds and maintenance, among other things. While the CEC has not yet established a maximum margin, imposed a financial penalty for profits above a maximum margin, or imposed restrictions on turnaround and maintenance activities, the potential implementation of a financial penalty, maximum margin, or any restrictions or delays on our ability to undertake turnaround or maintenance activities, could adversely restrict or affect our refinery operations and limit our profitability, cause us to make changes with respect to our business plan, strategy, operations, and assets (including our current financial and accounting estimates and assumptions), and adversely affect our business, financial condition, results of operations, and liquidity.

We are subject to risks arising from compliance with and changes in tax laws.

We are subject to extensive tax liabilities imposed by multiple jurisdictions, including income taxes; indirect taxes (excise/duty, sales/use, gross receipts, and value-added taxes); and payroll, franchise, withholding, and ad valorem taxes. New tax laws and regulations and changes in existing tax laws and regulations are continuously being enacted or proposed that could result in increased expenditures for tax liabilities in the future. For example, the IRA contains significant changes to U.S. tax law including, but not limited to, a corporate minimum tax and a one percent excise tax on the purchase by companies of their own stock.

Many of these tax liabilities are subject to periodic audits by the respective taxing authorities. Although we believe we have used reasonable interpretations and assumptions in calculating our tax liabilities, the final determination of these tax audits and any related proceedings cannot be predicted with certainty. Any adverse outcome of any of such tax audits or related proceedings could result in unforeseen tax-related liabilities that may, individually or in the aggregate, materially affect our cash tax liabilities, or create issues with respect to certain of our business permits, authorizations, and registrations, and, as a result, our business, financial condition, results of operations, and liquidity. Tax rates in the various jurisdictions in which we operate may change significantly as a result of political or economic factors beyond our control. It is also possible that future changes to tax laws or tax treaties, or interpretations thereof, could impact our ability to realize the tax savings recorded to date and adversely affect our future effective tax rates.

Cybersecurity and Privacy Related Risks

We are subject to risks arising from a significant breach of our information systems.

Our information systems and network infrastructure may be subject to unauthorized access or attack (and we are frequently subject to such attempts), including ransom-related incidents that could result in increased costs to prevent, and be prepared to respond to or mitigate such events, such as deploying additional personnel and protection technologies, training employees, and engaging third-party experts and consultants. Such unauthorized events could also result in (i) a loss of intellectual property, proprietary information, or employee, customer, supplier, or vendor data, (ii) public disclosure of sensitive information, (iii) systems interruption, (iv) disruption of our business operations, (v) remediation costs and repairs of system damage, (vi) reputational damage that adversely affects customer, supplier, or investor confidence, and (vii) damage to our business and competitiveness. A breach could also originate from or compromise our customers', vendors', suppliers', or other third-party networks outside of our

control that could impact our business and operations, as occurred with the Colonial Pipeline cybersecurity incident in May 2021. Although we implement internal controls on the connectivity of third parties to our systems that attempt to prevent or mitigate the impact from incidents affecting third-party systems, we have limited control over ensuring that third parties themselves are consistently enforcing strong cybersecurity controls over their systems. Increased risks of such attacks and disruptions also exist because of global geopolitical and other conflicts and tensions. A breach may also result in legal claims or proceedings against us by our stockholders, employees, customers, vendors, and government authorities. There can be no assurance that our current or future infrastructure protection technologies and disaster recovery plans can prevent or mitigate such breaches, cyber, and ransom-related incidents, or systems failures, any of which could have a material adverse effect on our business, financial condition, results of operations, and liquidity. The continuing and evolving threat of cybersecurity incidents has also resulted in increased regulatory focus on prevention and disclosure, such as the directive issued by the U.S. Transportation Security Administration following the Colonial Pipeline cybersecurity incident, the obligations imposed by the U.S. Cyber Incident Reporting for Critical Infrastructure Act adopted in March 2022, and the SEC's cybersecurity and governance disclosure rules issued in 2023. We may be required to expend significant additional resources to comply with such laws and regulations, incur fines for noncompliance, and otherwise be exposed to litigation and regulatory action as a result thereof.

Increasing legal and regulatory focus on data privacy and security issues could expose us to increased liability and operational changes and costs.

Along with our own data and information in the normal course of our business, we collect and retain certain data that is subject to specific laws and regulations. The compliant processing of this data domestically and transferring of this data across international borders continues to increase in complexity. This data is subject to regulation at various levels of government in many areas of our business and in jurisdictions across the world, including data privacy and security laws such as the California Consumer Privacy Act, the California Privacy Rights Act, the EU General Data Protection Regulation (GDPR), the U.K. and General Data Protection Regulation (U.K. GDPR), the standard contractual clauses adopted by the European Commission and the U.K. Parliament for the processing and transfer of personal data in compliance with the GDPR and/or the U.K. GDPR, and Quebec's Bill 64. We also operate in other jurisdictions (such as Mexico and Peru) that have issued, or are considering issuing, data privacy laws and regulations. The U.S. Federal Trade Commission recently adopted rules requiring the reporting of certain data breaches. As the number and complexities of such laws and regulations continue to increase, we will face increasingly complex compliance, monitoring, and control obligations. As the implementation, interpretation, and enforcement of such laws continues to progress and evolve, there may also be developments that amplify such risks. Any failure by us to comply with these laws and regulations, including as a result of a security or privacy breach, or otherwise, could expose us to litigation and enforcement, and result in significant penalties, fines, and other liabilities.

General Risk Factors

Uncertainty and illiquidity in financial markets, or changes in our credit profile or ratings, can adversely affect our ability to obtain credit and capital, increase our costs, and limit our flexibility.

Our ability to obtain credit and capital depends in large measure on capital markets and liquidity factors that we do not control. Our ability to access credit and capital markets may be restricted at a time when we would like, or need, to access those markets, which could have an impact on our flexibility to react to changing economic and business conditions. In addition, the cost and availability of debt and equity financing may be adversely impacted by persistently high interest rates, inflation, unstable or illiquid

market conditions, or adverse changes in our credit profile or to our credit ratings. These factors could adversely impact and limit our ability to obtain favorable credit and debt financing, raise our cost of capital, or require us to provide collateral or other forms of security, which would increase our costs and restrict operational and financial flexibility. Unstable or illiquid market conditions could also negatively impact our pension plans' assets and funding requirements.

From time to time, we may need to supplement our cash generated from operations with proceeds from financing activities or obtain letters of credit in certain commercial transactions. In addition, we rely on the counterparties to our commodity hedging and derivative instruments to fund their obligations under such arrangements. Uncertainty and illiquidity in financial markets could have an adverse impact on the costs or availability of the financial, commercial, and other services provided by such parties, which could have a material adverse effect on our business, financial condition, results of operations, and liquidity.

We are subject to risks arising from severe weather events.

Severe weather events, such as storms, hurricanes, droughts, or floods, could have an adverse effect on our operations and could increase our costs. For example, severe weather events can have an impact on crop production and reduce the supply of, or increase our costs to obtain, feedstocks for our Ethanol and Renewable Diesel segments. We have incurred, and expect to continue to incur, costs and expenses associated with severe weather, such as to keep our facilities performing and to mitigate and reduce the risk of severe weather to our operations. If more intense or frequent severe weather events occur, the physical and disruptive effects could have a material adverse impact on our operations and assets.

Our business may be negatively affected by work stoppages, slowdowns, or strikes, as well as by new legislation or an inability to attract and retain sufficient labor, and increased costs related thereto.

Certain employees at five of our U.S. refineries, as well as at each of our Canada and U.K. refineries, are covered by collective bargaining or similar agreements, which generally have unique and independent expiration dates. To the extent we are in negotiations for labor agreements expiring in the future, there is no assurance an agreement will be reached without a strike, work stoppage, or other labor action. Any prolonged strike, work stoppage, or other labor action at our facilities or at facilities owned or operated by third parties that support our operations could have an adverse effect on our business, financial condition, results of operations, and liquidity. Future U.S. federal, state, or international labor legislation could result in labor shortages and higher costs. An inability to recruit, train, and retain adequate personnel, or the loss or departure of personnel with key skills or deep institutional knowledge, may negatively impact our business. Inflation has also caused, and may in the future cause, increases in employee-related costs.

Our ability to fully insure losses arising from our operating hazards exposes us to various risks.

Our operations are subject to various hazards common to the industry, including explosions, fires, toxic emissions, maritime hazards, and natural catastrophes. As protection against these hazards, we maintain insurance coverage against some, but not all, potential losses and liabilities. We may not be able to maintain or obtain insurance of the type and amount we need, or at acceptable rates. Premiums and deductibles for certain insurance policies could increase substantially based on market conditions. In some instances, certain insurance could become unavailable or available only for reduced amounts of coverage. For example, coverage for hurricane damage is limited, and coverage for terrorism and cyber risks have broad exclusions. If we incur a significant loss or liability for which we are not adequately insured, it could have a material adverse effect on our business, financial condition, results of operations, and liquidity.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

RISK MANAGEMENT AND STRATEGY

We take an enterprise approach to information security risk management and governance. Our information security program and framework comprise processes, policies, practices, systems, and technologies that are designed to identify, assess, prioritize, manage, and monitor risks to our information systems, including risks from cybersecurity threats and events and risks associated with the use of third-party service providers.

Our established recovery approach is designed to provide for the ready availability and use of our business-critical processes in the event of any downtime, disaster, or outages. We also seek to identify and mitigate the risks associated with the use of third-party service providers through the review of their security programs prior to our engagement thereof. Additionally, our control environment and internal audit process bring a systematic, disciplined approach to evaluate our risk management, control, and governance processes concerning cybersecurity and our information security framework.

We have a cybersecurity Incident Response Plan (IRP) that sets forth a process to obtain information, coordinate activities, assess results, and communicate applicable developments to our employees, law enforcement, other external parties and agencies, and our Board. The IRP includes the following major components: preparation, detection and analysis, containment, eradication, notification, recovery, reporting, and lessons learned. Specific incident response playbooks have also been prepared for data breaches, malware, unauthorized remote access, and ransomware, which include applicable legal protocols. We have also retained certain third-party experts to assist us with various aspects of incident assessment and response in the event those services become necessary or useful.

Typically, we (i) perform periodic tabletop exercises with a company-wide cross-functional team that is facilitated by a third-party expert and is intended to simulate a real-life security incident, (ii) conduct penetration testing as needed and annually conduct Payment Card Industry Data Security Standard testing and firewall reviews, and have periodically engaged a third-party expert to help therewith, (iii) hold annual cybersecurity awareness trainings, and (iv) periodically engage a third-party expert to conduct a review of our information security framework, which helps to identify existing and emerging risks, and mitigate against such risks. These internal efforts and external third-party reviews also support our ability to regularly assess our information security program and framework against emerging risks, market and industry developments and provide opportunities to make adjustments or enhancements when deemed prudent or necessary. To date, there have been no cybersecurity incidents that have materially affected us, or that are reasonably likely to materially affect us, including our business strategy, financial condition, or results of operations.

For additional information on the cybersecurity risks we face, see “ITEM 1A. RISK FACTORS—Cybersecurity and Privacy Related Risks—*We are subject to risks arising from a significant breach of our information systems*.”

GOVERNANCE

Our Board's Role in Cybersecurity Oversight

Oversight of risk management, including with respect to risks from cybersecurity threats, is the responsibility of our Board, which exercises its oversight responsibilities both directly and through its committees. The Audit Committee of our Board has formal oversight responsibilities established in its committee charter concerning our initiatives and strategies respecting cybersecurity and information technology risks. At least once annually, the heads of our information services and internal audit teams provide a report to the Audit Committee on cybersecurity and information technology risks, as well as our information security operations, structure, framework, various cybersecurity and information technology metrics, our cybersecurity and information security management and improvement efforts, future projects, and our governance and assessments related to cybersecurity and information technology. The chair of the Audit Committee reports to the Board a summary of the information presented by the heads of our information services and internal audit teams during their cybersecurity update. Periodically, the Board also receives reports on such matters directly. As noted above, the IRP also contains notification procedures to the Board.

Management's Role in Assessment and Management of Material Risks from Cybersecurity Threats

We have an Information Security Committee (Infosec Committee) consisting of refining, renewable diesel, ethanol, logistics, and information services personnel that meets weekly to evaluate third-party exchange of data and collaborate on strategy for dealing with information security risks and other related matters. The Infosec Committee reports to our Information Security Oversight Committee (Infosec Oversight Committee) and our Executive Steering Committee on cybersecurity (Executive Steering Committee). Our Infosec Oversight Committee consists of information services, refining, and internal audit personnel and meets quarterly to discuss network threats and the overall security landscape. Our Executive Steering Committee consists of management within our information services, internal audit, refining, renewable diesel, ethanol, legal, and logistics teams, and meets twice per year to review and discuss information security metrics and results of security assessments, among other items. Key members of the Infosec Oversight Committee and the Executive Steering Committee provide a report to the Audit Committee of the Board as discussed above.

Our information services team is led by our Vice President Information Services & Technology, who also chairs the Infosec Oversight Committee and has approximately 25 years of experience in the information technology industry. Collectively, the members of our Infosec Committee, Infosec Oversight Committee, and Executive Steering Committee have decades of experience within the information technology and/or cybersecurity areas. On a monthly basis, our Vice President Information Services & Technology provides executive management with an Information Security Scorecard, which includes any cybersecurity events that have occurred. If a cybersecurity incident is declared under the IRP, we will evaluate whether such incident might have a material adverse impact on our business, financial condition, results of operations, or reputation, among other considerations, and communicate that discussion to executive management, who will then determine if escalation to the Board is warranted and if further disclosure is required to the SEC and/or other government agencies.

ITEM 3. LEGAL PROCEEDINGS

LITIGATION

We incorporate by reference into this item our disclosures made in Note 1 of Notes to Consolidated Financial Statements under "Legal Contingencies."

ENVIRONMENTAL ENFORCEMENT MATTERS

We are reporting the following proceedings to comply with SEC regulations, which require us to disclose certain information about proceedings arising under federal, state, or local provisions regulating the discharge of materials into the environment or primarily for the purpose of protecting the environment if a governmental authority is a party to such proceeding and we reasonably believe that such proceeding will result in monetary sanctions that exceed a specified threshold. Pursuant to SEC regulations, we use a threshold of $1 million for purposes of determining whether disclosure of any such proceeding is required. We believe proceedings less than this threshold are not material to our business and financial condition.

Bay Area Air Quality Management District (BAAQMD) (Benicia Refinery). In our quarterly report on Form 10-Q for the quarter ended September 30, 2023, we reported that (i) we had received a Notice of Violation (NOV) from the BAAQMD on March 21, 2019 related to atmospheric emissions of hydrogen commingled with non-methane organic compounds at our Benicia Refinery (the 2019 Atmospheric Emissions NOV), (ii) on December 1, 2020, we had received an NOV from the BAAQMD related to pressure relief devices in the Benicia Refinery's Hydrogen Unit (the 2020 Pressure Relief Device NOV), and (iii) on June 17, 2021, October 11, 2021, and January 26, 2022, we had received certain other compliance-related NOVs related to the 2019 Atmospheric Emissions NOV and the 2020 Pressure Relief Device NOV. We are continuing to work with the BAAQMD to resolve these matters.

BAAQMD (Benicia Refinery). In our quarterly report on Form 10-Q for the quarter ended June 30, 2023, we reported that on May 1, 2023, the BAAQMD issued a compliance-related NOV to our Benicia Refinery related to a pressure relief device. We are continuing to work with the BAAQMD to resolve this matter.

BAAQMD (Benicia Refinery). In our quarterly report on Form 10-Q for the quarter ended September 30, 2023, we reported that we were in the process of working with the BAAQMD to resolve several other NOVs issued by the BAAQMD to our Benicia Refinery in 2020 and 2019, which primarily relate to various emissions and related compliance issues. We are continuing to work with the BAAQMD to resolve these matters.

Texas Attorney General (Texas AG) (Port Arthur Refinery). In our annual report on Form 10-K for the year ended December 31, 2022, we reported that the Texas AG had filed suit against our Port Arthur Refinery in the 419th Judicial District Court of Travis County, Texas, Cause No. D-1-GN-19-004121, for alleged violations of the Clean Air Act seeking injunctive relief and penalties. We are working with the Texas AG to resolve this matter.

ITEM 4. MINE SAFETY DISCLOSURES

None.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following table lists the names and titles of our executive officers (for purposes of Rule3b-7 under the Securities Exchange Act of 1934) as of the date of this report. There is no arrangement or understanding between any executive officer listed below or any other person under which the executive officer was or is to be selected as an officer.

Name	Current Position	Officer Beginning	Age as of December 31, 2023
R. Lane Riggs	Chief Executive Officer and President	2011	58
Jason W. Fraser	Executive Vice President and Chief Financial Officer	2015	55
Gary K. Simmons	Executive Vice President and Chief Operating Officer	2011	59
Richard J. Walsh	Senior Vice President, General Counsel and Secretary	2016	58

Mr. Riggs was elected Chief Executive Officer and President, and as a member of our Board effective as of the close of business on June 30, 2023. He previously served as President and Chief Operating Officer (beginning January 23, 2020), and Executive Vice President and Chief Operating Officer (beginning January 1, 2018), and prior to that as Executive Vice President Refining Operations and Engineering (beginning 2014), and Senior Vice President Refining Operations (beginning 2011). He has held several leadership positions with Valero overseeing refining operations, supply optimization and crude and feedstock supply, and planning and economics. Mr. Riggs also previously served on the board of directors of Valero Energy Partners GP LLC (the general partner of Valero Energy Partners LP) from 2014 to 2019.

Mr. Fraser was elected Executive Vice President and Chief Financial Officer effective July 15, 2020. Prior to that he served as Executive Vice President and General Counsel effective January 1, 2019. In 2018, he served as Senior Vice President overseeing Valero's Public Policy & Strategic Planning, Governmental Affairs, Investor Relations, and External Communications functions. From November 2016 to May 2018, Mr. Fraser served as Vice President Public Policy & Strategic Planning, and from May 2015 to November 2016, he served in London as Vice President Europe, overseeing our European commercial businesses. Prior to his service in London, he held various leadership positions at our San Antonio headquarters, including Senior Vice President & Deputy General Counsel and Senior Vice President Specialty Products in the Valero family of companies.

Mr. Simmons was elected Executive Vice President and Chief Operating Officer on July 20, 2023. He previously served as Executive Vice President and Chief Commercial Officer (beginning January 23, 2020), and Senior Vice President Supply, International Operations and Systems Optimization (beginning May 2014), and prior to that as Vice President Crude and Feedstock Supply and Trading (2012 to 2014), and Vice President Supply Chain Optimization (2011 to 2012). Mr. Simmons has held many leadership positions with Valero, including Vice President and General Manager of our Ardmore and St. Charles refineries.

Mr. Walsh was elected Senior Vice President, General Counsel and Secretary, effective April 22, 2021, and prior to that was elected as Senior Vice President and General Counsel effective July 15, 2020. Mr. Walsh has responsibility for our legal and governmental affairs, health, safety, and environmental, fuels compliance, risk management, ESG, and compliance/ethics teams. He previously served as Vice President and Deputy General Counsel from 2016 to 2020. He joined Valero in 1999 and has served in many different leadership roles within our legal department.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock trades on the NYSE under the trading symbol "VLO."

As of January 31, 2024, there were 4,414 holders of record of our common stock.

Dividends are considered quarterly by the Board, may be paid only when approved by the Board, and will depend on our financial condition, results of operations, cash flows, prospects, industry conditions, capital requirements, and other factors and restrictions our Board deems relevant. There can be no assurance that we will pay a dividend in the future at the rates we have paid historically, or at all.

The following table discloses purchases of shares of our common stock made by us or on our behalf during the fourth quarter of 2023.

Period	Total Number of Shares Purchased (a)	Average Price Paid per Share (b)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (c)
October 2023	611,778	$ 124.20	559,399	$3.1 billion
November 2023	1,561,401	$ 124.24	1,487,134	$2.9 billion
December 2023	5,324,131	$ 128.92	5,323,068	$2.2 billion
Total	7,497,310	$ 127.56	7,369,601	$2.2 billion

(a) The shares reported in this column include 127,709 shares related to our purchases of shares from our employees (including former employees) and non-employee directors in connection with the exercise of stock options, the vesting of restricted stock, and other stock compensation transactions in accordance with the terms of our stock-based compensation plans.

(b) The average price paid per share reported in this column excludes brokerage commissions and a one percent excise tax on share purchases.

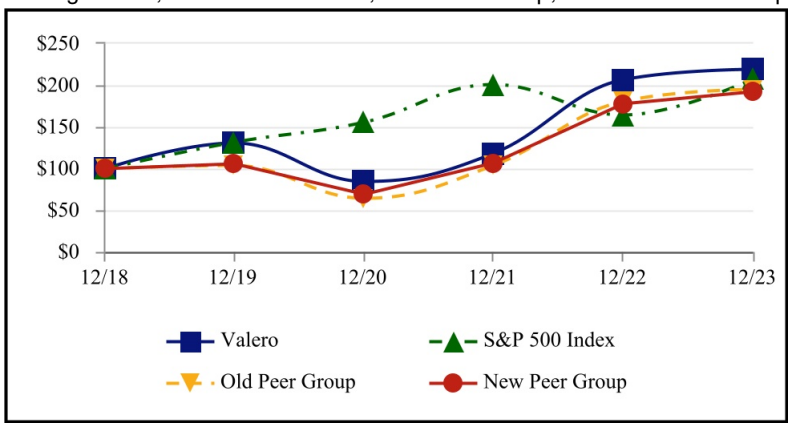
(c) On February 23, 2023, we announced that our Board authorized us to purchase shares of our outstanding common stock for a total cost of up to $2.5 billion with no expiration date, and we completed all authorized share purchases under that program during the fourth quarter of 2023. On September 15, 2023, we announced that our Board authorized us to purchase shares of our outstanding common stock for a total cost of up to $2.5 billion with no expiration date (the September 2023 Program). As of December 31, 2023, we had $2.2 billion remaining available for purchase under the September 2023 Program. On February 22, 2024, our Board authorized us to purchase shares of our outstanding common stock for a total cost of up to $2.5 billion with no expiration date, which is in addition to the amount remaining under the September 2023 Program.

The performance graph below is not "soliciting material," is not deemed filed with the SEC, and is not to be incorporated by reference into any of our filings under the Securities Act of 1933 or the Securities Exchange Act of 1934, respectively.

This performance graph and the related textual information are based on historical data and are not indicative of future performance. The following line graph compares the cumulative total return[4] on an investment in our common stock against the cumulative total return of the S&P 500 Composite Index and an index of peers (that we selected) for the five-year period commencing December 31, 2018 and ending December 31, 2023. Our selected peer group comprises the following eleven members: ConocoPhillips; CVR Energy, Inc.; Delek US Holdings, Inc.; the Energy Select Sector SPDR Fund; EOG Resources, Inc.; HF Sinclair Corporation; LyondellBasell Industries N.V.; Marathon Petroleum Corporation; Occidental Petroleum Corporation; PBF Energy Inc.; and Phillips 66. The Energy Select Sector SPDR Fund (XLE) serves as a proxy for stock price performance of the energy sector and includes energy companies with which we compete for capital. LyondellBasell Industries N.V. was added to the prior year's peer group because of its similarities to us in size, complexity, and exposure to commodity pricing volatility for both its products and feedstocks. LyondellBasell Industries N.V. also helps to balance the full portfolio of peers by helping ensure accountability of performance both within the core downstream segment of the oil and gas industry, and also in adjacent segments that face similar challenges and opportunities. We believe that our peer group represents a group of companies for making head-to-head performance comparisons in a competitive operating environment that is primarily characterized by U.S.-based companies that have business models predominantly consisting of downstream refining operations, together with similarly sized energy companies that share operating similarities to us, and that are in adjacent segments of the oil and gas industry.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN[4]

Among Valero, the S&P 500 Index, Old Peer Group, and New Peer Group



	As of December 31,					
	2018	2019	2020	2021	2022	2023
Valero common stock	$ 100.00	$ 130.36	$ 83.95	$ 117.80	$ 206.18	$ 218.29
S&P 500 Index	100.00	131.49	155.68	200.37	164.08	207.21
Old Peer Group	100.00	103.43	63.56	103.27	180.60	194.27
New Peer Group	100.00	105.09	69.11	106.04	177.48	192.24

[4] Assumes that an investment in Valero common stock, the S&P 500 index, our old peer group, and our new peer group was $100 on December 31, 2018. Cumulative total return is based on share price appreciation plus reinvestment of dividends from December 31, 2018 through December 31, 2023.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis is management's perspective of our current financial condition and results of operations, and should be read in conjunction with "ITEM 1A. RISK FACTORS" and "ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA" included in this report. This discussion and analysis includes the years ended December 31, 2023 and 2022 and comparison between such years. The discussion for the year ended December 31, 2021 and comparison between the years ended December 31, 2022 and 2021 have been omitted from this annual report on Form 10-K for the year ended December 31, 2023, as such information can be found in "ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS" in our annual report on Form 10-K for the year ended December 31, 2022, which was filed on February 23, 2023.

CAUTIONARY STATEMENT FOR THE PURPOSE OF SAFE HARBOR PROVISIONS OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

This report, including without limitation our disclosures below under "OVERVIEW AND OUTLOOK," includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. You can identify our forward-looking statements by the words "anticipate," "believe," "expect," "plan," "intend," "scheduled," "estimate," "project," "projection," "predict," "budget," "forecast," "goal," "guidance," "target," "ambition," "could," "would," "should," "may," "strive," "seek," "potential," "opportunity," "aimed," "considering," "continue," and similar expressions.

These forward-looking statements include, among other things, statements regarding:

- the effect, impact, potential duration or timing, or other implications of global geopolitical and other conflicts and tensions;
- future Refining segment margins, including gasoline and distillate margins, and discounts;
- future Renewable Diesel segment margins;
- future Ethanol segment margins;
- expectations regarding feedstock costs, including crude oil differentials, product prices for each of our segments, transportation costs, and operating expenses;
- anticipated levels of crude oil and liquid transportation fuel inventories and storage capacity;
- expectations regarding the levels of, costs and timing with respect to, the production and operations at our existing refineries and plants, projects under evaluation, construction, or development, and former projects;
- our anticipated level of capital investments, including deferred turnaround and catalyst cost expenditures, our expected allocation between, and/or within, growth capital expenditures and sustaining capital expenditures, capital expenditures for environmental and other purposes, and joint venture investments, the expected costs and timing applicable to such capital investments and any related projects, and the effect of those capital investments on our business, financial condition, results of operations, and liquidity;
- our anticipated level of cash distributions or contributions, such as our dividend payment rate and contributions to our pension plans and other postretirement benefit plans;

- our ability to meet future cash and credit requirements, whether from funds generated from our operations or our ability to access financial markets effectively, and expectations regarding our liquidity;
- our evaluation of, and expectations regarding, any future activity under our share purchase program or transactions involving our debt securities;
- anticipated trends in the supply of, and demand for, crude oil and other feedstocks and refined petroleum products, renewable diesel, and ethanol and corn related co-products in the regions where we operate, as well as globally;
- expectations regarding environmental, tax, and other regulatory matters, including SBx 1-2 and the matters discussed under "ITEM 3. LEGAL PROCEEDINGS" above, the anticipated amounts and timing of payment with respect to our deferred tax liabilities, unrecognized tax benefits, matters impacting our ability to repatriate cash held by our foreign subsidiaries, and the anticipated effect thereof on our business, financial condition, results of operations, and liquidity;
- the effect of general economic and other conditions, including inflation and economic activity levels, on refining, renewable diesel, and ethanol industry fundamentals;
- expectations regarding our risk management activities, including the anticipated effects of our hedge transactions;
- expectations regarding our counterparties, including our ability to pass on increased compliance costs and timely collect receivables, and the credit risk within our accounts receivable or accounts payable;
- expectations regarding adoptions of new, or changes to existing Renewable and Low-Carbon Fuel Programs, blending and tax credits, or efficiency standards that impact demand for renewable fuels; and
- expectations regarding our low-carbon fuels strategy, publicly announced GHG emissions reduction/displacement targets and ambitions, and our current, former, and any future low-carbon projects.

We based our forward-looking statements on our current expectations, estimates, and projections about ourselves, our industry, and the global economy and financial markets generally. We caution that these statements are not guarantees of future performance or results and involve known and unknown risks and uncertainties, the ultimate outcomes of which we cannot predict with certainty. In addition, we based many of these forward-looking statements on assumptions about future events, the ultimate outcomes of which we cannot predict with certainty and which may prove to be inaccurate. Accordingly, actual performance or results may differ materially from the future performance or results that we have expressed, suggested, or forecast in the forward-looking statements. Differences between actual performance or results and any future performance or results expressed, suggested, or forecast in these forward-looking statements could result from a variety of factors, including the following:

- the effects arising out of global geopolitical and other conflicts and tensions, including with respect to changes in trade flows and impacts to crude oil and other markets;
- demand for, and supplies of, refined petroleum products (such as gasoline, diesel, jet fuel, and petrochemicals), renewable diesel, and ethanol and corn related co-products;
- demand for, and supplies of, crude oil and other feedstocks;
- the effects of public health threats, pandemics, and epidemics, such as the COVID-19 pandemic and variants of the virus, governmental and societal responses thereto, and the adverse impacts of the foregoing on our business, financial condition, results of operations, and liquidity, and the global economy and financial markets generally;

- acts of terrorism aimed at either our refineries and plants or third-party facilities that could impair our ability to produce or transport refined petroleum products, renewable diesel, ethanol, or corn related co-products, to receive feedstocks, or otherwise operate efficiently;
- the effects of war or hostilities, and political and economic conditions, in countries that produce crude oil or other feedstocks or consume refined petroleum products, renewable diesel, ethanol or corn related co-products;
- the ability of the members of OPEC, and other petroleum-producing nations that collectively make up OPEC+, to agree on and to maintain crude oil price and production controls;
- the level of consumer demand, consumption, and overall economic activity, including the effects from seasonal fluctuations and market prices;
- refinery, renewable diesel plant, or ethanol plant overcapacity or undercapacity;
- the risk that any transactions may not provide the anticipated benefits or may result in unforeseen detriments;
- the actions taken by competitors, including both pricing and adjustments to refining capacity or renewable fuels production in response to market conditions;
- the level of competitors' imports into markets that we supply;
- accidents, unscheduled shutdowns, weather events, civil unrest, expropriation of assets, and other economic, diplomatic, legislative, societal, 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 service providers;
- changes in the cost or availability of transportation or storage capacity for feedstocks and our products;
- pressure and influence of environmental groups and other stakeholders upon policies and decisions related to the production, transportation, storage, refining, processing, marketing, and sales of crude oil or other feedstocks, refined petroleum products, renewable diesel, ethanol, or corn related co-products;
- the price, availability, technology related to, and acceptance of alternative fuels and alternative-fuel vehicles, as well as sentiment and perceptions with respect to low-carbon projects and GHG emissions more generally;
- the levels of government subsidies for, and executive orders, mandates, or other policies with respect to, alternative fuels, alternative-fuel vehicles, and other low-carbon technologies or initiatives, including those related to carbon capture, carbon sequestration, and low-carbon fuels, or affecting the price of natural gas and/or electricity;
- the volatility in the market price of compliance credits (primarily RINs needed to comply with the RFS) under the Renewable and Low-Carbon Fuel Programs and emission credits needed under other environmental emissions programs;
- delay of, cancellation of, or failure to implement planned capital or other strategic projects and realize the various assumptions and benefits projected for such projects or cost overruns in constructing such planned projects;
- earthquakes, hurricanes, tornadoes, winter storms, droughts, floods, wildfires, and other weather events, which can unforeseeably affect the price or availability of electricity, natural gas, crude oil, waste and renewable feedstocks, corn, and other feedstocks, critical supplies, refined petroleum products, renewable diesel, and ethanol;
- rulings, judgments, or settlements in litigation or other legal or regulatory matters, such as unexpected environmental remediation or enforcement costs, including those in excess of any reserves or insurance coverage;
- legislative or regulatory action, including the introduction or enactment of legislation or rulemakings by government authorities, environmental regulations, changes to income tax rates,

introduction of a global minimum tax, windfall taxes or penalties, tax changes or restrictions impacting the foreign repatriation of cash, actions implemented under SBx 1-2, actions implemented under the Renewable and Low-Carbon Fuel Programs and other environmental emissions programs, including changes to volume requirements or other obligations or exemptions under the RFS, and actions arising from the EPA's or other government agencies' regulations, policies, or initiatives concerning GHGs, including mandates for or bans of specific technology, which may adversely affect our business or operations;

- changing economic, regulatory, and political environments and related events in the various countries in which we operate or otherwise do business, including trade restrictions, expropriation or impoundment of assets, failure of foreign governments and state-owned entities to honor their contracts, property disputes, economic instability, restrictions on the transfer of funds, duties and tariffs, transportation delays, import and export controls, labor unrest, security issues involving key personnel, and decisions, investigations, regulations, issuances or revocations of permits and other authorizations, and other actions, policies, and initiatives by the states, counties, cities, and other jurisdictions in the countries in which we operate or otherwise do business;
- changes in the credit ratings assigned to our debt securities and trade credit;
- the operating, financing, and distribution decisions of our joint ventures or other joint venture members that we do not control;
- changes in currency exchange rates, including the value of the Canadian dollar, the pound sterling, the euro, the Mexican peso, and the Peruvian sol relative to the U.S. dollar;
- the adequacy of capital resources and liquidity, including availability, timing, and amounts of cash flow or our ability to borrow or access financial markets;
- the costs, disruption, and diversion of resources associated with lawsuits, demands, or investigations, or campaigns and negative publicity commenced by government authorities, investors, stakeholders, or other interested parties;
- overall economic conditions, including the stability and liquidity of financial markets, and the effect thereof on consumer demand; and
- other factors generally described in the "RISK FACTORS" section included in "ITEM 1A. RISK FACTORS" in this report.

Any one of these factors, or a combination of these factors, could materially affect our future results of operations and whether any forward-looking statements ultimately prove to be accurate. Our forward-looking statements are not guarantees of future performance, and actual results and future performance may differ materially from those expressed, suggested, or forecast in any forward-looking statements. Such forward-looking statements speak only as of the date of this annual report on Form 10-K and we do not intend to update these statements unless we are required by applicable securities laws to do so.

All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the foregoing, as it may be updated or modified by our future filings with the SEC. We undertake no obligation to publicly release any revisions to any such forward-looking statements that may be made to reflect events or circumstances after the date of this report or to reflect the occurrence of unanticipated events unless we are required by applicable securities laws to do so.

NON-GAAP FINANCIAL MEASURES

The discussions in “OVERVIEW AND OUTLOOK,” “RESULTS OF OPERATIONS,” and “LIQUIDITY AND CAPITAL RESOURCES” below include references to financial measures that are not defined under U.S. generally accepted accounting principles (GAAP). These non-GAAP financial measures include adjusted operating income (including adjusted operating income for each of our reportable segments, as applicable); Refining, Renewable Diesel, and Ethanol segment margin; and capital investments attributable to Valero. We have included these non-GAAP financial measures to help facilitate the comparison of operating results between years, to help assess our cash flows, and because we believe they provide useful information as discussed further below. See the tables in note (h) beginning on page 54 for reconciliations of adjusted operating income (including adjusted operating income for each of our reportable segments, as applicable) and Refining, Renewable Diesel, and Ethanol segment margin to their most directly comparable GAAP financial measures. Also in note (h), we disclose the reasons why we believe our use of such non-GAAP financial measures provides useful information. See the table on page 61 for a reconciliation of capital investments attributable to Valero to its most directly comparable GAAP financial measure. Also on page 61, we disclose the reasons why we believe our use of this non-GAAP financial measure provides useful information.

OVERVIEW AND OUTLOOK

Overview

Business Operations Update

Our results for the year ended December 31, 2023 were favorably impacted by the continued strong worldwide demand for petroleum-based transportation fuels, while the worldwide supply of those products remained constrained. This global supply and demand imbalance contributed to strong refining margins for 2023.

The strong demand for our products and continued strength in refining margins were the primary contributors to us reporting $8.8 billion of net income attributable to Valero stockholders for the year ended December 31, 2023. Our operating results for 2023, including operating results by segment, are described in the summary on the following page, and detailed descriptions can be found below under “RESULTS OF OPERATIONS” beginning on page 46.

Our operations generated $9.2 billion of cash in 2023. This cash was used to make $1.9 billion of capital investments in our business and return $6.6 billion to our stockholders through purchases of common stock for treasury and dividend payments. In addition, we reduced our outstanding debt through the purchase of $199 million of our public debt in 2023. As a result of this and other activity, our cash and cash equivalents increased by $562 million during 2023 to $5.4 billion as of December 31, 2023. We had $10.5 billion in liquidity as of December 31, 2023. The components of our liquidity and descriptions of our cash flows, capital investments, and other matters impacting our liquidity and capital resources can be found below under “LIQUIDITY AND CAPITAL RESOURCES” beginning on page 57.

Results for the Year Ended December 31, 2023

For 2023, we reported net income attributable to Valero stockholders of $8.8 billion compared to $11.5 billion for 2022. The decrease of $2.7 billion was primarily due to a decrease in operating income of $3.8 billion, partially offset by an increase in "other income, net" of $323 million and a decrease in income tax expense of $809 million. The details of our operating income and adjusted operating income by segment, where applicable, and in total are reflected in the following table (in millions). Adjusted operating income excludes the adjustments reflected in the tables in note (h) beginning on page 54.

	Year Ended December 31,		
	2023	2022	Change
Refining segment:			
Operating income	$ 11,511	$ 15,803	$ (4,292)
Adjusted operating income	11,528	15,762	(4,234)
Renewable Diesel segment:			
Operating income	852	774	78
Ethanol segment:			
Operating income	553	110	443
Adjusted operating income	569	151	418
Total company:			
Operating income	11,858	15,690	(3,832)
Adjusted operating income	11,891	15,710	(3,819)

While our operating income decreased by $3.8 billion in 2023 compared to 2022, adjusted operating income also decreased by $3.8 billion primarily due to the following:

- *Refining segment.* Refining segment adjusted operating income decreased by $4.2 billion primarily due to lower gasoline and distillate (primarily diesel) margins, partially offset by higher discounts on crude oils and other feedstocks and lower operating expenses (excluding depreciation and amortization expense).

- *Renewable Diesel segment.* Renewable Diesel segment operating income increased by $78 million primarily due to lower feedstock costs and higher sales volumes, partially offset by lower product prices (primarily renewable diesel), higher operating expenses (excluding depreciation and amortization expense), and higher depreciation and amortization expense.

- *Ethanol segment.* Ethanol segment adjusted operating income increased by $418 million primarily due to lower corn prices, higher production volumes, and lower operating expenses (excluding depreciation and amortization expense), partially offset by lower ethanol and corn related co-product prices.

Outlook

Many uncertainties remain with respect to the supply and demand imbalance in the petroleum-based products market worldwide. While it is difficult to predict future worldwide economic activity and its impact on product supply and demand, as well as any effect that the uncertainty described in Note 2 of Notes to Consolidated Financial Statements or other political or regulatory developments may have on us, we have noted several factors below that have impacted or may impact our results of operations during the first quarter of 2024.

- Gasoline and diesel demand have returned to pre-pandemic levels and are expected to follow typical seasonal patterns. Jet fuel demand continues to improve and is approaching pre-pandemic levels in the U.S.

- Combined light product (gasoline, diesel, and jet fuel) inventories in the U.S. and Europe remain below historical levels reflecting tight global petroleum product balances, which should support continued high utilization of refining capacity.

- Crude oil discounts have widened, consistent with typical seasonal patterns and expected industry-wide refinery maintenance activity in the first quarter of 2024; however, continued sour crude oil production cuts by OPEC+ suppliers and the pending start-up of the Trans Mountain Pipeline expansion may dampen some of the seasonal effect. In addition, conflict in the Middle East, including impacts on shipping routes and freight costs, could result in increased volatility in the crude oil market and potentially impact crude oil discounts.

- Renewable diesel demand is expected to remain consistent with current levels.

- Ethanol demand is expected to follow typical seasonal patterns.

RESULTS OF OPERATIONS

The following tables, including the reconciliations of non-GAAP financial measures to their most directly comparable GAAP financial measures in note (h) beginning on page 54, highlight our results of operations, our operating performance, and market reference prices that directly impact our operations. Note references in this section can be found on pages 53 through 56.

Financial Highlights by Segment and Total Company (millions of dollars)

	Year Ended December 31, 2023				
	Refining	Renewable Diesel	Ethanol	Corporate and Eliminations	Total
Revenues:					
Revenues from external customers	$ 136,470	$ 3,823	$ 4,473	$ —	$ 144,766
Intersegment revenues	18	3,168	1,086	(4,272)	—
Total revenues	136,488	6,991	5,559	(4,272)	144,766
Cost of sales:					
Cost of materials and other	117,401	5,550	4,395	(4,259)	123,087
Operating expenses (excluding depreciation and amortization expense reflected below)	5,208	358	515	8	6,089
Depreciation and amortization expense	2,351	231	80	(4)	2,658
Total cost of sales	124,960	6,139	4,990	(4,255)	131,834
Other operating expenses	17	—	16	—	33
General and administrative expenses (excluding depreciation and amortization expense reflected below)	—	—	—	998	998
Depreciation and amortization expense	—	—	—	43	43
Operating income by segment	$ 11,511	$ 852	$ 553	$ (1,058)	11,858
Other income, net (e)					502
Interest and debt expense, net of capitalized interest					(592)
Income before income tax expense					11,768
Income tax expense					2,619
Net income					9,149
Less: Net income attributable to noncontrolling interests					314
Net income attributable to Valero Energy Corporation stockholders					$ 8,835

Financial Highlights by Segment and Total Company (continued)
(millions of dollars)

	Year Ended December 31, 2022				
	Refining	Renewable Diesel	Ethanol	Corporate and Eliminations	Total
Revenues:					
Revenues from external customers	$ 168,154	$ 3,483	$ 4,746	$ —	$ 176,383
Intersegment revenues	56	2,018	740	(2,814)	—
Total revenues	168,210	5,501	5,486	(2,814)	176,383
Cost of sales:					
Cost of materials and other (a)	144,588	4,350	4,628	(2,796)	150,770
Operating expenses (excluding depreciation and amortization expense reflected below)	5,509	255	625	—	6,389
Depreciation and amortization expense (b)	2,247	122	59	—	2,428
Total cost of sales	152,344	4,727	5,312	(2,796)	159,587
Asset impairment loss (c)	—	—	61	—	61
Other operating expenses	63	—	3	—	66
General and administrative expenses (excluding depreciation and amortization expense reflected below) (d)	—	—	—	934	934
Depreciation and amortization expense	—	—	—	45	45
Operating income by segment	$ 15,803	$ 774	$ 110	$ (997)	15,690
Other income, net (e)					179
Interest and debt expense, net of capitalized interest					(562)
Income before income tax expense					15,307
Income tax expense (f)					3,428
Net income					11,879
Less: Net income attributable to noncontrolling interests					351
Net income attributable to Valero Energy Corporation stockholders					$ 11,528

Average Market Reference Prices and Differentials

	Year Ended December 31,	
	2023	2022
Refining		
Feedstocks (dollars per barrel)		
Brent crude oil	$ 82.27	$ 98.86
Brent less West Texas Intermediate (WTI) crude oil	4.60	4.43
Brent less WTI Houston crude oil	3.15	2.82
Brent less Dated Brent crude oil	(0.44)	(2.22)
Brent less Argus Sour Crude Index crude oil	5.34	7.42
Brent less Maya crude oil	13.33	11.68
Brent less Western Canadian Select Houston crude oil	12.15	15.55
WTI crude oil	77.67	94.43
Natural gas (dollars per million British thermal units)	2.23	5.83
RVO (dollars per barrel) (g)	7.02	7.72
Product margins (RVO adjusted unless otherwise noted) (dollars per barrel)		
U.S. Gulf Coast:		
CBOB gasoline less Brent	8.83	9.54
Ultra-low-sulfur (ULS) diesel less Brent	25.06	38.73
Propylene less Brent (not RVO adjusted)	(47.47)	(42.73)
U.S. Mid-Continent:		
CBOB gasoline less WTI	17.70	15.88
ULS diesel less WTI	32.37	44.11
North Atlantic:		
CBOB gasoline less Brent	15.61	19.24
ULS diesel less Brent	29.47	49.29
U.S. West Coast:		
CARBOB 87 gasoline less Brent	28.45	31.32
CARB diesel less Brent	32.79	40.97

Average Market Reference Prices and Differentials (continued)

	Year Ended December 31,	
	2023	2022
Renewable Diesel		
New York Mercantile Exchange ULS diesel (dollars per gallon)	$ 2.81	$ 3.54
Biodiesel RIN (dollars per RIN)	1.35	1.67
California LCFS (dollars per metric ton)	72.42	98.73
U.S. Gulf Coast (USGC) used cooking oil (dollars per pound)	0.58	0.77
USGC distillers corn oil (dollars per pound)	0.63	0.77
USGC fancy bleachable tallow (dollars per pound)	0.59	0.75
Ethanol		
Chicago Board of Trade corn (dollars per bushel)	5.65	6.94
New York Harbor ethanol (dollars per gallon)	2.34	2.57

2023 Compared to 2022

Total Company, Corporate, and Other

The following table includes selected financial data for the total company, corporate, and other for 2023 and 2022. The selected financial data is derived from the Financial Highlights by Segment and Total Company tables, unless otherwise noted.

	Year Ended December 31,		
	2023	2022	Change
Revenues	$ 144,766	$ 176,383	$ (31,617)
Cost of sales (see notes (a) and (b))	131,834	159,587	(27,753)
Operating income	11,858	15,690	(3,832)
Adjusted operating income (see note (h))	11,891	15,710	(3,819)
Other income, net (see note (e))	502	179	323
Income tax expense (see note (f))	2,619	3,428	(809)

Revenues decreased by $31.6 billion in 2023 compared to 2022 primarily due to decreases in product prices for the petroleum-based transportation fuels associated with sales made by our Refining segment. This decrease in revenues was partially offset by a decrease in cost of sales of $27.8 billion primarily due to decreases in crude oil and other feedstock costs. These changes resulted in a $3.8 billion decrease in operating income, from $15.7 billion in 2022 to $11.9 billion in 2023.

Adjusted operating income also decreased by $3.8 billion, from $15.7 billion in 2022 to $11.9 billion in 2023. The components of this $3.8 billion decrease in adjusted operating income are discussed by segment in the segment analyses that follow.

“Other income, net” increased by $323 million in 2023 compared to 2022 due tothe items noted in the following table (in millions):

	Year Ended December 31,		
	2023	2022	Change
Interest income on cash	$ 293	$ 105	$ 188
Net gain from early retirement of debt (see note (e))	11	14	(3)
Pension settlement charge (see note (e))	—	(58)	58
Equity income on joint ventures and other	198	118	80
Other income, net	$ 502	$ 179	$ 323

Income tax expense decreased by $809 million in 2023 compared to 2022 primarily as a result of a decrease in income before income tax expense.

Refining Segment Results

The following table includes selected financial and operating data of our Refining segment for 2023 and 2022. The selected financial data is derived from the Financial Highlights by Segment and Total Company tables, unless otherwise noted.

	Year Ended December 31,		
	2023	2022	Change
Operating income	$ 11,511	$ 15,803	$ (4,292)
Adjusted operating income (see note (h))	11,528	15,762	(4,234)
Refining margin (see note (h))	19,087	23,518	(4,431)
Operating expenses (excluding depreciation and amortization expense reflected below)	5,208	5,509	(301)
Depreciation and amortization expense	2,351	2,247	104
Throughput volumes (thousand BPD) (see note (i))	2,979	2,953	26

Refining segment operating income decreased by $4.3 billion in 2023 compared to 2022; however, Refining segment adjusted operating income, which excludes the adjustments in the table in note (h), decreased by $4.2 billion in 2023 compared to 2022. The components of this decrease in the adjusted results, along with the reasons for the changes in those components, are outlined below.

- Refining segment margin decreased by $4.4 billion in 2023 compared to 2022.

  Refining segment margin is primarily affected by the prices for the petroleum-based transportation fuels that we sell and the cost of crude oil and other feedstocks that we process. The table on page 48 reflects market reference prices and differentials that we believe impacted our Refining segment margin in 2023 compared to 2022.

  The decrease in Refining segment margin was primarily due to the following:

  - A decrease in distillate (primarily diesel) margins had an unfavorable impact of approximately $5.6 billion.

- A decrease in gasoline margins had an unfavorable impact of approximately $529 million.
- Higher discounts on crude oils had a favorable impact of approximately $1.1 billion.
- Higher discounts on other feedstocks had a favorable impact of approximately $438 million.

- Refining segment operating expenses (excluding depreciation and amortization expense) decreased by $301 million primarily due to lower natural gas costs of $438 million, partially offset by increases in chemicals and catalyst costs of $96 million and certain employee compensation expenses of $39 million.

Renewable Diesel Segment Results

The following table includes selected financial and operating data of our Renewable Diesel segment for 2023 and 2022. The selected financial data is derived from the Financial Highlights by Segment and Total Company tables, unless otherwise noted.

	Year Ended December 31,		
	2023	2022	Change
Operating income	$ 852	$ 774	$ 78
Renewable Diesel margin (see note (h))	1,441	1,151	290
Operating expenses (excluding depreciation and amortization expense reflected below)	358	255	103
Depreciation and amortization expense	231	122	109
Sales volumes (thousand gallons per day) (see note (i))	3,539	2,175	1,364

Renewable Diesel segment operating income increased by $78 million in 2023 compared to 2022. The components of this increase, along with the reasons for the changes in those components, are outlined below.

- Renewable Diesel segment margin increased by $290 million in 2023 compared to 2022.

  Renewable Diesel segment margin is primarily affected by the price for the renewable diesel that we sell and the cost of the feedstocks that we process. The table on page 49 reflects market reference prices that we believe impacted our Renewable Diesel segment margin in 2023 compared to 2022.

  The increase in Renewable Diesel segment margin was primarily due to the following:

  - A decrease in the cost of the feedstocks that we process had a favorable impact of approximately $1.9 billion.
  - An increase in sales volumes of 1.4 million gallons per day had a favorable impact of approximately $724 million. The increase in sales volumes was primarily due to

additional production resulting from the completion of the new DGD Port Arthur Plant that commenced operations in the fourth quarter of 2022.

  - A decrease in product prices, primarily renewable diesel, had an unfavorable impact of approximately $2.3 billion.

- Renewable Diesel segment operating expenses (excluding depreciation and amortization expense) increased by $103 million primarily due to increased costs resulting from the new DGD Port Arthur Plant that commenced operations in the fourth quarter of 2022.

- Renewable Diesel segment depreciation and amortization expense increased by $109 million primarily due to depreciation expense associated with the new DGD Port Arthur Plant that commenced operations in the fourth quarter of 2022.

Ethanol Segment Results

The following table includes selected financial and operating data of our Ethanol segment for 2023 and 2022. The selected financial data is derived from the Financial Highlights by Segment and Total Company tables, unless otherwise noted.

	Year Ended December 31,		
	2023	2022	Change
Operating income	$ 553	$ 110	$ 443
Adjusted operating income (see note (h))	569	151	418
Ethanol margin (see note (h))	1,164	858	306
Operating expenses (excluding depreciation and amortization expense reflected below)	515	625	(110)
Depreciation and amortization expense (see note (b))	80	59	21
Asset impairment loss (see note (c))	—	61	(61)
Production volumes (thousand gallons per day) (see note (i))	4,367	3,866	501

Ethanol segment operating income increased by $443 million in 2023 compared to 2022; however, Ethanol segment adjusted operating income, which excludes the adjustments in the table in note (h), increased by $418 million in 2023 compared to 2022. The components of this increase in the adjusted results, along with the reasons for the changes in these components, are outlined below.

- Ethanol segment margin increased by $306 million in 2023 compared to 2022.

  Ethanol segment margin is primarily affected by prices for the ethanol and corn related co-products that we sell and the cost of corn that we process. The table on page 49 reflects market reference prices that we believe impacted our Ethanol segment margin in 2023 compared to 2022.

  The increase in Ethanol segment margin was primarily due to the following:

  - Lower corn prices had a favorable impact of approximately $618 million.

- An increase in production volumes of 501,000 gallons per day had a favorable impact of approximately $150 million.
- Lower ethanol prices had an unfavorable impact of approximately $337 million.
- Lower prices for the corn related co-products that we produce, primarily DDGs and inedible distillers corn oils, had an unfavorable impact of approximately $129 million.

- Ethanol segment operating expenses (excluding depreciation and amortization expense) decreased by $110 million primarily due to lower natural gas costs.

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The following notes relate to references on pages 46 through 52.

(a) Under the RFS program, the EPA is required to set annual quotas for the volume of renewable fuels that obligated parties, such as us, must blend into petroleum-based transportation fuels consumed in the U.S. The quotas are used to determine an obligated party's RVO. The EPA released a final rule on June 3, 2022 that, among other things, modified the volume standards for 2020 and, for the first time, established volume standards for 2021 and 2022.

In 2020, we recognized the cost of the RVO using the 2020 quotas 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 of the quotas. As a result of the final rule released by the EPA as noted above, we recognized a benefit of $104 million in the year ended December 31, 2022 primarily related to the modification of the 2020 quotas.

(b) Depreciation and amortization expense for the year ended December 31, 2022 includes a gain of $23 million on the sale of our ethanol plant located in Jefferson, Wisconsin (Jefferson ethanol plant).

(c) Our ethanol plant located in Lakota, Iowa (Lakota ethanol plant) was previously configured to produce USP-grade ethanol, a higher grade ethanol suitable for hand sanitizer blending that has a higher market value than fuel-grade ethanol. During 2022, demand for USP-grade ethanol declined and had a negative impact on the profitability of the plant. As a result, we tested the recoverability of the carrying value of the Lakota ethanol plant and concluded that it was impaired. Therefore, we reduced the carrying value of the plant to its estimated fair value and recognized an asset impairment loss of $61 million in the year ended December 31, 2022.

(d) General and administrative expenses (excluding depreciation and amortization expense) for the year ended December 31, 2022 includes a charge of $20 million for an environmental reserve adjustment associated with a non-operating site.

(e) "Other income, net" includes the following:

- a net gain of $11 million in the year ended December 31, 2023 related to the early retirement of $199 million aggregate principal amount of various series of our senior notes;
- a net gain of $14 million in the year ended December 31, 2022 related to the early retirement of approximately $3.1 billion aggregate principal amount of various series of our senior notes; and
- a pension settlement charge of $58 million in the year ended December 31, 2022 resulting from a greater number of employees that retired in 2022 who elected lump sum benefit payments from our defined benefit pension plans than estimated.

(f) Income tax expense for the year ended December 31, 2022 includes deferred income tax expense of $51 million associated with the recognition of a deferred tax liability for foreign withholding tax on the repatriation of cash

held by one of our international subsidiaries that we considered no longer permanently reinvested in our operations in that country.

(g) The RVO cost represents the average market cost on a per barrel basis to comply with the RFS program. The RVO cost is calculated by multiplying (i) the average market price during the applicable period for the RINs associated with each class of renewable fuel (i.e., biomass-based diesel, cellulosic biofuel, advanced biofuel, and total renewable fuel) by (ii) the quotas for the volume of each class of renewable fuel that must be blended into petroleum-based transportation fuels consumed in the U.S., as set or proposed by the EPA, on a percentage basis for each class of renewable fuel and adding together the results of each calculation.

(h) We use certain financial measures (as noted below) that are not defined under GAAP and are considered to be non-GAAP financial measures.

We have defined these non-GAAP measures and believe they are useful to the external users of our financial statements, including industry analysts, investors, lenders, and rating agencies. We believe these measures are useful to assess our ongoing financial performance because, when reconciled to their most comparable GAAP measures, they provide improved comparability between periods after adjusting for certain items that we believe are not indicative of our core operating performance and that may obscure our underlying business results and trends. These non-GAAP measures should not be considered as alternatives to their most comparable GAAP measures nor should they be considered in isolation or as a substitute for an analysis of our results of operations as reported under GAAP. In addition, these non-GAAP measures may not be comparable to similarly titled measures used by other companies because we may define them differently, which diminishes their utility.

Non-GAAP financial measures are as follows (in millions):

- **Refining margin** is defined as Refining segment operating income excluding the modification of RVO adjustment, operating expenses (excluding depreciation and amortization expense), depreciation and amortization expense, and other operating expenses, as reflected in the table below.

	Year Ended December 31,	
	2023	**2022**
Reconciliation of Refining operating income to Refining margin		
Refining operating income	$ 11,511	$ 15,803
Adjustments:		
Modification of RVO (see note (a))	—	(104)
Operating expenses (excluding depreciation and amortization expense)	5,208	5,509
Depreciation and amortization expense	2,351	2,247
Other operating expenses	17	63
Refining margin	$ 19,087	$ 23,518

- **Renewable Diesel margin** is defined as Renewable Diesel segment operating income excluding operating expenses (excluding depreciation and amortization expense) and depreciation and amortization expense, as reflected in the table below.

	Year Ended December 31,	
	2023	**2022**
Reconciliation of Renewable Diesel operating income to Renewable Diesel margin		
Renewable Diesel operating income	$ 852	$ 774
Adjustments:		
Operating expenses (excluding depreciation and amortization expense)	358	255
Depreciation and amortization expense	231	122
Renewable Diesel margin	$ 1,441	$ 1,151

- **Ethanol margin** is defined as Ethanol segment operating income excluding operating expenses (excluding depreciation and amortization expense), depreciation and amortization expense, the asset impairment loss, and other operating expenses, as reflected in the table below.

	Year Ended December 31,	
	2023	**2022**
Reconciliation of Ethanol operating income to Ethanol margin		
Ethanol operating income	$ 553	$ 110
Adjustments:		
Operating expenses (excluding depreciation and amortization expense)	515	625
Depreciation and amortization expense (see note (b))	80	59
Asset impairment loss (see note (c))	—	61
Other operating expenses	16	3
Ethanol margin	$ 1,164	$ 858

- **Adjusted Refining operating income** is defined as Refining segment operating income excluding the modification of RVO adjustment and other operating expenses, as reflected in the table below.

	Year Ended December 31,	
	2023	**2022**
Reconciliation of Refining operating income to adjusted Refining operating income		
Refining operating income	$ 11,511	$ 15,803
Adjustments:		
Modification of RVO (see note (a))	—	(104)
Other operating expenses	17	63
Adjusted Refining operating income	$ 11,528	$ 15,762

- **Adjusted Ethanol operating income** is defined as Ethanol segment operating income excluding the gain on sale of ethanol plant, the asset impairment loss, and other operating expenses, as reflected in the table below.

	Year Ended December 31,	
	2023	2022
Reconciliation of Ethanol operating income to adjusted Ethanol operating income		
Ethanol operating income	$ 553	$ 110
Adjustments:		
Gain on sale of ethanol plant (see note (b))	—	(23)
Asset impairment loss (see note (c))	—	61
Other operating expenses	16	3
Adjusted Ethanol operating income	$ 569	$ 151

- **Adjusted operating income** is defined as total company operating income excluding the modification of RVO adjustment, the gain on sale of ethanol plant, the asset impairment loss, the environmental reserve adjustment, and other operating expenses, as reflected in the table below.

	Year Ended December 31,	
	2023	2022
Reconciliation of total company operating income to adjusted operating income		
Total company operating income	$ 11,858	$ 15,690
Adjustments:		
Modification of RVO (see note (a))	—	(104)
Gain on sale of ethanol plant (see note (b))	—	(23)
Asset impairment loss (see note (c))	—	61
Environmental reserve adjustment (see note (d))	—	20
Other operating expenses	33	66
Adjusted operating income	$ 11,891	$ 15,710

(i) We use throughput volumes, sales volumes, and production volumes for the Refining segment, Renewable Diesel segment, and Ethanol segment, respectively, due to their general use by others who operate facilities similar to those included in our segments.

LIQUIDITY AND CAPITAL RESOURCES

Our Liquidity

Our liquidity consisted of the following as of December 31, 2023 (in millions):

Available capacity from our committed facilities (a):		
Valero Revolver	$	3,996
Accounts receivable sales facility		1,300
Total available capacity		5,296
Cash and cash equivalents (b)		5,164
Total liquidity	$	10,460

(a) Excludes the committed facilities of the consolidated VIEs.
(b) Excludes $260 million of cash and cash equivalents related to the consolidated VIEs that is for their use only.

Information about our outstanding borrowings, letters of credit issued, and availability under our credit facilities is reflected in Note 9 of Notes to Consolidated Financial Statements.

Our debt and financing agreements do not have rating agency triggers that would automatically require us to post additional collateral. However, in the event of certain downgrades of our senior unsecured debt by the ratings agencies, the cost of borrowings under some of our bank credit facilities and other arrangements may increase. As of December 31, 2023, all of our ratings on our senior unsecured debt, including debt guaranteed by us, were at or above investment grade level as follows:

Rating Agency	Rating
Moody's Investors Service	Baa2 (stable outlook)
Standard & Poor's Ratings Services	BBB (stable outlook)
Fitch Ratings	BBB (stable outlook)

We cannot provide assurance that these ratings will remain in effect for any given period of time or that one or more of these ratings will not be lowered or withdrawn entirely by a rating agency. We note that these credit ratings are not recommendations to buy, sell, or hold our securities. Each rating should be evaluated independently of any other rating. Any future reduction below investment grade or withdrawal of one or more of our credit ratings could have a material adverse impact on our ability to obtain short- and long-term financing and the cost of such financings.

We believe we have sufficient funds from operations and from available capacity under our credit facilities to fund our ongoing operating requirements and other commitments over the next 12 months and thereafter for the foreseeable future. We expect that, to the extent necessary, we can raise additional cash through equity or debt financings in the public and private capital markets or the arrangement of additional credit facilities. However, there can be no assurances regarding the availability of any future financings or additional credit facilities or whether such financings or additional credit facilities can be made available on terms that are acceptable to us.

Cash Flows

Components of our cash flows are set forth below (in millions):

	Year Ended December 31,	
	2023	2022
Cash flows provided by (used in):		
Operating activities	$ 9,229	$ 12,574
Investing activities	(1,865)	(2,805)
Financing activities:		
Debt issuance and borrowings	2,420	3,153
Repayments of debt and finance lease obligations (including premiums paid on early retirement of debt)	(2,687)	(6,019)
Return to stockholders:		
Purchases of common stock for treasury	(5,136)	(4,577)
Common stock dividend payments	(1,452)	(1,562)
Return to stockholders	(6,588)	(6,139)
Other financing activities	(86)	156
Financing activities	(6,941)	(8,849)
Effect of foreign exchange rate changes on cash	139	(180)
Net increase in cash and cash equivalents	$ 562	$ 740

Cash Flows for the Year Ended December 31, 2023

In 2023, we used the $9.2 billion of cash generated by our operations and the $2.4 billion in debt borrowings to make $1.9 billion of investments in our business, repay $2.7 billion of debt and finance lease obligations (including premiums paid on the early retirement of debt), return $6.6 billion to our stockholders through purchases of our common stock for treasury and dividend payments, and increase our available cash on hand by $562 million. The debt borrowings and repayments are described in Note 9 of Notes to Consolidated Financial Statements.

As previously noted, our operations generated $9.2 billion of cash in 2023, driven primarily by net income of $9.1 billion and noncash charges to income of $2.4 billion, partially offset by an unfavorable change in working capital of $2.3 billion. Noncash charges primarily included $2.7 billion of depreciation and amortization expense and $103 million of deferred income tax expense. Details regarding the components of the change in working capital, along with the reasons for the changes in those components, are described in Note 18 of Notes to Consolidated Financial Statements. In addition, see “RESULTS OF OPERATIONS” for an analysis of the significant components of our net income.

Our investing activities primarily consisted of $1.9 billion in capital investments, as defined below under “Capital Investments,” of which $294 million related to capital investments made by DGD.

Cash Flows for the Year Ended December 31, 2022

In 2022, we used the $12.6 billion of cash generated by our operations and the $3.2 billion from the debt issuance and borrowings to make $2.8 billion of investments in our business, repay $6.0 billion of debt and finance lease obligations (including premiums paid on the early retirement of debt), return $6.1 billion to our stockholders through purchases of our common stock for treasury and dividend payments, and increase our available cash on hand by $740 million. The debt issuance, borrowings, and repayments are described in Note 9 of Notes to Consolidated Financial Statements.

As previously noted, our operations generated $12.6 billion of cash in 2022, driven primarily by net income of $11.9 billion and noncash charges to income of $2.3 billion, partially offset by an unfavorable change in working capital of $1.6 billion. Noncash charges primarily included $2.5 billion of depreciation and amortization expense, $50 million of deferred income tax expense, and a $61 million asset impairment loss associated with our Lakota ethanol plant, as described in Note 6 of Notes to Consolidated Financial Statements. Details regarding the components of the change in working capital, along with the reasons for the changes in those components, are described in Note 18 of Notes to Consolidated Financial Statements. In addition, see "RESULTS OF OPERATIONS" for an analysis of the significant components of our net income.

Our investing activities of $2.8 billion primarily consisted of $2.7 billion in capital investments, of which $879 million related to capital investments made by DGD.

Our Capital Resources

Our material cash requirements as of December 31, 2023 primarily consist of working capital requirements, capital investments, contractual obligations, and other matters, as described below. Our operations have historically generated positive cash flows to fulfill our working capital requirements and other uses of cash as discussed below.

Capital Investments

Capital investments are comprised of our capital expenditures, deferred turnaround and catalyst cost expenditures, and investments in nonconsolidated joint ventures, as reflected in our statements of cash flows as shown on page 76. Capital investments exclude acquisitions, if any.

We also identify our capital investments by the nature of the project with which the expenditure is associated as follows:

- *Sustaining capital investments* are generally associated with projects that are expected to extend the lives of our property assets, sustain their operating capabilities and safety (including deferred turnaround and catalyst cost expenditures), or comply with regulatory requirements. Regulatory compliance capital investments are generally associated with projects that are incurred to comply with government regulatory requirements, such as requirements to reduce emissions and prohibited elements from our products.

- *Growth capital investments*, including low-carbon growth capital investments that support the development and growth of our low-carbon renewable diesel and ethanol businesses, are generally associated with projects for the construction of new property assets that are expected to enhance our profitability and cash-generating capabilities, including investments in nonconsolidated joint ventures.

We have developed an extensive multi-year capital investment program, which we update and revise based on changing internal and external factors. The following table reflects our expected capital investments for the year ending December 31, 2024 by nature of the project and reportable segment, along with historical amounts for the years ended December 31, 2023 and 2022 (in millions). The following table also reflects capital investments attributable to Valero, which is a non-GAAP measure

that we define and reconcile to capital investments below under “Capital Investments Attributable to Valero.”

	Year Ending December 31, 2024 (a)	Year Ended December 31, 2023	Year Ended December 31, 2022
Capital investments by nature of the project (b):			
Sustaining capital investments	$ 1,620	$ 1,486	$ 1,368
Growth capital investments:			
Low-carbon growth capital investments	345	237	836
Other growth capital investments	200	193	534
Total growth capital investments	545	430	1,370
Total capital investments	$ 2,165	$ 1,916	$ 2,738
Capital investments by segment:			
Refining	$ 1,605	$ 1,488	$ 1,764
Renewable Diesel	430	294	879
Ethanol	60	43	22
Corporate	70	91	73
Total capital investments	2,165	1,916	2,738
Adjustments:			
Renewable Diesel capital investments attributable to the other joint venture member in DGD	(215)	(147)	(439)
Capital expenditures of other VIEs	—	(11)	(40)
Capital investments attributable to Valero	$ 1,950	$ 1,758	$ 2,259

(a) All expected amounts for the year ending December 31, 2024 exclude capital expenditures that the consolidated VIEs (other than DGD) may incur because we do not operate those VIEs.
(b) Capital investments attributable to Valero by nature of the project are as follows (in millions):

	Year Ending December 31, 2024	Year Ended December 31, 2023	Year Ended December 31, 2022
Sustaining capital investments	$ 1,565	$ 1,449	$ 1,340
Growth capital investments:			
Low-carbon growth capital investments	185	126	422
Other growth capital investments	200	183	497
Total growth capital investments	385	309	919
Capital investments attributable to Valero	$ 1,950	$ 1,758	$ 2,259

We have publicly announced GHG emissions reduction/displacement targets and a long-term ambition. We believe that our allocation of growth capital into low-carbon projects to date has been consistent with such targets and ambition. Certain low-carbon projects have been completed or are already in execution and the associated capital investments are included in our expected capital investments for 2024. Our capital investments in future years to achieve these targets and ambition are expected to include investments associated with certain low-carbon projects currently at various stages of progress, evaluation, or approval. See “ITEMS 1. and 2. BUSINESS AND PROPERTIES—OUR COMPREHENSIVE LIQUID FUELS STRATEGY— *Our Low-Carbon Projects*” for a description of our low-carbon projects.

Capital Investments Attributable to Valero

Capital investments attributable to Valero is a non-GAAP financial measure that reflects our net share of capital investments and is defined as all capital expenditures, deferred turnaround and catalyst cost expenditures, and investments in nonconsolidated joint ventures, excluding the portion of DGD's capital investments attributable to the other joint venture member and all of the capital expenditures of other consolidated VIEs.

We are a 50 percent joint venture member in DGD and consolidate its financial statements, and DGD's operations compose our Renewable Diesel segment. As a result, all of DGD's net cash provided by operating activities (or operating cash flow) is included in our consolidated net cash provided by operating activities. DGD's members use DGD's operating cash flow (excluding changes in its current assets and current liabilities) to fund its capital investments rather than distribute all of that cash to themselves. Because DGD's operating cash flow is effectively attributable to each member, only 50 percent of DGD's capital investments should be attributed to our net share of capital investments. We also exclude all of the capital expenditures of other VIEs that we consolidate because we do not operate those VIEs. See Note 12 of Notes to Consolidated Financial Statements for more information about the VIEs that we consolidate. We believe capital investments attributable to Valero is an important measure because it more accurately reflects our capital investments.

Capital investments attributable to Valero should not be considered as an alternative to capital investments, which is the most comparable GAAP measure, nor should it be considered in isolation or as a substitute for an analysis of our cash flows as reported under GAAP. In addition, this non-GAAP measure may not be comparable to similarly titled measures used by other companies because we may define it differently, which may diminish its utility.

The following table (in millions) reconciles our capital investments to capital investments attributable to Valero for the years ended December 31, 2023 and 2022.

	Year Ended December 31,	
	2023	2022
Reconciliation of capital investments to capital investments attributable to Valero		
Capital expenditures (excluding VIEs)	$ 665	$ 788
Capital expenditures of VIEs:		
DGD	235	853
Other VIEs	11	40
Deferred turnaround and catalyst cost expenditures (excluding VIEs)	946	1,030
Deferred turnaround and catalyst cost expenditures of DGD	59	26
Investments in nonconsolidated joint ventures	—	1
Capital investments	1,916	2,738
Adjustments:		
DGD's capital investments attributable to our joint venture member	(147)	(439)
Capital expenditures of other VIEs	(11)	(40)
Capital investments attributable to Valero	$ 1,758	$ 2,259

Contractual Obligations

Below is a summary of our contractual obligations (in millions) as of December 31, 2023 that are expected to be paid within the next year and thereafter. These obligations are reflected in our balance sheets, except (i) the interest payments related to debt obligations, operating lease liabilities, and finance lease obligations and (ii) purchase obligations.

	Payments Due by Period		
	Short-Term	Long-Term	Total
Debt obligations (a)	$ 1,197	$ 8,098	$ 9,295
Interest payments related to debt obligations (b)	478	4,873	5,351
Operating lease liabilities (c)	398	1,002	1,400
Finance lease obligations (c)	312	3,026	3,338
Other long-term liabilities (d)	—	1,510	1,510
Purchase obligations (e)	17,852	9,554	27,406

(a) Debt obligations and a maturity analysis of our debt are described in Note 9 of Notes to Consolidated Financial Statements. Debt obligations exclude amounts related to net unamortized debt issuance costs and other.
(b) Interest payments related to debt obligations are the expected payments based on information available as of December 31, 2023.
(c) Operating lease liabilities, finance lease obligations, and maturity analyses of remaining minimum lease payments are described in Note 5 of Notes to Consolidated Financial Statements. Operating lease liabilities and finance lease obligations reflected in this table include related interest expense.
(d) Other long-term liabilities are described in Note 8 of Notes to Consolidated Financial Statements. Other long-term liabilities exclude amounts related to the long-term portion of operating lease liabilities that are separately presented above.
(e) Purchase obligations are described in Note 10 of Notes to Consolidated Financial Statements. Purchase obligations are based on (i) fixed or minimum quantities to be purchased and (ii) fixed or estimated prices to be paid based on current market conditions.

The amount outstanding associated with the IEnova Revolver, as defined and described in Note 9 of Notes to Consolidated Financial Statements, is reflected in current portion of debt and finance lease obligations in our balance sheet as of December 31, 2023, and also included in the table above in debt obligations – short-term. The IEnova Revolver is subject to repayment on demand; however, we do not expect the lender to demand repayment during the next 12 months. Thus, the final cash flows for this instrument cannot be predicted with certainty at this time.

In 2023, we used cash on hand to purchase and retire $199 million of our public debt. We will continue to evaluate further deleveraging opportunities.

We previously announced our participation in Navigator's proposed large-scale carbon capture and sequestration pipeline system in the Mid-Continent region of the U.S. In October 2023, Navigator announced that it decided to cancel this project. Under the terms of agreements associated with the project, we may have some rights from and obligations to Navigator, including a portion of the aggregate project costs to date, but we do not expect such obligation will be material.

We have not entered into any transactions, agreements, or other contractual arrangements that would result in off-balance sheet liabilities.

Other Matters Impacting Liquidity and Capital Resources

Stock Purchase Programs

During the year ended December 31, 2023, we purchased for treasury 39,717,265 of our shares for a total cost of $5.2 billion. As of December 31, 2023, we had $2.2 billion remaining available for purchase under the September 2023 Program. On February 22, 2024, our Board authorized us to purchase shares of our outstanding common stock for a total cost of up to $2.5 billion with no expiration date, which is in addition to the amount remaining under the September 2023 Program. We will continue to evaluate the timing of purchases when appropriate. We have no obligation to make purchases under these programs.

Pension Plan Funding

We plan to contribute $113 million to our pension plans and $22 million to our other postretirement benefit plans during 2024. See Note 13 of Notes to Consolidated Financial Statements for a discussion of our employee benefit plans.

Cash Held by Our Foreign Subsidiaries

As of December 31, 2023, $4.3 billion of our cash and cash equivalents was held by our foreign subsidiaries. Cash held by our foreign subsidiaries can be repatriated to us through dividends without any U.S. federal income tax consequences, but certain other taxes may apply, including, but not limited to, withholding taxes imposed by certain foreign jurisdictions, U.S. state income taxes, and U.S. federal income tax on foreign exchange gains. Therefore, there is a cost to repatriate cash held by certain of our foreign subsidiaries to us.

Environmental Matters

Our operations are subject to extensive environmental regulations by government authorities relating to, among other matters, the discharge of materials into the environment, climate, waste management, pollution prevention measures, GHG and other emissions, our facilities and operations, and characteristics and composition of many of our products. Because environmental laws and regulations are becoming more complex and stringent and new environmental laws and regulations are continuously being enacted or proposed, the level of future costs and expenditures required for environmental matters could increase. See Note 8 of Notes to Consolidated Financial Statements for disclosure of our environmental liabilities. In addition, see Note 1 of Notes to Consolidated Financial Statements regarding our accounting for these liabilities under “Environmental Matters.” See also “ITEMS 1. and 2. BUSINESS AND PROPERTIES—GOVERNMENT REGULATIONS” and the items incorporated by reference therein.

Concentration of Customers

Our operations have a concentration of customers in the refining industry and customers who are refined petroleum product wholesalers and retailers. These concentrations of customers may impact our overall exposure to credit risk, either positively or negatively, in that these customers may be similarly affected by changes in economic or other conditions, including the uncertainties concerning worldwide events causing volatility in the global crude oil markets. However, we believe that our portfolio of accounts receivable is sufficiently diversified to the extent necessary to minimize potential credit risk. Historically, we have not had any significant problems collecting our accounts receivable. See also “ITEM 1A. RISK FACTORS—Legal, Government, and Regulatory Risks—*We are subject to risks arising from legal, political, and regulatory developments regarding climate, GHG emissions, and the environment.”*

CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements in accordance with GAAP requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates. The following summary provides further information about our critical accounting policies that involve critical accounting estimates, and should be read in conjunction with Note 1 of Notes to Consolidated Financial Statements, which summarizes our significant accounting policies. The following accounting policies involve estimates that are considered critical due to the level of subjectivity and judgment involved, as well as the impact on our financial position and results of operations. We believe that all of our estimates are reasonable. Unless otherwise noted, estimates of the sensitivity to earnings that would result from changes in the assumptions used in determining our estimates is not practicable due to the number of assumptions and contingencies involved, and the wide range of possible outcomes.

Unrecognized Tax Benefits

We take tax positions in our tax returns from time to time that ultimately may not be allowed by the relevant taxing authorities. When we take such positions, we evaluate the likelihood of sustaining those positions and determine the amount of tax benefit arising from such positions, if any, that should be recognized in our financial statements. Tax benefits not recognized by us are recorded as a liability for unrecognized tax benefits, which represents our potential future obligation to various taxing authorities if the tax positions are not sustained.

The evaluation of tax positions and the determination of the benefit arising from such positions that are recognized in our financial statements requires us to make significant judgments and estimates based on an analysis of complex tax laws and regulations and related interpretations. These judgments and estimates are subject to change due to many factors, including the progress of ongoing tax audits, case law, and changes in legislation.

Details of our changes in unrecognized tax benefits, along with other information about our unrecognized tax benefits, are included in Note 15 of Notes to Consolidated Financial Statements.

Impairment of Long-Lived Assets

Long-lived assets (primarily property, plant, and equipment) are tested for recoverability whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. A long-lived asset is not recoverable if its carrying amount exceeds the sum of the undiscounted cash flows expected to result from its use and eventual disposition. If a long-lived asset is not recoverable, an impairment loss is recognized for the amount by which the carrying amount of the long-lived asset exceeds its fair value, with fair value determined based on discounted estimated net cash flows or other appropriate methods.

In order to test for recoverability, we must make estimates of projected cash flows related to the asset being evaluated. Such estimates include, but are not limited to, assumptions about future sales volumes, commodity prices, operating costs, margins, the use or disposition of the asset, the asset's estimated remaining useful life, and future expenditures necessary to maintain the asset's existing service potential in light of existing and expected regulations. Due to the significant subjectivity of the assumptions used to test for recoverability, changes in market conditions could result in significant impairment charges in the future, thus affecting our earnings.

New environmental and tax laws and regulations, as well as changes to existing laws and regulations, are continuously being enacted or proposed. The implementation of future legislative and regulatory initiatives (such as those discussed in ITEM 1A. RISK FACTORS) that may adversely affect our operations could indicate that the carrying value of an asset may not be recoverable and result in an impairment loss that could be material. If the circumstances that trigger an impairment also result in a reduction in the estimated useful life of the asset, then we may also be required to recognize an asset retirement obligation for that asset.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

COMMODITY PRICE RISK

We are exposed to market risks related to the volatility in the price of feedstocks (primarily crude oil, waste and renewable feedstocks, and corn), the products we produce, and natural gas used in our operations. To reduce the impact of price volatility on our results of operations and cash flows, we use commodity derivative instruments, including futures and options to manage the volatility of:

- inventories and firm commitments to purchase inventories generally for amounts by which our current year inventory levels (determined on a LIFO basis) differ from our previous year-end LIFO inventory levels; and

- forecasted purchases and/or product sales at existing market prices that we deem favorable.

Our positions in commodity derivative instruments are monitored and managed on a daily basis by our risk control group to ensure compliance with our stated risk management policy that is periodically reviewed with our Board and/or relevant Board committee.

As of December 31, 2023 and 2022, the amount of gain or loss that would have resulted from a 10 percent increase or decrease in the underlying price for all of our commodity derivative instruments entered into for purposes other than trading with which we have market risk was not material. See Note 20 of Notes to Consolidated Financial Statements for notional volumes associated with these derivative contracts as of December 31, 2023.

COMPLIANCE PROGRAM PRICE RISK

We are exposed to market risk related to the volatility in the price of credits needed to comply with the Renewable and Low-Carbon Fuel Programs. To manage this risk, we enter into contracts to purchase these credits. As of December 31, 2023 and 2022, the amount of gain or loss in the fair value of derivative instruments that would have resulted from a 10 percent increase or decrease in the underlying price of the contracts was not material. See Note 20 of Notes to Consolidated Financial Statements for a discussion about these blending programs.

INTEREST RATE RISK

The following tables provide information about our debt instruments (dollars in millions), the fair values of which are sensitive to changes in interest rates. A 10 percent increase or decrease in our floating interest rates would not have a material effect to our results of operations. Principal cash flows and related weighted-average interest rates by expected maturity dates are presented. See Note 9 of Notes to Consolidated Financial Statements for additional information related to our debt.

	December 31, 2023 (a)							
	Expected Maturity Dates							
	2024	2025	2026	2027	2028	There-after	Total	Fair Value
Fixed rate	$ 167	$ 441	$ 672	$ 564	$ 1,047	$ 5,374	$ 8,265	$ 8,079
Average interest rate	1.2 %	3.2 %	4.2 %	2.2 %	4.4 %	5.5 %	4.8 %	
Floating rate	$ 1,030	$ —	$ —	$ —	$ —	$ —	$ 1,030	$ 1,030
Average interest rate	8.7 %	— %	— %	— %	— %	— %	8.7 %	

	December 31, 2022 (a)							
	Expected Maturity Dates							
	2023	2024	2025	2026	2027	There-after	Total	Fair Value
Fixed rate	$ —	$ 167	$ 441	$ 672	$ 578	$ 6,606	$ 8,464	$ 8,041
Average interest rate	— %	1.2 %	3.2 %	4.2 %	2.2 %	5.3 %	4.8 %	
Floating rate	$ 861	$ —	$ —	$ —	$ —	$ —	$ 861	$ 861
Average interest rate	7.1 %	— %	— %	— %	— %	— %	7.1 %	

(a) Excludes unamortized discounts and debt issuance costs.

FOREIGN CURRENCY RISK

We are exposed to exchange rate fluctuations on transactions related to our foreign operations that are denominated in currencies other than the local (functional) currencies of those operations. To manage our exposure to these exchange rate fluctuations, we often use foreign currency contracts. As of December 31, 2023 and 2022, the fair value of our foreign currency contracts was not material.

See Note 20 of Notes to Consolidated Financial Statements for a discussion about our foreign currency risk management activities.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate "internal control over financial reporting" (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) for Valero Energy Corporation. Our management evaluated the effectiveness of Valero's internal control over financial reporting as of December 31, 2023. In its evaluation, management used the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management believes that as of December 31, 2023, our internal control over financial reporting was effective based on those criteria.

Our independent registered public accounting firm has issued an attestation report on the effectiveness of our internal control over financial reporting, which begins on page 70 of this report.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders
Valero Energy Corporation:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Valero Energy Corporation and subsidiaries (the Company) as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2023, 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, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 22, 2024 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a 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 accounts or disclosures to which it relates.

Assessment of gross unrecognized tax benefits

As discussed in Note 15 to the consolidated financial statements, as of December 31, 2023, the Company has gross unrecognized tax benefits, excluding related interest and penalties, of $186 million. The Company's tax positions are subject to examination by local taxing authorities and resolution of such examinations may span multiple years. Due to the complexities inherent in the interpretation of income tax laws in domestic and foreign jurisdictions, it is uncertain whether some of the Company's income tax positions will be sustained upon examination.

We identified the assessment of the Company's gross unrecognized tax benefits as a critical audit matter. Complex auditor judgment was required in evaluating the Company's interpretation of income tax laws and assessing the Company's determination of the ultimate resolution of its income tax positions.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's income tax process. This included controls to evaluate which of the Company's income tax positions may not be sustained upon examination and estimate the gross unrecognized tax benefits. We involved domestic and international income tax professionals with specialized skills and knowledge, who assisted in:

- obtaining an understanding and evaluating the Company's income tax positions as filed or intended to be filed
- evaluating the Company's interpretation of income tax laws by developing an independent assessment of the Company's income tax positions and comparing the results to the Company's assessment
- inspecting settlements and communications with applicable taxing authorities
- assessing the expiration of applicable statutes of limitations.

In addition, we evaluated the Company's ability to estimate its gross unrecognized tax benefits by comparing historical uncertain income tax positions, including the gross unrecognized tax benefits, to actual results upon conclusion of tax examinations.

/s/ KPMG LLP

We have served as the Company's auditor since 2004.

San Antonio, Texas
February 22, 2024

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders
Valero Energy Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited Valero Energy Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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, 2023 and 2022, the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes (collectively, the consolidated financial statements), and our report dated February 22, 2024 expressed an unqualified opinion on those consolidated financial statements.

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 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 of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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/ KPMG LLP

San Antonio, Texas
February 22, 2024

VALERO ENERGY CORPORATION
CONSOLIDATED BALANCE SHEETS
(millions of dollars, except par value)

	December 31,	
	2023	**2022**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 5,424	$ 4,862
Receivables, net	12,525	11,919
Inventories	7,583	6,752
Prepaid expenses and other	689	600
Total current assets	26,221	24,133
Property, plant, and equipment, at cost	51,668	50,576
Accumulated depreciation	(21,459)	(19,598)
Property, plant, and equipment, net	30,209	30,978
Deferred charges and other assets, net	6,626	5,871
Total assets	$ 63,056	$ 60,982
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of debt and finance lease obligations	$ 1,406	$ 1,109
Accounts payable	12,567	12,728
Accrued expenses	1,240	1,215
Taxes other than income taxes payable	1,452	1,568
Income taxes payable	137	841
Total current liabilities	16,802	17,461
Debt and finance lease obligations, less current portion	10,118	10,526
Deferred income tax liabilities	5,349	5,217
Other long-term liabilities	2,263	2,310
Commitments and contingencies		
Equity:		
Valero Energy Corporation stockholders' equity:		
Common stock, $0.01 par value; 1,200,000,000 shares authorized; 673,501,593 and 673,501,593 shares issued	7	7
Additional paid-in capital	6,901	6,863
Treasury stock, at cost; 340,199,677 and 301,372,958 common shares	(25,322)	(20,197)
Retained earnings	45,630	38,247
Accumulated other comprehensive loss	(870)	(1,359)
Total Valero Energy Corporation stockholders' equity	26,346	23,561
Noncontrolling interests	2,178	1,907
Total equity	28,524	25,468
Total liabilities and equity	$ 63,056	$ 60,982

See Notes to Consolidated Financial Statements.

VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF INCOME
(millions of dollars, except per share amounts)

	Year Ended December 31,		
	2023	**2022**	**2021**
Revenues (a)	$ 144,766	$ 176,383	$ 113,977
Cost of sales:			
Cost of materials and other	123,087	150,770	102,714
Operating expenses (excluding depreciation and amortization expense reflected below)	6,089	6,389	5,776
Depreciation and amortization expense	2,658	2,428	2,358
Total cost of sales	131,834	159,587	110,848
Asset impairment loss	—	61	—
Other operating expenses	33	66	87
General and administrative expenses (excluding depreciation and amortization expense reflected below)	998	934	865
Depreciation and amortization expense	43	45	47
Operating income	11,858	15,690	2,130
Other income, net	502	179	16
Interest and debt expense, net of capitalized interest	(592)	(562)	(603)
Income before income tax expense	11,768	15,307	1,543
Income tax expense	2,619	3,428	255
Net income	9,149	11,879	1,288
Less: Net income attributable to noncontrolling interests	314	351	358
Net income attributable to Valero Energy Corporation stockholders	$ 8,835	$ 11,528	$ 930
Earnings per common share	$ 24.93	$ 29.05	$ 2.27
Weighted-average common shares outstanding (in millions)	353	395	407
Earnings per common share – assuming dilution	$ 24.92	$ 29.04	$ 2.27
Weighted-average common shares outstanding – assuming dilution (in millions)	353	396	407
Supplemental information:			
(a) Includes excise taxes on sales by certain of our foreign operations	$ 5,765	$ 5,194	$ 5,645

See Notes to Consolidated Financial Statements.

VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(millions of dollars)

	Year Ended December 31,		
	2023	**2022**	**2021**
Net income	$ 9,149	$ 11,879	$ 1,288
Other comprehensive income (loss):			
Foreign currency translation adjustment	433	(613)	(47)
Net gain on pension and other postretirement benefits	30	335	378
Net gain (loss) on cash flow hedges	90	(6)	(2)
Other comprehensive income (loss) before income tax expense	553	(284)	329
Income tax expense related to items of other comprehensive income (loss)	18	70	82
Other comprehensive income (loss)	535	(354)	247
Comprehensive income	9,684	11,525	1,535
Less: Comprehensive income attributable to noncontrolling interests	360	348	359
Comprehensive income attributable to Valero Energy Corporation stockholders	$ 9,324	$ 11,177	$ 1,176

See Notes to Consolidated Financial Statements.

VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF EQUITY
(millions of dollars, except per share amounts)

	Valero Energy Corporation Stockholders' Equity							
	Common Stock	Additional Paid-in Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Loss	Total	Non-controlling Interests	Total Equity
Balance as of December 31, 2020	$ 7	$ 6,814	$ (15,719)	$ 28,953	$ (1,254)	$ 18,801	$ 841	$ 19,642
Net income	—	—	—	930	—	930	358	1,288
Dividends on common stock ($3.92 per share)	—	—	—	(1,602)	—	(1,602)	—	(1,602)
Stock-based compensation expense	—	80	—	—	—	80	—	80
Transactions in connection with stock-based compensation plans	—	(67)	69	—	—	2	—	2
Purchases of common stock for treasury	—	—	(27)	—	—	(27)	—	(27)
Contributions from noncontrolling interests	—	—	—	—	—	—	189	189
Distributions to noncontrolling interests	—	—	—	—	—	—	(2)	(2)
Other comprehensive income	—	—	—	—	246	246	1	247
Balance as of December 31, 2021	7	6,827	(15,677)	28,281	(1,008)	18,430	1,387	19,817
Net income	—	—	—	11,528	—	11,528	351	11,879
Dividends on common stock ($3.92 per share)	—	—	—	(1,562)	—	(1,562)	—	(1,562)
Stock-based compensation expense	—	89	—	—	—	89	—	89
Transactions in connection with stock-based compensation plans	—	(53)	57	—	—	4	—	4
Purchases of common stock for treasury	—	—	(4,577)	—	—	(4,577)	—	(4,577)
Contributions from noncontrolling interests	—	—	—	—	—	—	265	265
Distributions to noncontrolling interests	—	—	—	—	—	—	(93)	(93)
Other comprehensive loss	—	—	—	—	(351)	(351)	(3)	(354)
Balance as of December 31, 2022	7	6,863	(20,197)	38,247	(1,359)	23,561	1,907	25,468
Net income	—	—	—	8,835	—	8,835	314	9,149
Dividends on common stock ($4.08 per share)	—	—	—	(1,452)	—	(1,452)	—	(1,452)
Stock-based compensation expense	—	94	—	—	—	94	—	94
Transactions in connection with stock-based compensation plans	—	(56)	63	—	—	7	—	7
Purchases of common stock for treasury	—	—	(5,188)	—	—	(5,188)	—	(5,188)
Contributions from noncontrolling interests	—	—	—	—	—	—	75	75
Distributions to noncontrolling interests	—	—	—	—	—	—	(164)	(164)
Other comprehensive income	—	—	—	—	489	489	46	535
Balance as of December 31, 2023	$ 7	$ 6,901	$ (25,322)	$ 45,630	$ (870)	$ 26,346	$ 2,178	$ 28,524

See Notes to Consolidated Financial Statements.

VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(millions of dollars)

	Year Ended December 31,		
	2023	2022	2021
Cash flows from operating activities:			
Net income	$ 9,149	$ 11,879	$ 1,288
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization expense	2,701	2,473	2,405
Loss (gain) on early redemption and retirement of debt, net	(11)	(14)	193
Asset impairment loss	—	61	—
Gain on sale of assets	—	—	(62)
Deferred income tax expense (benefit)	103	50	(126)
Changes in current assets and current liabilities	(2,326)	(1,626)	2,225
Changes in deferred charges and credits and other operating activities, net	(387)	(249)	(64)
Net cash provided by operating activities	9,229	12,574	5,859
Cash flows from investing activities:			
Capital expenditures (excluding variable interest entities (VIEs))	(665)	(788)	(513)
Capital expenditures of VIEs:			
Diamond Green Diesel Holdings LLC (DGD)	(235)	(853)	(1,042)
Other VIEs	(11)	(40)	(110)
Deferred turnaround and catalyst cost expenditures (excluding VIEs)	(946)	(1,030)	(787)
Deferred turnaround and catalyst cost expenditures of DGD	(59)	(26)	(6)
Purchases of available-for-sale (AFS) debt securities	(276)	(100)	—
Proceeds from sales and maturities of AFS debt securities	314	5	—
Proceeds from sale of assets	—	32	270
Investments in nonconsolidated joint ventures	—	(1)	(9)
Other investing activities, net	13	(4)	38
Net cash used in investing activities	(1,865)	(2,805)	(2,159)
Cash flows from financing activities:			
Proceeds from debt issuances and borrowings (excluding VIEs)	1,750	2,239	1,446
Proceeds from borrowings of VIEs:			
DGD	550	809	301
Other VIEs	120	105	81
Repayments of debt and finance lease obligations (excluding VIEs)	(2,125)	(5,067)	(2,849)
Repayments of debt and finance lease obligations of VIEs:			
DGD	(480)	(823)	(180)
Other VIEs	(77)	(73)	(6)
Premiums paid on early redemption and retirement of debt	(5)	(56)	(179)
Purchases of common stock for treasury	(5,136)	(4,577)	(27)
Common stock dividend payments	(1,452)	(1,562)	(1,602)
Contributions from noncontrolling interests	75	265	189
Distributions to noncontrolling interests	(164)	(93)	(2)
Other financing activities, net	3	(16)	(18)
Net cash used in financing activities	(6,941)	(8,849)	(2,846)
Effect of foreign exchange rate changes on cash	139	(180)	(45)
Net increase in cash and cash equivalents	562	740	809
Cash and cash equivalents at beginning of year	4,862	4,122	3,313
Cash and cash equivalents at end of year	$ 5,424	$ 4,862	$ 4,122

See Notes to Consolidated Financial Statements.

1. DESCRIPTION OF BUSINESS, BASIS OF PRESENTATION, AND SIGNIFICANT ACCOUNTING POLICIES

Description of Business

The terms "Valero," "we," "our," and "us," as used in this report, may refer to Valero Energy Corporation, one or more of its consolidated subsidiaries, or all of them taken as a whole. The term "DGD," as used in this report, may refer to Diamond Green Diesel Holdings LLC, its wholly owned consolidated subsidiary, or both of them taken as a whole.

We are a multinational manufacturer and marketer of petroleum-based and low-carbon liquid transportation fuels and petrochemical products, and we sell our products primarily in the United States (U.S.), Canada, the United Kingdom (U.K.), Ireland, and Latin America. We own 15 petroleum refineries located in the U.S., Canada, and the U.K. with a combined throughput capacity of approximately 3.2 million barrels per day. We are a joint venture member in DGD, which owns two renewable diesel plants located in the Gulf Coast region of the U.S. with a combined production capacity of approximately 1.2 billion gallons per year, and we own 12 ethanol plants located in the Mid-Continent region of the U.S. with a combined production capacity of approximately 1.6 billion gallons per year.

Basis of Presentation

General

These consolidated financial statements were prepared in conformity with U.S. generally accepted accounting principles (GAAP) and with the rules and regulations of the U.S. Securities and Exchange Commission (SEC).

Reclassifications

Certain prior year amounts in our statements of cash flows have been reclassified to conform to the 2023 presentation. Prior year amounts for activities related to investments in AFS debt securities have been reclassified from "other investing activities, net" to purchases of AFS debt securities and proceeds from sales and maturities of AFS debt securities.

Significant Accounting Policies

Principles of Consolidation

These financial statements include those of Valero, our wholly owned subsidiaries, and VIEs in which we have a controlling financial interest. The VIEs that we consolidate are described in Note 12. The ownership interests held by others in the VIEs are recorded as noncontrolling interests. Intercompany items and transactions have been eliminated in consolidation. Investments in less than wholly owned entities where we have significant influence are accounted for using the equity method.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates. On an ongoing basis, we review our estimates based on currently available information. Changes in facts and circumstances may result in revised estimates.

Cash Equivalents

Our cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and have a maturity of three months or less when acquired.

Investments in Debt Securities

Investments in debt securities that have stated maturities of three months or less from the date of acquisition are classified as cash equivalents, and those with stated maturities of greater than three months but less than one year are classified as short-term investments, which are reflected in prepaid expenses and other in our balance sheets. Our investments in debt securities are classified as AFS and are subsequently measured and carried at fair value in our balance sheets with changes in fair value reported in other comprehensive income until realized. The cost of a security sold is determined using the first-in, first-out method.

Receivables

Trade receivables are carried at amortized cost, which is the original invoice amount adjusted for cash collections, write-offs, and foreign exchange. We maintain an allowance for credit losses, which is adjusted based on management's assessment of our customers' historical collection experience, known or expected credit risks, and industry and economic conditions.

Inventories

The cost of (i) refinery feedstocks and refined petroleum products and blendstocks, (ii) renewable diesel feedstocks (i.e., waste and renewable feedstocks, predominately animal fats, used cooking oils, vegetable oils, and inedible distillers corn oils) and products, and (iii) ethanol feedstocks and products is determined under the last-in, first-out (LIFO) method using the dollar-value LIFO approach, with any increments valued based on average purchase prices during the year. Our LIFO inventories are carried at the lower of cost or market. The cost of products purchased for resale and the cost of materials and supplies are determined principally under the weighted-average cost method. Our non-LIFO inventories are carried at the lower of cost or net realizable value.

In determining the market value of our inventories, we assume that feedstocks are converted into products, which requires us to make estimates regarding the products expected to be produced from those feedstocks and the conversion costs required to convert those feedstocks into products. We also estimate the usual and customary transportation costs required to move the inventory from our plants to the appropriate points of sale. We then apply an estimated selling price to our inventories. If the aggregate market value of our LIFO inventories or the aggregate net realizable value of our non-LIFO inventories is less than the related aggregate cost, we recognize a loss for the difference in our statements of income. To the extent the aggregate market value of our LIFO inventories subsequently increases, we recognize an increase to the value of our inventories (not to exceed cost) and a gain in our statements of income.

Property, Plant, and Equipment

The cost of property, plant, and equipment (property assets) purchased or constructed, including betterments of property assets, is capitalized. However, the cost of repairs to and normal maintenance of property assets is expensed as incurred. Betterments of property assets are those that extend the useful life, increase the capacity or improve the operating efficiency of the asset, or improve the safety of our operations. The cost of property assets constructed includes interest and certain overhead costs allocable to the construction activities.

Our operations are highly capital intensive. Each of our refineries and plants comprises a large base of property assets, consisting of a series of interconnected, highly integrated and interdependent crude oil and other feedstock processing facilities and supporting infrastructure (Units) and other property assets that support our business. Improvements consist of the addition of new Units and other property assets and betterments of those Units and assets. We plan for these improvements by developing a multi-year capital investment program that is updated and revised based on changing internal and external factors.

Depreciation of crude oil processing and waste and renewable feedstocks processing facilities is recorded on a straight-line basis over the estimated useful lives of these assets primarily using the composite method of depreciation. We maintain a separate composite group of property assets for each of our refineries and our renewable diesel plants. We estimate the useful life of each group based on an evaluation of the property assets comprising the group, and such evaluations consist of, but are not limited to, the physical inspection of the assets to determine their condition, consideration of the manner in which the assets are maintained, assessment of the need to replace assets, and evaluation of the manner in which improvements impact the useful life of the group. The estimated useful lives of our composite groups range primarily from 20 to 30 years.

Under the composite method of depreciation, the cost of an improvement is added to the composite group to which it relates and is depreciated over that group's estimated useful life. We design improvements to our crude oil processing and waste and renewable feedstocks processing facilities in accordance with engineering specifications, design standards, and practices we believe to be accepted in our industry, and these improvements have design lives consistent with our estimated useful lives. Therefore, we believe the use of the group life to depreciate the cost of improvements made to the group is reasonable because the estimated useful life of each improvement is consistent with that of the group.

Also under the composite method of depreciation, the historical cost of a minor property asset (net of salvage value) that is retired or replaced is charged to accumulated depreciation and no gain or loss is recognized. However, a gain or loss is recognized for a major property asset that is retired, replaced, sold, or for an abnormal disposition of a property asset (primarily involuntary conversions). Gains and losses are reflected in depreciation and amortization expense, unless such amounts are reported separately due to materiality.

Depreciation of our corn processing facilities, administrative buildings, and other assets is recorded on a straight-line basis over the estimated useful lives of the related assets using the component method of deprecation. The estimated useful life of our corn processing facilities is 20 years.

Leasehold improvements are amortized on a straight-line basis over the shorter of the lease term or the estimated useful life of the related asset. Finance lease right-of-use assets are amortized as discussed below under "Leases."

Deferred Charges and Other Assets

"Deferred charges and other assets, net" primarily include the following:

- turnaround costs, which are incurred in connection with planned major maintenance activities at our refineries, renewable diesel plants, and ethanol plants, are deferred when incurred and

amortized on a straight-line basis over the period of time estimated to lapse until the next turnaround occurs;

- fixed-bed catalyst costs, representing the cost of catalyst that is changed out at periodic intervals when the quality of the catalyst has deteriorated beyond its prescribed function, are deferred when incurred and amortized on a straight-line basis over the estimated useful life of the specific catalyst;
- operating lease right-of-use assets, which are amortized as discussed below under “Leases”;
- investments in nonconsolidated joint ventures;
- purchased compliance credits, which are described below under “Costs of Renewable and Low-Carbon Fuel Programs”;
- goodwill;
- intangible assets, which are amortized over their estimated useful lives; and
- noncurrent income taxes receivable.

Leases

We evaluate if a contract is or contains a lease at inception of the contract. If we determine that a contract is or contains a lease, we recognize a right-of-use (ROU) asset and lease liability at the commencement date of the lease based on the present value of lease payments over the lease term. The present value of the lease payments is determined by using the implicit rate when readily determinable. If not readily determinable, our centrally managed treasury group provides an incremental borrowing rate based on quoted interest rates obtained from financial institutions. The rate used is for a term similar to the duration of the lease based on information available at the commencement date. Lease terms include options to extend or terminate the lease when it is reasonably certain that we will exercise those options.

We recognize ROU assets and lease liabilities for leasing arrangements with terms greater than one year. Except for the marine transportation asset class, we account for lease and nonlease components in a contract as a single lease component for all classes of underlying assets. Our marine transportation contracts include nonlease components, such as maintenance and crew costs. We allocate the consideration in these contracts based on pricing information provided by the third-party broker.

Expense for an operating lease is recognized as a single lease cost on a straight-line basis over the lease term and is reflected in the appropriate income statement line item based on the leased asset’s function. Amortization expense of a finance lease ROU asset is recognized on a straight-line basis over the lesser of the useful life of the leased asset or the lease term. However, if the lessor transfers ownership of the finance lease ROU asset to us at the end of the lease term, the finance lease ROU asset is amortized over the useful life of the leased asset. Amortization expense is reflected in depreciation and amortization expense. Interest expense is incurred based on the carrying value of the lease liability and is reflected in “interest and debt expense, net of capitalized interest.”

Impairment of Assets

Long-lived assets are tested for recoverability whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. A long-lived asset is not deemed recoverable if its carrying amount exceeds the sum of the undiscounted cash flows expected to result from its use and eventual disposition. If a long-lived asset is not deemed recoverable, an impairment loss is recognized for the amount by which the carrying amount of the long-lived asset exceeds its fair value, with fair value determined based on discounted estimated net cash flows or other appropriate methods.

We evaluate our equity method investments for impairment when there is evidence that we may not be able to recover the carrying amount of our investments or the investee is unable to sustain an earnings capacity that justifies the carrying amount. A loss in the value of an investment that is other than a temporary decline is recognized based on the difference between the estimated current fair value of the investment and its carrying amount.

Goodwill is not amortized, but is tested for impairment annually on October 1st and in interim periods when events or changes in circumstances indicate that the fair value of a reporting unit with goodwill is below its carrying amount. A goodwill impairment loss is recognized for the amount that the carrying amount of a reporting unit, including goodwill, exceeds its fair value, limited to the total amount of goodwill allocated to that reporting unit.

Asset Retirement Obligations

We record a liability, which is referred to as an asset retirement obligation, at fair value for the estimated cost to retire a tangible long-lived asset at the time we incur that liability, which is generally when the asset is purchased, constructed, or leased. We record the liability when we have a legal obligation to incur costs to retire the asset 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.

We have obligations with respect to certain of our assets at our refineries and plants to clean and/or dispose of various component parts of the assets at the time they are retired. However, these component parts can be used for extended and indeterminate periods of time as long as they are properly maintained and/or upgraded. It is our practice and current intent to maintain all our assets and continue making improvements to those assets based on technological advances. As a result, we believe that assets at our refineries and plants have indeterminate lives for purposes of estimating asset retirement obligations because dates or ranges of dates upon which we would retire such assets cannot reasonably be estimated at this time. We will recognize a liability at such time when sufficient information exists to estimate a date or range of potential settlement dates that is needed to employ a present value technique to estimate fair value.

Environmental Matters

Liabilities for future remediation costs are recorded when environmental assessments and/or remedial efforts are probable and the costs can be reasonably estimated. Other than for assessments, the timing and magnitude of these accruals generally are based on the completion of investigations or other studies or a commitment to a formal plan of action. Amounts recorded for environmental liabilities have not been reduced by possible recoveries from third parties and have not been measured on a discounted basis.

Legal Contingencies

We are subject to legal proceedings, claims, and liabilities that arise in the ordinary course of business. We accrue losses associated with legal claims when such losses are probable and reasonably estimable. If we determine that a loss is probable and cannot estimate a specific amount for that loss but can estimate a range of loss, the best estimate within the range is accrued. If no amount within the range is a better estimate than any other, the minimum amount of the range is accrued. Estimates are adjusted as additional information becomes available or circumstances change. Legal defense costs associated with loss contingencies are expensed in the period incurred.

Foreign Currency Translation

Generally, our foreign subsidiaries use their local currency as their functional currency. Balance sheet amounts are translated into U.S. dollars using exchange rates in effect as of the balance sheet date. Income statement amounts are translated into U.S. dollars using the exchange rates in effect at the time the underlying transactions occur. Foreign currency translation adjustments are recorded as a component of accumulated other comprehensive loss.

Revenue Recognition

Our revenues are primarily generated from contracts with customers. We generate revenue from contracts with customers from the sale of products by our Refining, Renewable Diesel, and Ethanol segments. Revenues are recognized when we satisfy our performance obligation to transfer products to our customers, which typically occurs at a point in time upon shipment or delivery of the products, and for an amount that reflects the transaction price that is allocated to the performance obligation.

The customer is able to direct the use of, and obtain substantially all of the benefits from, the products at the point of shipment or delivery. As a result, we consider control to have transferred upon shipment or delivery because we have a present right to payment at that time, the customer has legal title to the asset, we have transferred physical possession of the asset, and the customer has significant risks and rewards of ownership of the asset.

Our contracts with customers state the final terms of the sale, including the description, quantity, and price for goods sold. Payment terms for our customers vary by type of customer and method of delivery; however, the payment is typically due in full within two to ten days from date of invoice. In the normal course of business, we generally do not accept product returns.

The transaction price is the consideration that we expect to be entitled to in exchange for our products. The transaction price for substantially all of our contracts is generally based on commodity market pricing (i.e., variable consideration). As such, this market pricing may be constrained (i.e., not estimable) at the inception of the contract but will be recognized based on the applicable market pricing, which will be known upon transfer of the goods to the customer. Some of our contracts also contain variable consideration in the form of sales incentives to our customers, such as discounts and rebates. For contracts that include variable consideration, we estimate the factors that determine the variable consideration in order to establish the transaction price.

We have elected to exclude from the measurement of the transaction price all taxes assessed by government authorities that are both imposed on and concurrent with a specific revenue-producing

transaction and collected by us from a customer (e.g., sales tax, use tax, value-added tax, etc.). We continue to include in the transaction price excise taxes that are imposed on certain inventories in our foreign operations. The amount of such taxes is provided in supplemental information in a footnote to the statements of income.

There are instances where we provide shipping services in relation to the goods sold to our customer. Shipping and handling costs that occur before the customer obtains control of the goods are deemed to be fulfillment activities and are included in cost of materials and other. We have elected to account for shipping and handling activities that occur after the customer has obtained control of a good as fulfillment activities rather than as a promised service, and we have included these activities in cost of materials and other.

We enter into certain purchase and sale arrangements with the same counterparty that are deemed to be made in contemplation of one another. We combine these transactions and present the net effect in cost of materials and other. We also enter into refined petroleum product exchange transactions to fulfill sales contracts with our customers by accessing refined petroleum products in markets where we do not operate our own refineries. These refined petroleum product exchanges are accounted for as exchanges of nonmonetary assets, and no revenues are recorded on these transactions.

Cost Classifications

Cost of materials and other primarily includes the cost of materials that are a component of our products sold. These costs include (i) the direct cost of materials (such as crude oil and other refinery feedstocks, refined petroleum products and blendstocks, renewable diesel feedstocks and products, and ethanol feedstocks and products) that are a component of our products sold; (ii) costs related to the delivery (such as shipping and handling costs) of products sold; (iii) costs related to our obligations to comply with the Renewable and Low-Carbon Fuel Programs defined below under “Costs of Renewable and Low-Carbon Fuel Programs”; (iv) the blender’s tax credit recognized on qualified fuel mixtures; (v) gains and losses on our commodity derivative instruments; and (vi) certain excise taxes.

Operating expenses (excluding depreciation and amortization expense) include costs to operate our refineries (and associated logistics assets), renewable diesel plants, and ethanol plants. These costs primarily include employee-related expenses, energy and utility costs, catalysts and chemical costs, and repair and maintenance expenses.

Depreciation and amortization expense associated with our operations is separately presented in our statements of income as a component of cost of sales and general and administrative expenses and is disclosed by reportable segment in Note 17.

Other operating expenses include costs, if any, incurred by our reportable segments that are not associated with our cost of sales.

Costs of Renewable and Low-Carbon Fuel Programs

We purchase credits to comply with various government and regulatory blending programs, such as the U.S. Environmental Protection Agency’s Renewable Fuel Standard, California Low Carbon Fuel Standard, Canada Clean Fuel Regulations, and similar programs in other jurisdictions in which we operate

(collectively, the Renewable and Low-Carbon Fuel Programs). We purchase compliance credits (primarily Renewable Identification Numbers (RINs)) to comply with government regulations that require us to blend a certain volume of renewable and low-carbon fuels into the petroleum-based transportation fuels we produce in, or import into, the respective jurisdiction to be consumed therein based on annual quotas. To the degree that we are unable to blend renewable and low-carbon fuels at the required quotas, we must purchase compliance credits to meet our obligations.

The costs of purchased compliance credits are charged to cost of materials and other when such credits are needed to satisfy our compliance obligations. To the extent we have not purchased enough credits nor entered into fixed-price purchase contracts to satisfy our obligations as of the balance sheet date, we charge cost of materials and other for such deficiency based on the market prices of the credits as of the balance sheet date, and we record a liability for our obligation to purchase those credits. See Note 19 for disclosure of our fair value liability. If the number of purchased credits exceeds our obligation as of the balance sheet date, we record a prepaid asset equal to the amount paid for those excess credits.

Stock-Based Compensation

Compensation expense for our share-based compensation plans is based on the fair value of the awards granted and is recognized on a straight-line basis over the shorter of (i) the requisite service period of each award or (ii) the period from the grant date to the date retirement eligibility is achieved if that date is expected to occur during the vesting period established in the award.

Income Taxes

Income taxes are accounted for under the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred amounts are measured using enacted tax rates expected to apply to taxable income in the year those temporary differences are expected to be recovered or settled. Deferred tax assets are reduced by unrecognized tax benefits, if such items may be available to offset the unrecognized tax benefit. Income tax effects are released from accumulated other comprehensive loss to retained earnings, when applicable, on an individual item basis as those items are reclassified into income.

We have elected to classify any interest expense and penalties related to the underpayment of income taxes in income tax expense.

We have elected to treat the global intangible low-taxed income (GILTI) tax as a period expense.

Earnings per Common Share

Earnings per common share is computed by dividing net income attributable to Valero stockholders by the weighted-average number of common shares outstanding for the year. Participating securities are included in the computation of basic earnings per share using the two-class method. Earnings per common share – assuming dilution is computed by dividing net income attributable to Valero stockholders by the weighted-average number of common shares outstanding for the year increased by the effect of dilutive securities. Earnings per common share – assuming dilution is also determined using the two-class method, unless the treasury stock method is more dilutive. Potentially dilutive securities are

excluded from the computation of earnings per common share – assuming dilution when the effect of including such shares would be antidilutive.

Derivatives and Hedging

All derivative instruments, not designated as normal purchases or sales, are recognized in our balance sheets as either assets or liabilities measured at their fair values with changes in fair value recognized currently in income or in other comprehensive income as appropriate. The cash flow effects of all of our derivative instruments are reflected in operating activities in our statements of cash flows.

Accounting Pronouncement Adopted on January 1, 2024

ASU 2023-07

In November 2023, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*, to improve the disclosures about a public entity's reportable segments primarily through improved disclosures about significant segment expenses and other segment related items. We adopted this ASU effective January 1, 2024 and it did not affect our financial position or our results of operations, but will result in additional disclosures.

Accounting Pronouncement Not Yet Adopted

ASU 2023-09

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*, to improve income tax disclosures by requiring further disaggregation of information in the rate reconciliation and disaggregation of income taxes paid by jurisdiction. This ASU also includes certain other amendments intended to improve the effectiveness of income tax disclosures. We expect to adopt this ASU effective January 1, 2025 and the adoption will not affect our financial position or our results of operations, but will result in additional disclosures.

2. UNCERTAINTY

In September 2022, California adopted Senate Bill No. 1322 (SB 1322), which requires refineries in California to report monthly on the volume and cost of the crude oil they buy, the quantity and price of the wholesale gasoline they sell, and the gross gasoline margin per barrel, among other information. The provisions of SB 1322 were effective January 2023.

In March 2023, California adopted Senate Bill No. 2 (such statute, together with any regulations contemplated or issued thereunder, SBx 1-2), which, among other things, (i) authorized the establishment of a maximum gross gasoline refining margin (max margin) and the imposition of a financial penalty for profits above a max margin, (ii) significantly expanded the reporting obligations under SB 1322 and the Petroleum Industry Information Reporting Act of 1980, which include reporting requirements to the California Energy Commission (CEC) for all participants in the petroleum industry supply chain in California (e.g., refiners, marketers, importers, transporters, terminals, producers, renewables producers, pipelines, and ports), (iii) created the Division of Petroleum Market Oversight within the CEC to analyze the data provided under SBx 1-2, and (iv) authorized the CEC to regulate the timing and other aspects of refinery turnaround and maintenance activities in certain instances. SBx 1-2 imposes increased and substantial reporting requirements, which include daily, weekly, monthly, and annual reporting of detailed

operational and financial data on all aspects of our operations in California, much of it at the transaction level. The operational data includes our plans for turnaround and maintenance activities at our two California refineries and the manner in which we expect to address the potential impacts on feedstock and product inventories in California as a result of such turnaround and maintenance activities. The provisions of SBx 1-2 became effective June 26, 2023.

In September 2023, Governor Newsom directed the CEC to immediately begin the regulatory processes concerning the potential imposition of a penalty for exceeding a max margin and the timing of refinery turnarounds and maintenance. Consequently, in October 2023, the CEC adopted an order instituting an informational proceeding on a max margin and penalty under SBx 1-2, as well as an order initiating rulemaking activity under SBx 1-2. The CEC indicated in a November 2023 workshop that the latter rulemaking process will be focused on rules relating to the timing of refinery maintenance and turnarounds, as well as the standardization of data collection and reporting; final regulations are expected by July 2024. It remains uncertain as to what extent any regulations will address the remaining reporting requirements under SBx 1-2. In a separate November 2023 workshop, the CEC indicated a formal staff recommendation on establishing a max margin and penalty is expected in late 2024.

We continue to review and analyze the provisions of SBx 1-2 and the possible impacts to our refining and marketing operations in California. While the CEC has not yet established a max margin, imposed a financial penalty for profits above a max margin, or imposed restrictions on turnaround and maintenance activities, the potential implementation of a financial penalty or of any restrictions or delays on our ability to undertake turnaround or maintenance activities creates uncertainty due to the potential adverse effects on us. Any adverse effects on our operations or financial performance in California could indicate that the carrying value of our assets in California is not recoverable, which would result in an impairment loss that could be material. In addition, if the circumstances that trigger an impairment loss result in a reduction in the estimated useful lives of the assets, we may be required to recognize an asset retirement obligation that could be material. Other jurisdictions are contemplating similarly focused legislation or actions.

The ultimate timing and impacts of SBx 1-2 and any other similarly focused legislation or actions are subject to considerable uncertainty due to a number of factors, including technological and economic feasibility, legal challenges, and potential changes in law, regulation, or policy, and it is not currently possible to predict the ultimate effects of these matters and developments on our financial condition, results of operations, and liquidity.

3. RECEIVABLES

Receivables consisted of the following (in millions):

	December 31,	
	2023	2022
Receivables from contracts with customers	$ 7,209	$ 7,189
Receivables from certain purchase and sale arrangements	3,857	3,602
Receivables before allowance for credit losses	11,066	10,791
Allowance for credit losses	(28)	(30)
Receivables after allowance for credit losses	11,038	10,761
Income taxes receivable	409	142
Other receivables	1,078	1,016
Receivables, net	$ 12,525	$ 11,919

4. INVENTORIES

Inventories consisted of the following (in millions):

	December 31,	
	2023	2022
Refinery feedstocks	$ 2,223	$ 1,949
Refined petroleum products and blendstocks	3,790	3,579
Renewable diesel feedstocks and products	913	583
Ethanol feedstocks and products	313	328
Materials and supplies	344	313
Inventories	$ 7,583	$ 6,752

As of December 31, 2023 and 2022, the replacement cost (market value) of LIFO inventories exceeded their LIFO carrying amounts by $4.4 billion and $6.3 billion, respectively.

During the year ended December 31, 2022, we had a liquidation of certain LIFO inventory layers, which was due to weather-related production disruptions that occurred at the end of the year that decreased cost of materials and other by $323 million.

Our non-LIFO inventories accounted for $1.5 billion and $1.6 billion of our total inventories as of December 31, 2023 and 2022, respectively.

5. LEASES

General

We have entered into long-term leasing arrangements for the right to use various classes of underlying assets as follows:

- *Pipelines, Terminals, and Tanks* includes facilities and equipment used in the storage, transportation, production, and sale of refinery feedstock, refined petroleum product, ethanol, and corn inventories;
- *Marine Transportation* includes time charters for ocean-going tankers and coastal vessels;
- *Rail Transportation* includes railcars and related storage facilities; and
- *Other* includes machinery, equipment, and various facilities used in our refining, renewable diesel, and ethanol operations; facilities and equipment related to industrial gases and power used in our operations; land and rights-of-way associated with our refineries, plants, and pipelines and other logistics assets, as well as office facilities; and equipment primarily used at our corporate offices, such as printers and copiers.

In addition to fixed lease payments, some arrangements contain provisions for variable lease payments. Certain leases for pipelines, terminals, and tanks provide for variable lease payments based on, among other things, throughput volumes in excess of a base amount. Certain marine transportation leases contain provisions for payments that are contingent on usage. Additionally, if the rental increases are not scheduled in the lease, such as an increase based on subsequent changes in the index or rate, those rents are considered variable lease payments. In all instances, variable lease payments are recognized in the period in which the obligation for those payments is incurred.

Lease Costs and Other Supplemental Information

Our total lease cost comprises costs that are included in our statements of income, as well as costs capitalized as part of an item of property, plant, and equipment or inventory. Total lease cost was as follows (in millions):

	Pipelines, Terminals, and Tanks	Transportation		Other	Total
		Marine	Rail		
Year ended December 31, 2023					
Finance lease cost:					
Amortization of ROU assets	$ 213	$ —	$ 3	$ 30	$ 246
Interest on lease liabilities	101	—	1	5	107
Operating lease cost	166	127	80	45	418
Variable lease cost	114	61	—	8	183
Short-term lease cost	18	125	2	112	257
Sublease income	—	(29)	—	(2)	(31)
Total lease cost	$ 612	$ 284	$ 86	$ 198	$ 1,180
Year ended December 31, 2022					
Finance lease cost:					
Amortization of ROU assets	$ 183	$ —	$ 3	$ 32	$ 218
Interest on lease liabilities	78	—	1	5	84
Operating lease cost	171	102	68	38	379
Variable lease cost	79	50	—	9	138
Short-term lease cost	15	82	3	57	157
Sublease income	—	(27)	—	(2)	(29)
Total lease cost	$ 526	$ 207	$ 75	$ 139	$ 947
Year ended December 31, 2021					
Finance lease cost:					
Amortization of ROU assets	$ 137	$ —	$ 2	$ 28	$ 167
Interest on lease liabilities	66	—	1	5	72
Operating lease cost	163	105	64	49	381
Variable lease cost	51	21	—	7	79
Short-term lease cost	5	44	1	46	96
Sublease income	—	(4)	—	(3)	(7)
Total lease cost	$ 422	$ 166	$ 68	$ 132	$ 788

The following table presents additional information related to our operating and finance leases (in millions, except for lease terms and discount rates):

	December 31, 2023		December 31, 2022	
	Operating Leases	Finance Leases	Operating Leases	Finance Leases
Supplemental balance sheet information				
ROU assets, net reflected in the following balance sheet line items:				
Property, plant, and equipment, net	$ —	$ 2,195	$ —	$ 2,278
Deferred charges and other assets, net	1,136	—	1,114	—
Total ROU assets, net	$ 1,136	$ 2,195	$ 1,114	$ 2,278
Current lease liabilities reflected in the following balance sheet line items:				
Current portion of debt and finance lease obligations	$ —	$ 209	$ —	$ 248
Accrued expenses	360	—	311	—
Noncurrent lease liabilities reflected in the following balance sheet line items:				
Debt and finance lease obligations, less current portion	—	2,097	—	2,146
Other long-term liabilities	753	—	776	—
Total lease liabilities	$ 1,113	$ 2,306	$ 1,087	$ 2,394
Other supplemental information				
Weighted-average remaining lease term	6.9 years	14.3 years	7.5 years	14.6 years
Weighted-average discount rate	5.7 %	4.8 %	5.2 %	4.6 %

Supplemental cash flow information related to our operating and finance leases is presented in Note 18.

DGD Port Arthur Plant Finance Lease

In connection with the construction of the DGD plant located next to our Port Arthur Refinery (the DGD Port Arthur Plant), DGD entered into an agreement with a third party to utilize certain rail facilities, truck rack facilities, and tanks for the transportation and storage of feedstocks and renewable diesel. The agreement commenced in the fourth quarter of 2022, upon completion of the DGD Port Arthur Plant, and has an initial term of 20 years with two automatic five-year renewal periods. In the fourth quarter of 2022, DGD recognized a finance lease ROU asset and related liability of approximately $500 million in connection with this agreement.

Maturity Analyses

As of December 31, 2023, the remaining minimum lease payments due under our long-term leases were as follows (in millions):

	Operating Leases	Finance Leases
2024	$ 398	$ 312
2025	254	298
2026	195	274
2027	103	244
2028	64	243
Thereafter	386	1,967
Total undiscounted lease payments	1,400	3,338
Less: Amount associated with discounting	287	1,032
Total lease liabilities	$ 1,113	$ 2,306

6. PROPERTY, PLANT, AND EQUIPMENT

Summary by Major Class

Major classes of property, plant, and equipment, including assets held under finance leases, consisted of the following (in millions):

	December 31,	
	2023	2022
Land	$ 505	$ 499
Crude oil processing facilities	34,043	32,699
Transportation and terminaling facilities	5,978	5,900
Waste and renewable feedstocks processing facilities	3,243	3,215
Corn processing facilities	1,069	1,052
Administrative buildings	1,137	1,095
Finance lease ROU assets (see Note 5)	3,062	2,906
Other	1,942	1,886
Construction in progress	689	1,324
Property, plant, and equipment, at cost	51,668	50,576
Accumulated depreciation	(21,459)	(19,598)
Property, plant, and equipment, net	$ 30,209	$ 30,978

Depreciation expense for the years ended December 31, 2023, 2022, and 2021 was $1.9 billion, $1.7 billion, and $1.7 billion, respectively.

Asset Impairment

Our ethanol plant located in Lakota, Iowa (Lakota ethanol plant) was previously configured to produce a higher-grade ethanol product, as opposed to fuel-grade ethanol, suitable for hand sanitizer blending or industrial purposes that has a higher market value than fuel-grade ethanol. During 2022, demand for

higher-grade ethanol declined and had a negative impact on the profitability of the plant. As a result, we tested the recoverability of the carrying value of the Lakota ethanol plant and concluded that it was impaired. Therefore, we reduced the carrying value of the plant to its estimated fair value and recognized an asset impairment loss of $61 million for the year ended December 31, 2022. See Note 19 for disclosure related to the method used to determine fair value. During the third quarter of 2023, the Lakota ethanol plant resumed production of fuel-grade ethanol.

Sale of Ethanol Plant

In June 2022, we sold our ethanol plant in Jefferson, Wisconsin (Jefferson ethanol plant) for $82 million, which resulted in a gain of $23 million that is included in depreciation and amortization expense for the year ended December 31, 2022.

Change in Useful Life

The Jefferson ethanol plant was temporarily idled in 2020 at the onset of the COVID-19 pandemic in response to the decreased demand for ethanol resulting from the effects of the pandemic on our business, and we had previously evaluated this plant for potential impairment assuming that operations would resume. However, we completed an evaluation of the plant during the third quarter of 2021 and concluded that it was no longer a strategic asset for our ethanol business. The plant's operations permanently ceased at that time and we reduced its estimated useful life, which reduced its net book value to estimated salvage value. The additional depreciation expense of $48 million for the year ended December 31, 2021 resulting from this change did not have a material impact on our results of operations nor was there a material impact to our financial position.

7. DEFERRED CHARGES AND OTHER ASSETS

"Deferred charges and other assets, net" consisted of the following (in millions):

	December 31,	
	2023	2022
Deferred turnaround and catalyst costs, net	$ 2,382	$ 2,139
Operating lease ROU assets, net (see Note 5)	1,136	1,114
Investments in nonconsolidated joint ventures	713	724
Purchased compliance credits	612	543
Goodwill	260	260
Intangible assets, net	183	202
Income taxes receivable	56	26
Other	1,284	863
Deferred charges and other assets, net	$ 6,626	$ 5,871

Amortization expense for deferred turnaround and catalyst costs and intangible assets was $821 million, $745 million, and $695 million for the years ended December 31, 2023, 2022, and 2021, respectively.

The entire balance of goodwill is related to our Refining segment. See Note 17 for information on our reportable segments.

8. ACCRUED EXPENSES AND OTHER LONG-TERM LIABILITIES

Accrued expenses and other long-term liabilities consisted of the following (in millions):

	Accrued Expenses		Other Long-Term Liabilities	
	December 31,		December 31,	
	2023	2022	2023	2022
Operating lease liabilities (see Note 5)	$ 360	$ 311	$ 753	$ 776
Liability for unrecognized tax benefits	—	—	238	239
Defined benefit plan liabilities (see Note 13)	55	35	476	448
Repatriation tax liability (see Note 15) (a)	—	—	167	301
Environmental liabilities	23	21	294	296
Wage and other employee-related liabilities	392	388	90	87
Accrued interest expense	83	67	—	—
Contract liabilities from contracts with customers (see Note 17)	40	129	—	—
Blending program obligations (see Note 19)	83	189	—	—
Other accrued liabilities	204	75	245	163
Accrued expenses and other long-term liabilities	$ 1,240	$ 1,215	$ 2,263	$ 2,310

(a) The current portion of repatriation tax liability is included in income taxes payable. As of December 31, 2023 and 2022, the current portion of repatriation tax liability was $134 million and $100 million, respectively.

9. DEBT AND FINANCE LEASE OBLIGATIONS

Debt, at stated values, and finance lease obligations consisted of the following (in millions):

	Final Maturity	December 31, 2023	December 31, 2022
Credit facilities:			
Valero Revolver	2027	$ —	$ —
Canadian Revolver	2023	n/a	—
Accounts Receivable Sales Facility	2024	—	—
DGD Revolver	2026	250	100
DGD Loan Agreement	2026	—	25
IEnova Revolver	2028	766	717
Public debt:			
Valero Senior Notes			
1.200%	2024	167	167
2.850%	2025	251	251
3.65%	2025	189	189
3.400%	2026	426	426
2.150%	2027	564	578
4.350%	2028	591	606
4.000%	2029	439	439
8.75%	2030	200	200
2.800%	2031	462	472
7.5%	2032	729	733
6.625%	2037	1,380	1,442
6.75%	2037	24	24
10.500%	2039	113	113
4.90%	2045	621	626
3.650%	2051	829	855
4.000%	2052	508	553
7.45%	2097	70	70
Valero Energy Partners LP (VLP) Senior Notes			
4.375%	2026	146	146
4.500%	2028	456	474
Debenture, 7.65%	2026	100	100
Other debt	2024	14	19
Net unamortized debt issuance costs and other		(77)	(84)
Total debt		9,218	9,241
Finance lease obligations (see Note 5)		2,306	2,394
Total debt and finance lease obligations		11,524	11,635
Less: Current portion		1,406	1,109
Debt and finance lease obligations, less current portion		$ 10,118	$ 10,526

Credit Facilities

Valero Revolver

We have a $4 billion revolving credit facility (the Valero Revolver) that matures in November 2027. We have the option to increase the aggregate commitments under the Valero Revolver to $5.5 billion, subject to certain conditions. The Valero Revolver also provides for the issuance of letters of credit of up to $2.4 billion.

Outstanding borrowings under the Valero Revolver bear interest, at our option, at either (i) the Adjusted Term SOFR, a secured overnight financing rate (SOFR) or (ii) the Alternate Base Rate (each of these rates is defined in the Valero Revolver), plus the applicable margins. The Valero Revolver also requires payments for customary fees, including facility fees, letter of credit participation fees, and administrative agent fees. The interest rate and facility fees under the Valero Revolver are subject to adjustment based upon the credit ratings assigned to our senior unsecured debt.

Canadian Revolver

One of our Canadian subsidiaries had a C$150 million committed revolving credit facility (the Canadian Revolver) with a maturity date of November 2023. The Canadian Revolver provided for the issuance of letters of credit. Prior to November 30, 2023, all letters of credit under this facility were canceled and the facility was terminated.

Accounts Receivable Sales Facility

We have an accounts receivable sales facility with a group of third-party entities and financial institutions to sell up to $1.3 billion of eligible trade receivables on a revolving basis. In July 2023, we extended the maturity date of this facility to July 2024. Under this program, one of our marketing subsidiaries (Valero Marketing) sells eligible receivables, without recourse, to another of our subsidiaries (Valero Capital), whereupon the receivables are no longer owned by Valero Marketing. Valero Capital, in turn, sells an undivided percentage ownership interest in the eligible receivables, without recourse, to the third-party entities and financial institutions. To the extent that Valero Capital retains an ownership interest in the receivables it has purchased from Valero Marketing, such interest is included in our financial statements solely as a result of the consolidation of the financial statements of Valero Capital with those of Valero Energy Corporation; the receivables are not available to satisfy the claims of the creditors of Valero Marketing or Valero Energy Corporation.

As of December 31, 2023 and 2022, $2.6 billion and $3.0 billion, respectively, of our accounts receivable composed the designated pool of accounts receivable included in the program. All amounts outstanding under the accounts receivable sales facility are reflected as debt in our balance sheets and proceeds and repayments are reflected as cash flows from financing activities. Outstanding borrowings under the facility bear interest, at either (i) an adjusted daily simple SOFR or (ii) an alternate base rate as allowed under the terms of this facility, plus applicable margins. The interest rates under the program are subject to adjustment based upon the credit ratings assigned to our senior unsecured debt. The program also requires payments for customary fees, including facility fees.

DGD Revolver

In March 2021, DGD, as described in Note 12, entered into a $400 million unsecured revolving credit facility (the DGD Revolver) with a syndicate of financial institutions. In June 2023, DGD amended this

facility to (i) extend the maturity date from March 2024 to June 2026 and (ii) transition the benchmark reference interest rate previously based on the London Interbank Offered Rate (LIBOR) to a SOFR. DGD has the option to increase the aggregate commitments under the DGD Revolver to $550 million, subject to certain restrictions. The DGD Revolver also provides for the issuance of letters of credit of up to $150 million. The DGD Revolver is only available to fund the operations of DGD, and the creditors of DGD do not have recourse against us. As of December 31, 2023, all outstanding borrowings under this facility are reflected in current portion of debt as payment is expected to occur in 2024.

Effective June 2023, outstanding borrowings under the DGD Revolver generally bear interest, at DGD's option, at (i) an alternate base rate, (ii) an adjusted term SOFR, or (iii) an adjusted daily simple SOFR as allowed under the terms of the agreement for the applicable interest period in effect from time to time, plus the applicable margins. As of December 31, 2023 and 2022, the variable interest rate on the DGD Revolver was 7.201 percent and 5.880 percent, respectively. The DGD Revolver also requires payments for customary fees, including unused commitment fees, letter of credit fees, and administrative agent fees.

DGD Loan Agreement

DGD had an unsecured revolving loan agreement with its members (Darling Ingredients Inc. (Darling) and us) with a maturity date of April 2022. Under this agreement, each member had committed $25 million, resulting in aggregate commitments of $50 million. In March 2022, the maturity date of this facility was extended to April 2023, and then further extended to June 2023. In June 2023, DGD entered into a new unsecured revolving loan agreement (the DGD Loan Agreement) with its members that replaced and superseded the previous agreement. The new agreement includes the following modifications from the previous agreement: (i) extends the maturity date from June 2023 to June 2026, (ii) increases each member's commitment from $25 million to $100 million, resulting in an increase in aggregate commitments from $50 million to $200 million, and (iii) transitions the benchmark reference interest rate previously based on the LIBOR to a SOFR. The DGD Loan Agreement is only available to fund the operations of DGD. Any outstanding borrowings under this agreement represent loans made by the noncontrolling member as any transactions between DGD and us under this agreement are eliminated in consolidation.

Effective June 2023, outstanding borrowings under the DGD Loan Agreement bear interest at a term SOFR for the applicable interest period in effect from time to time plus the applicable margin. There were no outstanding borrowings under the DGD Loan Agreement as of December 31, 2023. As of December 31, 2022, the variable interest rate was 6.672 percent.

IEnova Revolver

Central Mexico Terminals, as described in Note 12, has a combined $830 million unsecured revolving credit facility (IEnova Revolver) with IEnova (defined in Note 12), that matures in February 2028. IEnova may terminate this revolver at any time and demand repayment of all outstanding amounts; therefore, all outstanding borrowings are reflected in current portion of debt. The IEnova Revolver is only available to fund the operations of Central Mexico Terminals, and the creditors of Central Mexico Terminals do not have recourse against us.

Outstanding borrowings under the IEnova Revolver bear interest at a SOFR for the applicable interest period in effect from time to time plus the applicable margin. The interest rate under this revolver is

subject to adjustment, with agreement by both parties, based upon changes in market conditions. As of December 31, 2023 and 2022, the variable interest rate was 9.245 percent and 7.393 percent, respectively.

Summary of Credit Facilities

We had outstanding borrowings, letters of credit issued, and availability under our credit facilities as follows (in millions):

			December 31, 2023		
	Facility Amount	Maturity Date	Outstanding Borrowings	Letters of Credit Issued (a)	Availability
Committed facilities:					
Valero Revolver	$ 4,000	November 2027	$ —	$ 4	$ 3,996
Accounts receivable sales facility	1,300	July 2024	—	n/a	1,300
Committed facilities of VIEs (b):					
DGD Revolver	400	June 2026	250	54	96
DGD Loan Agreement (c)	100	June 2026	—	n/a	100
IEnova Revolver	830	February 2028	766	n/a	64
Uncommitted facilities:					
Letter of credit facilities	n/a	n/a	n/a	—	n/a

(a) Letters of credit issued as of December 31, 2023 expire at various times in 2024 through 2026.
(b) Creditors of the VIEs do not have recourse against us.
(c) The amounts shown for this facility represent the facility amount available from, and borrowings outstanding to, the noncontrolling member as any transactions between DGD and us under this facility are eliminated in consolidation.

We are charged letter of credit issuance fees under our various uncommitted short-term bank credit facilities. These uncommitted credit facilities have no commitment fees or compensating balance requirements.

Activity under our credit facilities was as follows (in millions):

	Year Ended December 31,		
	2023	2022	2021
Borrowings:			
Accounts receivable sales facility	$ 1,750	$ 1,600	$ —
DGD Revolver	550	759	276
DGD Loan Agreement	—	50	25
IEnova Revolver	120	105	81
Repayments:			
Accounts receivable sales facility	(1,750)	(1,600)	—
DGD Revolver	(400)	(759)	(176)
DGD Loan Agreement	(25)	(50)	—
IEnova Revolver	(71)	(67)	—

Public Debt

In February 2023, we used cash on hand to purchase and retire a portion of the following notes (in millions):

Debt Purchased and Retired	Principal Amount
6.625% Senior Notes due 2037	$ 62
3.650% Senior Notes due 2051	26
4.000% Senior Notes due 2052	45
Various other Valero and VLP Senior Notes	66
Total	$ 199

During the year ended December 31, 2022, the following activity occurred:

- In November and December 2022, we used cash on hand to purchase and retire a portion of the following notes (in millions):

Debt Purchased and Retired	Principal Amount
2.150% Senior Notes due 2027	$ 22
4.500% VLP Senior Notes due 2028	26
2.800% Senior Notes due 2031	28
6.625% Senior Notes due 2037	58
4.90% Senior Notes due 2045	24
3.650% Senior Notes due 2051	95
4.000% Senior Notes due 2052	97
7.45% Senior Notes due 2097	30
Various other Valero Senior Notes	62
Total	$ 442

- In September 2022, we used cash on hand to purchase and retire a portion of the following notes in connection with cash tender offers that we publicly announced in August 2022 and completed in September 2022 (in millions):

Debt Purchased and Retired	Principal Amount
3.65% Senior Notes due 2025	$ 48
2.850% Senior Notes due 2025	291
4.375% VLP Senior Notes due 2026	62
3.400% Senior Notes due 2026	166
4.350% Senior Notes due 2028	131
4.000% Senior Notes due 2029	552
Total	$ 1,250

- In June 2022, we reduced our debt through the acquisition of the $300 million of 4.00 percent Gulf Opportunity Zone Revenue Bonds Series 2010 that are due December 1, 2040, but were subject to mandatory tender on June 1, 2022. We have the option to effectuate a remarketing of these bonds.

- In February 2022, we issued $650 million of 4.000 percent Senior Notes due June 1, 2052. Proceeds from this debt issuance totaled $639 million before deducting the underwriting discount and other debt issuance costs. The proceeds and cash on hand were used to purchase and retire a

portion of the following notes in connection with cash tender offers that we publicly announced and completed in February 2022 (in millions):

Debt Purchased and Retired	Principal Amount
3.65% Senior Notes due 2025	$ 72
2.850% Senior Notes due 2025	507
4.375% VLP Senior Notes due 2026	168
3.400% Senior Notes due 2026	653
Total	$ 1,400

During the year ended December 31, 2021, the following activity occurred:

- In November 2021, we issued $500 million of 2.800 percent Senior Notes due December 1, 2031 and $950 million of 3.650 percent Senior Notes due December 1, 2051. Proceeds from these debt issuances totaled $1.446 billion before deducting the underwriting discounts and other debt issuance costs. These proceeds and cash on hand were used to redeem or purchase and retire a portion of the following notes in connection with cash tender offers that we publicly announced in November 2021 and completed in December 2021 (in millions):

Debt Redeemed or Purchased and Retired	Principal Amount
2.700% Senior Notes due 2023	$ 850
1.200% Senior Notes due 2024	756
3.65% Senior Notes due 2025	276
4.375% VLP Senior Notes due 2026	124
10.500% Senior Notes due 2039	137
Total	$ 2,143

In connection with the early debt redemption and retirement activity described above, we recognized a charge of $193 million in “other income, net” comprised of $179 million of premiums paid, $10 million of unamortized debt discounts and deferred debt costs, and $4 million of bank fees.

- In September 2021, we redeemed our Floating Rate Senior Notes due September 15, 2023 for $575 million.

Other Disclosures

"Interest and debt expense, net of capitalized interest" is comprised as follows (in millions):

	Year Ended December 31,		
	2023	2022	2021
Interest and debt expense	$ 611	$ 619	$ 651
Less: Capitalized interest	19	57	48
Interest and debt expense, net of capitalized interest	$ 592	$ 562	$ 603

Our credit facilities and other debt arrangements contain various customary restrictive covenants, including cross-default and cross-acceleration clauses.

Principal maturities for our debt obligations as of December 31, 2023 were as follows (in millions):

2024 (a)	$ 1,197
2025	441
2026	672
2027	564
2028	1,047
Thereafter	5,374
Net unamortized debt issuance costs and other	(77)
Total debt	$ 9,218

(a) Maturities for 2024 include the DGD Revolver and the IEnova Revolver.

10. COMMITMENTS AND CONTINGENCIES

Purchase Obligations

We have various purchase obligations under certain crude oil and other feedstock supply arrangements, industrial gas supply arrangements (such as hydrogen supply arrangements), natural gas supply arrangements, and various throughput, transportation, and terminaling agreements. We enter into these contracts to ensure an adequate supply of feedstock and utilities and adequate storage capacity to operate our refineries and ethanol plants. Substantially all of our purchase obligations are based on market prices or adjustments based on market indices. Certain of these purchase obligations include fixed or minimum volume requirements, while others are based on our usage requirements. None of these obligations is associated with suppliers' financing arrangements. These purchase obligations are not reflected as liabilities.

Self-Insurance

We are self-insured for certain medical and dental, workers' compensation, automobile liability, general liability, and other third-party liability claims up to applicable retention limits. Liabilities are accrued for self-insured claims, or when estimated losses exceed coverage limits, and when sufficient information is available to reasonably estimate the amount of the loss. These liabilities are included in accrued expenses and other long-term liabilities.

11. EQUITY

Share Activity

Activity in the number of shares of common stock and treasury stock was as follows (in millions):

	Common Stock	Treasury Stock
Balance as of December 31, 2020	673	(265)
Transactions in connection with stock-based compensation plans	—	1
Balance as of December 31, 2021	673	(264)
Transactions in connection with stock-based compensation plans	—	1
Purchases of common stock for treasury	—	(38)
Balance as of December 31, 2022	673	(301)
Transactions in connection with stock-based compensation plans	—	1
Purchases of common stock for treasury	—	(40)
Balance as of December 31, 2023	673	(340)

Preferred Stock

We have 20 million shares of preferred stock authorized with a par value of $0.01 per share. No shares of preferred stock were outstanding as of December 31, 2023 or 2022.

Treasury Stock

We purchase shares of our outstanding common stock as authorized by our board of directors (Board), including under share purchase programs (described in the table below) and with respect to our employee stock-based compensation plans.

Our Board authorized us to purchase shares of our outstanding common stock under various programs with no expiration dates as follows (in millions):

Program Name	Announcement Date	Total Cost Authorized	Completion of Authorized Share Purchases	Remaining Available for Purchase as of December 31, 2023
January 2018 Program	January 23, 2018	$ 2,500	Second quarter of 2022	$ —
July 2022 Program	July 7, 2022	2,500	Fourth quarter of 2022	—
October 2022 Program	October 26, 2022	2,500	Second quarter of 2023	—
February 2023 Program	February 23, 2023	2,500	Fourth quarter of 2023	—
September 2023 Program	September 15, 2023	2,500	n/a	2,199

On February 22, 2024, our Board authorized us to purchase shares of our outstanding common stock for a total cost of up to $2.5 billion with no expiration date, which is in addition to the amount remaining under the September 2023 Program.

Common Stock Dividends

On January 18, 2024, our Board declared a quarterly cash dividend of $1.07 per common share payable on March 4, 2024 to holders of record at the close of business on February 1, 2024.

Income Tax Effects Related to Components of Other Comprehensive Income (Loss)

The tax effects allocated to each component of other comprehensive income (loss) were as follows (in millions):

	Before-Tax Amount	Tax Expense (Benefit)	Net Amount
Year ended December 31, 2023			
Foreign currency translation adjustment	$ 433	$ —	$ 433
Pension and other postretirement benefits:			
Gain (loss) arising during the year related to:			
Net actuarial gain	77	18	59
Prior service cost	(19)	(4)	(15)
Miscellaneous loss	—	2	(2)
Amounts reclassified into income related to:			
Net actuarial gain	(12)	(3)	(9)
Prior service credit	(22)	(5)	(17)
Settlement loss	2	—	2
Effect of exchange rates	4	1	3
Net gain on pension and other postretirement benefits	30	9	21
Derivative instruments designated and qualifying as cash flow hedges:			
Net gain arising during the year	82	8	74
Net loss reclassified into income	8	1	7
Net gain on cash flow hedges	90	9	81
Other comprehensive income	$ 553	$ 18	$ 535

	Before-Tax Amount	Tax Expense (Benefit)	Net Amount
Year ended December 31, 2022			
Foreign currency translation adjustment	$ (613)	$ (7)	$ (606)
Pension and other postretirement benefits:			
Net actuarial gain arising during the year	244	57	187
Amounts reclassified into income related to:			
Net actuarial loss	52	12	40
Prior service credit	(22)	(5)	(17)
Settlement loss	61	13	48
Net gain on pension and other postretirement benefits	335	77	258
Derivative instruments designated and qualifying as cash flow hedges:			
Net loss arising during the year	(292)	(32)	(260)
Net loss reclassified into income	286	32	254
Net loss on cash flow hedges	(6)	—	(6)
Other comprehensive loss	$ (284)	$ 70	$ (354)
Year ended December 31, 2021			
Foreign currency translation adjustment	$ (47)	$ —	$ (47)
Pension and other postretirement benefits:			
Gain (loss) arising during the year related to:			
Net actuarial gain	317	69	248
Prior service cost	(4)	(1)	(3)
Amounts reclassified into income related to:			
Net actuarial loss	80	18	62
Prior service credit	(25)	(6)	(19)
Settlement loss	8	2	6
Effect of exchange rates	2	—	2
Net gain on pension and other postretirement benefits	378	82	296
Derivative instruments designated and qualifying as cash flow hedges:			
Net loss arising during the year	(48)	(5)	(43)
Net loss reclassified into income	46	5	41
Net loss on cash flow hedges	(2)	—	(2)
Other comprehensive income	$ 329	$ 82	$ 247

Accumulated Other Comprehensive Loss

Changes in accumulated other comprehensive loss by component, net of tax, were as follows (in millions):

	Foreign Currency Translation Adjustment	Defined Benefit Plans Items	Gains (Losses) on Cash Flow Hedges	Total
Balance as of December 31, 2020	$ (515)	$ (737)	$ (2)	$ (1,254)
Other comprehensive income (loss) before reclassifications	(47)	245	(21)	177
Amounts reclassified from accumulated other comprehensive loss	—	49	18	67
Effect of exchange rates	—	2	—	2
Other comprehensive income (loss)	(47)	296	(3)	246
Balance as of December 31, 2021	(562)	(441)	(5)	(1,008)
Other comprehensive income (loss) before reclassifications	(606)	187	(114)	(533)
Amounts reclassified from accumulated other comprehensive loss	—	71	111	182
Other comprehensive income (loss)	(606)	258	(3)	(351)
Balance as of December 31, 2022	(1,168)	(183)	(8)	(1,359)
Other comprehensive income before reclassifications	433	42	32	507
Amounts reclassified from accumulated other comprehensive loss	—	(24)	3	(21)
Effect of exchange rates	—	3	—	3
Other comprehensive income	433	21	35	489
Balance as of December 31, 2023	$ (735)	$ (162)	$ 27	$ (870)

Gains (losses) reclassified out of accumulated other comprehensive loss and into net income were as follows (in millions):

Details about Accumulated Other Comprehensive Loss Components	Year Ended December 31, 2023	2022	2021	Affected Line Item in the Statements of Income
Amortization of items related to defined benefit pension plans:				
Net actuarial gain (loss)	$ 12	$ (52)	$ (80)	(a) Other income, net
Prior service credit	22	22	25	(a) Other income, net
Settlement loss	(2)	(61)	(8)	(a) Other income, net
	32	(91)	(63)	Total before tax
	(8)	20	14	Tax benefit (expense)
	$ 24	$ (71)	$ (49)	Net of tax
Losses on cash flow hedges:				
Commodity contracts	$ (8)	$ (286)	$ (46)	Revenues
	(8)	(286)	(46)	Total before tax
	1	32	5	Tax benefit
	$ (7)	$ (254)	$ (41)	Net of tax
Total reclassifications for the year	$ 17	$ (325)	$ (90)	Net of tax

(a) These accumulated other comprehensive loss components are included in the computation of net periodic benefit cost, as discussed in Note 13.

12. VARIABLE INTEREST ENTITIES

Consolidated VIEs

In the normal course of business, we have financial interests in certain entities that have been determined to be VIEs. We consolidate a VIE when we have a variable interest in an entity for which we are the primary beneficiary such that we have (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses of or the right to receive benefits from the VIE that could potentially be significant to the VIE. In order to make this determination, we evaluated our contractual arrangements with the VIE, including arrangements for the use of assets, purchases of products and services, debt, equity, or management of operating activities.

The following discussion summarizes our involvement with the consolidated VIEs:

- DGD is a joint venture with a subsidiary of Darling that owns and operatestwo plants that process waste and renewable feedstocks (predominately animal fats, used cooking oils, vegetable oils, and inedible distillers corn oils) into renewable diesel and renewable naphtha. One plant is located next to our St. Charles Refinery (the DGD St. Charles Plant) and the other plant is the

DGD Port Arthur Plant. Our significant agreements with DGD include an operations agreement that outlines our responsibilities as operator of both plants.

As operator, we operate the plants and perform certain day-to-day operating and management functions for DGD as an independent contractor. The operations agreement provides us (as operator) with certain power to direct the activities that most significantly impact DGD's economic performance. Because this agreement conveys such power to us and is separate from our ownership rights, we determined that DGD was a VIE. For this reason and because we hold a 50 percent ownership interest that provides us with significant economic rights and obligations, we determined that we are the primary beneficiary of DGD. DGD has risk associated with its operations because it generates revenues from external customers.

- Central Mexico Terminals is a collective group of three subsidiaries of Infraestructura Energetica Nova, S.A.P.I. de C.V. (IEnova), a Mexican company and indirect subsidiary of Sempra Energy, a U.S. public company. We have terminaling agreements with Central Mexico Terminals that represent variable interests because we have determined them to be finance leases due to our exclusive use of the terminals. Although we do not have an ownership interest in the entities that own each of the three terminals, the finance leases convey to us (i) the power to direct the activities that most significantly impact the economic performance of all three terminals and (ii) the ability to influence the benefits received or the losses incurred by the terminals because of our use of the terminals. As a result, we determined each of the entities was a VIE and that we are the primary beneficiary of each. Substantially all of Central Mexico Terminals' revenues will be derived from us; therefore, we believe there is limited risk to us associated with revenues from external customers.

- We also have financial interests in other entities that have been determined to be VIEs because the entities' contractual arrangements transfer the power to us to direct the activities that most significantly impact their economic performance or reduce the exposure to operational variability and risk of loss created by the entity that otherwise would be held exclusively by the equity owners. Furthermore, we determined that we are the primary beneficiary of these VIEs because (i) certain contractual arrangements (exclusive of our ownership rights) provide us with the power to direct the activities that most significantly impact the economic performance of these entities and/or (ii) our 50 percent ownership interests provide us with significant economic rights and obligations.

The assets of the consolidated VIEs can only be used to settle their own obligations and the creditors of the consolidated VIEs have no recourse to our other assets. We generally do not provide financial guarantees to the VIEs. Although we have provided credit facilities to some of the VIEs in support of their construction or acquisition activities, these transactions are eliminated in consolidation. Our financial position, results of operations, and cash flows are impacted by the performance of the consolidated VIEs, net of intercompany eliminations, to the extent of our ownership interest in each VIE.

The following table presents summarized balance sheet information for the significant assets and liabilities of the consolidated VIEs, which are included in our balance sheets (in millions):

	DGD	Central Mexico Terminals	Other	Total
December 31, 2023				
Assets				
Cash and cash equivalents	$ 237	$ —	$ 23	$ 260
Other current assets	1,520	11	46	1,577
Property, plant, and equipment, net	3,772	665	75	4,512
Liabilities				
Current liabilities, including current portion of debt and finance lease obligations	$ 616	$ 808	$ 19	$ 1,443
Debt and finance lease obligations, less current portion	669	—	—	669
December 31, 2022				
Assets				
Cash and cash equivalents	$ 133	$ —	$ 16	$ 149
Other current assets	1,106	7	32	1,145
Property, plant, and equipment, net	3,785	681	79	4,545
Liabilities				
Current liabilities, including current portion of debt and finance lease obligations	$ 626	$ 737	$ 21	$ 1,384
Debt and finance lease obligations, less current portion	693	—	—	693

Nonconsolidated VIEs

We hold variable interests in VIEs that have not been consolidated because we are not considered the primary beneficiary. These nonconsolidated VIEs are not material to our financial position or results of operations and are accounted for as equity investments.

On April 19, 2021, we sold a 24.99 percent membership interest in MVP Terminalling, LLC (MVP), a nonconsolidated joint venture, for $270 million that resulted in a gain of $62 million, which is included in “other income, net” for the year ended December 31, 2021. MVP owns and operates a marine terminal (the MVP Terminal) located on the Houston Ship Channel in Pasadena, Texas. We retained a 25.01 percent membership interest in MVP.

13. EMPLOYEE BENEFIT PLANS

Defined Benefit Plans

We have defined benefit pension plans, some of which are subject to collective bargaining agreements, that cover most of our employees. These plans provide eligible employees with retirement income based primarily on years of service and compensation during specific periods under final average pay and cash balance formulas. We fund all of our pension plans as required by local regulations. In the U.S., all qualified pension plans are subject to the Employee Retirement Income Security Act's minimum funding standard. We typically do not fund or fully fund U.S. nonqualified and certain foreign pension plans that are not subject to funding requirements because contributions to these pension plans may be less economic and investment returns may be less attractive than our other investment alternatives.

We also provide health care and life insurance benefits for certain retired employees through our postretirement benefit plans. Most of our employees become eligible for these benefits if, while still working for us, they reach normal retirement age or take early retirement. These plans are unfunded, and retired employees share the cost with us. Individuals who became our employees as a result of an acquisition became eligible for postretirement benefits under our plans as determined by the terms of the relevant acquisition agreement.

The changes in benefit obligation related to all of our defined benefit plans, the changes in fair value of plan assets[(a)], and the funded status of our defined benefit plans as of and for the years ended below were as follows (in millions):

	Pension Plans		Other Postretirement Benefit Plans	
	December 31,		December 31,	
	2023	2022	2023	2022
Changes in benefit obligation				
Benefit obligation as of beginning of year	$ 2,413	$ 3,463	$ 258	$ 347
Service cost	111	152	4	6
Interest cost	121	85	13	8
Participant contributions	—	—	22	13
Plan amendments	19	—	—	—
Benefits paid	(166)	(366)	(42)	(29)
Actuarial (gain) loss	110	(882)	10	(86)
Foreign currency exchange rate changes	10	(39)	1	(1)
Benefit obligation as of end of year	$ 2,618	$ 2,413	$ 266	$ 258
Changes in plan assets (a)				
Fair value of plan assets as of beginning of year	$ 2,485	$ 3,303	$ —	$ —
Actual return on plan assets	399	(532)	—	—
Company contributions	101	120	20	16
Participant contributions	—	—	22	13
Benefits paid	(166)	(366)	(42)	(29)
Foreign currency exchange rate changes	16	(40)	—	—
Fair value of plan assets as of end of year	$ 2,835	$ 2,485	$ —	$ —
Reconciliation of funded status (a)				
Fair value of plan assets as of end of year	$ 2,835	$ 2,485	$ —	$ —
Less: Benefit obligation as of end of year	2,618	2,413	266	258
Funded status as of end of year	$ 217	$ 72	$ (266)	$ (258)
Accumulated benefit obligation	$ 2,450	$ 2,271	n/a	n/a

(a) Plan assets include only the assets associated with pension plans subject to legal minimum funding standards. Plan assets associated with U.S. nonqualified pension plans are not included here because they are not protected from our creditors and therefore cannot be reflected as a reduction from our obligations under the pension plans. As a result, the reconciliation of funded status does not reflect the effect of plan assets that exist for all of our defined benefit plans. See Note 19 for the assets associated with certain U.S. nonqualified pension plans.

The actuarial loss for the year ended December 31, 2023 primarily resulted from a decrease in the discount rates used to determine our benefit obligations for our pension plans from 5.19 percent in 2022 to 5.01 percent in 2023. The actuarial gain for the year ended December 31, 2022 primarily resulted from an increase in the discount rates used to determine our benefit obligations for our pension plans from 2.93 percent in 2021 to 5.19 percent in 2022, primarily due to rising interest rates during 2022 as a result of actions by the Federal Reserve System and other central banks to address inflation.

Benefits paid for the year ended December 31, 2023 were lower than those paid in 2022 primarily due to fewer participants retiring in 2023 who elected lump-sum distributions.

The fair value of our plan assets as of December 31, 2023 was favorably impacted by the return on plan assets resulting primarily from an improvement in equity market prices throughout the year. The fair value of our plan assets as of December 31, 2022 was unfavorably impacted by the negative return on plan assets resulting primarily from a significant decline in equity market prices throughout the year.

Amounts recognized in our balance sheets for our pension and other postretirement benefits plans include (in millions):

	Pension Plans		Other Postretirement Benefit Plans	
	December 31,		December 31,	
	2023	2022	2023	2022
Deferred charges and other assets, net	$ 482	$ 297	$ —	$ —
Accrued expenses	(32)	(14)	(23)	(21)
Other long-term liabilities	(233)	(211)	(243)	(237)
	$ 217	$ 72	$ (266)	$ (258)

The following table presents information for our pension plans with projected benefit obligations in excess of plan assets (in millions):

	December 31,	
	2023	2022
Projected benefit obligation	$ 265	$ 249
Fair value of plan assets	—	24

The following table presents information for our pension plans with accumulated benefit obligations in excess of plan assets (in millions):

	December 31,	
	2023	2022
Accumulated benefit obligation	$ 220	$ 209
Fair value of plan assets	—	24

Benefit payments that we expect to pay, including amounts related to expected future services that we expect to receive, are as follows for the years ending December 31 (in millions):

	Pension Benefits	Other Postretirement Benefits
2024	$ 177	$ 22
2025	221	22
2026	193	21
2027	198	20
2028	185	19
2029-2033	1,020	94

We plan to contribute $113 million to our pension plans and $22 million to our other postretirement benefit plans during 2024.

The components of net periodic benefit cost related to our defined benefit plans were as follows (in millions):

	Pension Plans			Other Postretirement Benefit Plans		
	Year Ended December 31,			Year Ended December 31,		
	2023	2022	2021	2023	2022	2021
Service cost	$ 111	$ 152	$ 161	$ 4	$ 6	$ 7
Interest cost	121	85	73	13	8	7
Expected return on plan assets	(202)	(192)	(192)	—	—	—
Amortization of:						
Net actuarial (gain) loss	(6)	52	81	(6)	—	(1)
Prior service credit	(18)	(18)	(18)	(4)	(4)	(7)
Settlement loss	2	61	8	—	—	—
Net periodic benefit cost	$ 8	$ 140	$ 113	$ 7	$ 10	$ 6

The components of net periodic benefit cost other than the service cost component (i.e., the non-service cost components) are included in “other income, net.”

Amortization of the net actuarial (gain) loss shown in the preceding table was based on the straight-line amortization of the excess of the unrecognized (gain) loss over 10 percent of the greater of the projected benefit obligation or market-related value of plan assets (smoothed asset value) over the average remaining service period of active employees expected to receive benefits under each respective plan. Amortization of prior service credit shown in the preceding table was based on a straight-line amortization of the credit over the average remaining service period of employees expected to receive benefits under each respective plan.

Pre-tax amounts recognized in other comprehensive income (loss) were as follows (in millions):

	Pension Plans			Other Postretirement Benefit Plans		
	Year Ended December 31,			Year Ended December 31,		
	2023	2022	2021	2023	2022	2021
Net gain (loss) arising during the year:						
Net actuarial gain (loss)	$ 87	$ 158	$ 308	$ (10)	$ 86	$ 9
Prior service cost	(19)	—	(4)	—	—	—
Net (gain) loss reclassified into income:						
Net actuarial (gain) loss	(6)	53	81	(6)	(1)	(1)
Prior service credit	(18)	(18)	(18)	(4)	(4)	(7)
Settlement loss	2	61	8	—	—	—
Effect of exchange rates	4	—	2	—	—	—
Total changes in other comprehensive income (loss)	$ 50	$ 254	$ 377	$ (20)	$ 81	$ 1

The pre-tax amounts in accumulated other comprehensive loss that have not yet been recognized as components of net periodic benefit cost were as follows (in millions):

	Pension Plans		Other Postretirement Benefit Plans	
	December 31,		December 31,	
	2023	2022	2023	2022
Net actuarial (gain) loss	$ 256	$ 342	$ (73)	$ (89)
Prior service cost (credit)	11	(25)	2	(2)
Total	$ 267	$ 317	$ (71)	$ (91)

The weighted-average assumptions used to determine the benefit obligations were as follows:

	Pension Plans		Other Postretirement Benefit Plans	
	December 31,		December 31,	
	2023	2022	2023	2022
Discount rate	5.01 %	5.19 %	5.01 %	5.20 %
Rate of compensation increase	3.83 %	3.76 %	n/a	n/a
Interest crediting rate for cash balance plans	3.59 %	3.76 %	n/a	n/a

The discount rate assumption used to determine the benefit obligations as of December 31, 2023 and 2022 for the majority of our pension plans and other postretirement benefit plans was based on the Aon AA Only Above Median yield curve and considered the timing of the projected cash outflows under our plans. This curve was designed by Aon, our actuarial consultant, to provide a means for plan sponsors to

value the liabilities of their pension plans or postretirement benefit plans. To develop this curve, a hypothetical double-A yield curve represented by a series of annualized individual discount rates with maturities from six months to 99 years is constructed. Each bond issue underlying the double-A yield curve is required to have an average rating of double-A when averaging all available ratings by Moody's Investors Service, Standard & Poor's Ratings Services, and Fitch Ratings. Only the bonds representing the 50 percent highest yielding issuances of this double-A yield curve are then included in the Aon AA Only Above Median yield curve.

We based our discount rate assumption on the Aon AA Only Above Median yield curve because we believe it is representative of the types of bonds we would use to settle our pension and other postretirement benefit plan liabilities as of those dates. We believe that the yields associated with the bonds used to develop this yield curve reflect the current level of interest rates.

The weighted-average assumptions used to determine the net periodic benefit cost were as follows:

	Pension Plans			Other Postretirement Benefit Plans		
	Year Ended December 31,			Year Ended December 31,		
	2023	2022	2021	2023	2022	2021
Discount rate	5.19 %	2.94 %	2.62 %	5.20 %	2.96 %	2.64 %
Expected long-term rate of return on plan assets	7.31 %	6.71 %	7.09 %	n/a	n/a	n/a
Rate of compensation increase	3.76 %	3.70 %	3.66 %	n/a	n/a	n/a
Interest crediting rate for cash balance plans	3.76 %	3.03 %	3.03 %	n/a	n/a	n/a

The assumed health care cost trend rates were as follows:

	December 31,	
	2023	2022
Health care cost trend rate assumed for the next year	6.68 %	6.78 %
Rate to which the cost trend rate was assumed to decline (the ultimate trend rate)	4.97 %	4.97 %
Year that the rate reaches the ultimate trend rate	2032	2032

The following table presents the fair values of the assets of our pension plans (in millions) as of December 31, 2023 and 2022 by level of the fair value hierarchy. Assets categorized in Level 1 of the hierarchy are measured at fair value using a market approach based on unadjusted quoted prices from national securities exchanges. Assets categorized in Level 2 of the hierarchy are measured at net asset value in a market that is not active or inputs other than quoted prices that are observable. No assets were categorized in Level 3 of the hierarchy as of December 31, 2023 and 2022. As previously noted, we do not fund or fully fund U.S. nonqualified and certain foreign pension plans that are not subject to funding requirements, and we do not fund our other postretirement benefit plans.

	2023			2022		
	Level 1	Level 2	Total	Level 1	Level 2	Total
Equity securities (a)	$ 585	$ —	$ 585	$ 528	$ —	$ 528
Mutual funds	223	—	223	191	—	191
Corporate debt instruments (a)	—	251	251	—	253	253
Government securities	86	186	272	69	127	196
Common collective trusts (b)	—	1,078	1,078	—	940	940
Pooled separate accounts (c)	—	323	323	—	279	279
Private fund	—	46	46	—	43	43
Insurance contract	—	13	13	—	14	14
Interest and dividends receivable	6	—	6	5	—	5
Cash and cash equivalents	48	—	48	38	3	41
Securities transactions payable, net	(10)	—	(10)	(5)	—	(5)
Total pension plan assets	$ 938	$ 1,897	$ 2,835	$ 826	$ 1,659	$ 2,485

(a) This class of securities includes domestic and international securities, which are held in a wide range of industry sectors.
(b) This class primarily includes investments in approximately 80 percent equities and 20 percent bonds as of December 31, 2023 and 2022.
(c) This class primarily includes investments in approximately 45 percent equities and 55 percent bonds as of December 31, 2023. As of December 31, 2022, this class primarily included investments in approximately 55 percent equities and 45 percent bonds.

The investment policies and strategies for the assets of our pension plans incorporate a well-diversified approach that is expected to earn long-term returns from capital appreciation and a growing stream of current income. This approach recognizes that assets are exposed to risk and the market value of the pension plans' assets may fluctuate from year to year. Risk tolerance is determined based on our financial ability to withstand risk within the investment program and the willingness to accept return volatility. In line with the investment return objective and risk parameters, the pension plans' mix of assets includes a diversified portfolio of equity and fixed-income investments. Equity securities include international securities and a blend of U.S. growth and value stocks of various sizes of capitalization. Fixed income securities include bonds and notes issued by the U.S. government and its agencies, corporate bonds, and mortgage-backed securities. The aggregate asset allocation is reviewed on an annual basis. As of December 31, 2023, the target allocations for plan assets under our primary pension plan are 70 percent equity securities and 30 percent fixed income investments.

The expected long-term rate of return on plan assets is based on a forward-looking expected asset return model. This model derives an expected rate of return based on the target asset allocation of a plan's assets. The underlying assumptions regarding expected rates of return for each asset class reflect Aon's best expectations for these asset classes. The model reflects the positive effect of periodic rebalancing among diversified asset classes. We select an expected asset return that is supported by this model.

Defined Contribution Plans

We have defined contribution plans that cover most of our employees. Our contributions to these plans are based on employees' compensation and/or a partial match of employee contributions to the plans. Our contributions to these defined contribution plans were $87 million, $83 million, and $82 million for the years ended December 31, 2023, 2022, and 2021, respectively.

14. STOCK-BASED COMPENSATION

Overview

Under our 2020 Omnibus Stock Incentive Plan (the 2020 OSIP), various stock and stock-based awards may be granted to employees, non-employee directors, and third-party service providers. The 2020 OSIP permits grants of (i) restricted stock and restricted stock units; (ii) stock options (including incentive and non-qualified stock options); (iii) stock appreciation rights; (iv) performance awards of cash, stock, or other securities; and (v) other stock-based awards (e.g., stock unit awards). Awards under the 2020 OSIP are granted at the discretion of our Board's Human Resources and Compensation Committee (and approved by the independent directors in the case of our Chief Executive Officer and Executive Chairman) and may be subject to vesting or performance periods, performance goals, or other restrictions. The 2020 OSIP was approved by our stockholders on April 30, 2020, and as of such date, any shares of common stock that were not subject to outstanding awards and were available to be awarded under the 2011 Omnibus Stock Incentive Plan (the 2011 OSIP) became available for issuance under the 2020 OSIP and any shares of common stock subject to awards under the 2011 OSIP outstanding as of April 30, 2020, that are subsequently forfeited, terminated, canceled or rescinded, settled in cash in lieu of common stock, exchanged for awards not involving common stock, or expire unexercised also become available for issuance under the 2020 OSIP. No future awards will be made under the 2011 OSIP. As of December 31, 2023, 12,036,501 shares of our common stock remained available to be awarded under the 2020 OSIP.

The following table reflects activity related to our stock-based compensation arrangements (in millions):

	Year Ended December 31,		
	2023	2022	2021
Stock-based compensation expense:			
Restricted stock	$ 66	$ 67	$ 65
Performance awards	38	32	21
Stock options and other awards	3	4	2
Total stock-based compensation expense	$ 107	$ 103	$ 88
Tax benefit recognized on stock-based compensation expense	$ 14	$ 15	$ 13
Tax benefit realized for tax deductions resulting from exercises and vestings	2	2	1

Restricted Stock

Restricted stock is our most significant stock-based compensation arrangement. Employees, non-employee directors, and third-party service providers are eligible to receive restricted stock, which vests in accordance with individual written agreements between the participants and us, usually in equal annual installments over a period of three years beginning one year after the date of grant. The fair value of each share of restricted stock is equal to the market price of our common stock. A summary of the status of our restricted stock awards is presented in the following table:

	Number of Shares	Weighted-Average Grant-Date Fair Value Per Share
Nonvested shares as of January 1, 2023	1,182,177	$ 87.36
Granted	518,092	125.57
Vested	(786,920)	84.12
Forfeited	(10,503)	95.04
Nonvested shares as of December 31, 2023	902,846	112.01

As of December 31, 2023, there was $52 million of unrecognized compensation cost related to outstanding unvested restricted stock awards, which is expected to be recognized over a weighted-average period of approximately two years.

The following table reflects activity related to our restricted stock:

	Year Ended December 31,		
	2023	2022	2021
Weighted-average grant-date fair value per share of restricted stock granted	$ 125.57	$ 112.88	$ 77.71
Fair value of restricted stock vested (in millions)	99	99	59

15. INCOME TAXES

Income Statement Components

Income before income tax expense was as follows (in millions):

	Year Ended December 31,		
	2023	2022	2021
U.S. operations	$ 9,335	$ 11,716	$ 1,023
Foreign operations	2,433	3,591	520
Income before income tax expense	$ 11,768	$ 15,307	$ 1,543

Statutory income tax rates applicable to the countries in which we operate were as follows:

	Year Ended December 31,		
	2023	2022	2021
U.S.	21 %	21 %	21 %
Canada	15 %	15 %	15 %
U.K. (a)	25 %	19 %	19 %
Ireland	13 %	13 %	13 %
Peru	30 %	30 %	30 %
Mexico	30 %	30 %	30 %

(a) Statutory income tax rate was increased to 25 percent effective April 1, 2023.

The following is a reconciliation of income tax expense computed by applying statutory income tax rates to actual income tax expense (dollars in millions):

	U.S.		Foreign		Total	
	Amount	Percent	Amount	Percent	Amount	Percent
Year ended December 31, 2023						
Income tax expense at statutory rates	$ 1,960	21.0 %	$ 449	18.5 %	$ 2,409	20.5 %
U.S. state and Canadian provincial tax expense, net of federal income tax effect	114	1.2 %	161	6.6 %	275	2.3 %
Permanent differences	(87)	(0.9) %	(18)	(0.7) %	(105)	(0.9) %
GILTI tax	167	1.8 %	—	—	167	1.4 %
Foreign tax credits	(149)	(1.6) %	—	—	(149)	(1.3) %
Repatriation withholding tax	45	0.5 %	—	—	45	0.4 %
Tax effects of income associated with noncontrolling interests	(84)	(0.9) %	30	1.2 %	(54)	(0.4) %
Other, net	8	— %	23	0.9 %	31	0.3 %
Income tax expense	$ 1,974	21.1 %	$ 645	26.5 %	$ 2,619	22.3 %

See notes on page 119.

	U.S.		Foreign		Total	
	Amount	Percent	Amount	Percent	Amount	Percent
Year ended December 31, 2022						
Income tax expense at statutory rates	$ 2,460	21.0 %	$ 611	17.0 %	$ 3,071	20.1 %
U.S. state and Canadian provincial tax expense, net of federal income tax effect	182	1.6 %	255	7.1 %	437	2.8 %
Permanent differences	(61)	(0.5)%	(16)	(0.5) %	(77)	(0.5) %
GILTI tax	413	3.5 %	—	—	413	2.7 %
Foreign tax credits	(396)	(3.4)%	—	—	(396)	(2.6) %
Repatriation withholding tax	51	0.4 %	—	—	51	0.3 %
Tax effects of income associated with noncontrolling interests	(78)	(0.7)%	25	0.7 %	(53)	(0.3) %
Other, net	(27)	(0.2)%	9	0.3 %	(18)	(0.1) %
Income tax expense	$ 2,544	21.7 %	$ 884	24.6 %	$ 3,428	22.4 %
Year ended December 31, 2021						
Income tax expense at statutory rates	$ 215	21.0 %	$ 73	14.0 %	$ 288	18.7 %
U.S. state and Canadian provincial tax expense, net of federal income tax effect	16	1.6 %	53	10.2 %	69	4.5 %
Permanent differences	(34)	(3.3)%	(14)	(2.7) %	(48)	(3.1) %
Changes in tax law (a)	(10)	(1.0)%	74	14.2 %	64	4.1 %
CARES Act (b)	(56)	(5.5)%	—	—	(56)	(3.6) %
GILTI tax	125	12.2 %	—	—	125	8.1 %
Foreign tax credits	(103)	(10.1)%	—	—	(103)	(6.7) %
Settlements	(22)	(2.1)%	—	—	(22)	(1.4) %
Tax effects of income associated with noncontrolling interests	(74)	(7.2)%	30	5.8 %	(44)	(2.9) %
Other, net	(7)	(0.7)%	(11)	(2.1) %	(18)	(1.2) %
Income tax expense	$ 50	4.9 %	$ 205	39.4 %	$ 255	16.5 %

(a) During the three months ended June 30, 2021, certain statutory income tax rate changes (primarily an increase in the U.K. rate from 19 percent to 25 percent effective in 2023) were enacted that resulted in the remeasurement of our deferred tax liabilities and related deferred income tax expense.

(b) Upon filing our superseding 2020 federal income tax return in the fourth quarter of 2021, we recorded an additional tax benefit during the year ended December 31, 2021 related to the additional 2020 tax net operating loss (NOL) carryback to 2015, as permitted by the Coronavirus Aid, Relief and Economic Security (CARES) Act enacted on March 27, 2020.

Components of income tax expense were as follows (in millions):

	U.S.	Foreign	Total
Year ended December 31, 2023			
Current:			
Country	$ 1,804	$ 415	$ 2,219
U.S. state / Canadian provincial	157	140	297
Total current	1,961	555	2,516
Deferred:			
Country	25	69	94
U.S. state / Canadian provincial	(12)	21	9
Total deferred	13	90	103
Income tax expense	$ 1,974	$ 645	$ 2,619
Year ended December 31, 2022			
Current:			
Country	$ 2,147	$ 766	$ 2,913
U.S. state / Canadian provincial	153	312	465
Total current	2,300	1,078	3,378
Deferred:			
Country	164	(138)	26
U.S. state / Canadian provincial	80	(56)	24
Total deferred	244	(194)	50
Income tax expense	$ 2,544	$ 884	$ 3,428
Year ended December 31, 2021			
Current:			
Country	$ 68	$ 215	$ 283
U.S. state / Canadian provincial	1	97	98
Total current	69	312	381
Deferred:			
Country	5	(63)	(58)
U.S. state / Canadian provincial	(24)	(44)	(68)
Total deferred	(19)	(107)	(126)
Income tax expense	$ 50	$ 205	$ 255

Income Taxes Paid (Refunded)

Income taxes paid to (received from) U.S. and foreign taxing authorities were as follows (in millions):

	Year Ended December 31,		
	2023	2022	2021
U.S.	$ 2,158	$ 2,396	$ (878) (a)
Foreign	1,336	892	36
Income taxes paid (refunded), net	$ 3,494	$ 3,288	$ (842)

(a) This amount includes a refund of $ 962 million that we received related to our U.S. federal income tax return for 2020.

Deferred Income Tax Assets and Liabilities

The tax effects of significant temporary differences representing deferred income tax assets and liabilities were as follows (in millions):

	December 31,	
	2023	2022
Deferred income tax assets:		
Tax credit carryforwards	$ 809	$ 660
NOLs	710	642
Inventories	237	326
Compensation and employee benefit liabilities	32	44
Environmental liabilities	59	57
Finance lease obligations	314	309
Operating lease liabilities	519	512
Other	130	186
Total deferred income tax assets	2,810	2,736
Valuation allowance	(1,383)	(1,234)
Net deferred income tax assets	1,427	1,502
Deferred income tax liabilities:		
Property, plant, and equipment	5,121	5,022
Deferred turnaround costs	399	369
Operating lease ROU assets	546	507
Inventories	106	234
Investments	423	431
Other	181	156
Total deferred income tax liabilities	6,776	6,719
Net deferred income tax liabilities	$ 5,349	$ 5,217

We had the following income tax credit and loss carryforwards as of December 31, 2023 (in millions):

	Amount	Expiration
U.S. state income tax credits (gross amount)	$ 76	2024 through 2033
U.S. state income tax credits (gross amount)	2	Unlimited
U.S. foreign tax credits	748	2027 through 2033
U.S. state income tax NOLs (gross amount)	12,164	2024 through 2040
Foreign NOLs (gross amount)	329	Unlimited

We have recorded a valuation allowance as of December 31, 2023and 2022 due to uncertainties related to our ability to utilize some of our deferred income tax assets associated with our U.S. foreign tax credits, certain U.S. state income tax credits, certain foreign deferred tax assets, and certain NOLs before they expire. The valuation allowance is based on our estimates of future taxable income in the various jurisdictions in which we operate and the period over which deferred income tax assets will be recoverable. The valuation allowance increased by $149 million in 2023 primarily due to the generation of foreign tax credits that cannot be realized.

Unrecognized Tax Benefits

Changes in Unrecognized Tax Benefits

The following is a reconciliation of the changes in unrecognized tax benefits, excluding related interest and penalties (in millions):

	Year Ended December 31,		
	2023	2022	2021
Balance as of beginning of year	$ 284	$ 816	$ 847
Additions for tax positions related to the current year	18	27	3
Additions for tax positions related to prior years	4	19	13
Reductions for tax positions related to prior years	(73)	(573)	(25)
Reductions for tax positions related to the lapse of applicable statute of limitations	(9)	(5)	—
Settlements	(38)	—	(22)
Balance as of end of year	$ 186	$ 284	$ 816

As of December 31, 2023 and 2022, there was $126 million and $190 million, respectively, of unrecognized tax benefits that if recognized would reduce our annual effective tax rate.

Interest and penalties incurred during the years ended December 31, 2023, 2022, and 2021 were not material. Accrued interest and penalties as of December 31, 2023 and 2022 were not material.

Although reasonably possible, we do not anticipate that any of our tax audits will be resolved during the next 12 months that would result in a reduction in our liability for unrecognized tax benefits either due to our tax positions being sustained or due to our agreement to their disallowance. Should any reductions occur, we do not expect that they would have a material impact on our financial statements because such reductions would not materially affect our annual effective tax rate.

Tax Returns Under Audit

U.S. Federal

In 2023, we settled the audits related to our U.S. federal income tax returns for 2012 through 2015, with the exception of one issue regarding the timing of deductibility of certain costs at our refineries. We intend to file formal claims for refund with the Internal Revenue Service (IRS) for this disagreed-upon issue. The settlement related to these audits resulted in a favorable reduction in our unrecognized tax benefits.

As of December 31, 2023, our U.S. federal income tax returns for 2017 through 2020 were under audit by the IRS. We continue to work with the IRS to resolve these audits and we believe that they will be resolved for amounts consistent with our recorded amounts of unrecognized tax benefits associated with these audits.

U.S. State

As of December 31, 2023, our California tax returns for 2011 through 2019 were under audit by the state of California. We do not expect the ultimate disposition of these audits will result in a material change to our financial condition, results of operations, and liquidity. We believe these audits will be resolved for amounts consistent with our recorded amounts for unrecognized tax benefits associated with these audits.

Foreign

As of December 31, 2023, certain of our Canadian subsidiaries' federal tax returns for 2013 through 2015 and 2017 through 2020 were under audit by the Canada Revenue Agency and our Quebec provincial tax returns for 2013 through 2015 and 2017 through 2020 were under audit by Revenue Quebec. As of December 31, 2023, the 2020 tax return for one of our Mexican subsidiaries was under audit by Servicio de Administración Tributaria, and we are protesting proposed adjustments for this tax return. We do not expect the ultimate disposition of these audits or inquiries will result in a material change to our financial condition, results of operations, and liquidity.

Other Disclosures

Undistributed Earnings of Foreign Subsidiaries

As of December 31, 2023, the cumulative undistributed earnings of our foreign subsidiaries that is considered permanently reinvested in the relevant foreign countries were $7.1 billion. This amount excludes $1.4 billion of earnings that are no longer considered permanently reinvested. We are able to distribute cash via a dividend from our foreign subsidiaries with a full dividend received deduction in the U.S. However, there is a cost to repatriate the undistributed earnings of certain of our foreign subsidiaries to us, including, but not limited to, withholding taxes imposed by certain foreign jurisdictions, U.S. state income taxes, and U.S. federal income tax on foreign exchange gains. We have accrued $45 million of withholding and other taxes on the $1.4 billion of earnings previously noted, but it is not practicable to estimate the amount of additional tax that would be payable on the undistributed earnings that are considered permanently reinvested.

Repatriation Tax Liability

Our repatriation tax liability relates to our recognition of a one-time transition tax on the deemed repatriation of previously undistributed accumulated earnings and profits of our foreign subsidiaries and is included in other long-term liabilities (see Note 8). This transition tax will be remitted to the IRS over

the eight-year period provided in the Internal Revenue Code of 1986, as amended, with annual installments through 2025.

16. EARNINGS PER COMMON SHARE

Earnings per common share was computed as follows (dollars and shares in millions, except per share amounts):

	Year Ended December 31,		
	2023	2022	2021
Earnings per common share:			
Net income attributable to Valero stockholders	$ 8,835	$ 11,528	$ 930
Less: Income allocated to participating securities	27	43	6
Net income available to common stockholders	$ 8,808	$ 11,485	$ 924
Weighted-average common shares outstanding	353	395	407
Earnings per common share	$ 24.93	$ 29.05	$ 2.27
Earnings per common share – assuming dilution:			
Net income attributable to Valero stockholders	$ 8,835	$ 11,528	$ 930
Less: Income allocated to participating securities	27	43	6
Net income available to common stockholders	$ 8,808	$ 11,485	$ 924
Weighted-average common shares outstanding	353	395	407
Effect of dilutive securities	—	1	—
Weighted-average common shares outstanding – assuming dilution	353	396	407
Earnings per common share – assuming dilution	$ 24.92	$ 29.04	$ 2.27

Participating securities include restricted stock and performance awards granted under our 2020 OSIP or our 2011 OSIP. Dilutive securities include participating securities as well as outstanding stock options. For the years ended December 31, 2023, 2022, and 2021, we computed earnings per common share – assuming dilution using the two-class method for all dilutive securities.

17. REVENUES AND SEGMENT INFORMATION

Revenue from Contracts with Customers

Disaggregation of Revenue

Revenue is presented in the table below under "*Segment Information*" disaggregated by product because this is the level of disaggregation that management has determined to be beneficial to users of our financial statements.

Contract Balances

Contract balances were as follows (in millions):

	December 31,	
	2023	2022
Receivables from contracts with customers (see Note 3)	$ 7,209	$ 7,189
Contract liabilities, included in accrued expenses (see Note 8)	40	129

During the years ended December 31, 2023, 2022, and 2021, we recognized as revenue $127 million, $76 million, and $47 million, respectively, that was included in contract liabilities as of December 31, 2022, 2021, and 2020, respectively.

Remaining Performance Obligations

We have spot and term contracts with customers, the majority of which are spot contracts with no remaining performance obligations. We do not disclose remaining performance obligations for contracts that have terms of one year or less. The transaction price for our remaining term contracts includes a fixed component and variable consideration (i.e., a commodity price), both of which are allocated entirely to a wholly unsatisfied promise to transfer a distinct good that forms part of a single performance obligation. The fixed component is not material and the variable consideration is highly uncertain. Therefore, as of December 31, 2023, we have not disclosed the aggregate amount of the transaction price allocated to our remaining performance obligations.

Segment Information

We have three reportable segments—Refining, Renewable Diesel, and Ethanol. Each segment is a strategic business unit that offers different products and services by employing unique technologies and marketing strategies and whose operations and operating performance are managed and evaluated separately. Operating performance is measured based on the operating income generated by the segment, which includes revenues and expenses that are directly attributable to the management of the respective segment. Intersegment sales are generally derived from transactions made at prevailing market rates. The following is a description of each segment's business operations.

- The *Refining segment* includes the operations of our petroleum refineries, the associated activities to market our refined petroleum products, and the logistics assets that support our refining operations. The principal products manufactured by our refineries and sold by this segment include gasolines and blendstocks, distillates, and other products.

- The *Renewable Diesel segment* represents the operations of DGD, a consolidated joint venture as discussed in Note 12, and the associated activities to market renewable diesel and renewable

naphtha. The principal products manufactured by DGD and sold by this segment are renewable diesel and renewable naphtha. This segment sells some renewable diesel to the Refining segment, which is then sold to that segment's customers.

- The *Ethanol segment* includes the operations of our ethanol plants and the associated activities to market our ethanol and co-products. The principal products manufactured by our ethanol plants are ethanol and distillers grains. This segment sells some ethanol to the Refining segment for blending into gasoline, which is sold to that segment's customers as a finished gasoline product.

Operations that are not included in any of the reportable segments are included in the corporate category.

The following tables reflect information about our operating income, including a reconciliation to our consolidated income before income tax expense, and total expenditures for long-lived assets by reportable segment (in millions):

	Refining	Renewable Diesel	Ethanol	Corporate and Eliminations	Total
Year ended December 31, 2023					
Revenues:					
Revenues from external customers	$ 136,470	$ 3,823	$ 4,473	$ —	$ 144,766
Intersegment revenues	18	3,168	1,086	(4,272)	—
Total revenues	136,488	6,991	5,559	(4,272)	144,766
Cost of sales:					
Cost of materials and other (a)	117,401	5,550	4,395	(4,259)	123,087
Operating expenses (excluding depreciation and amortization expense reflected below)	5,208	358	515	8	6,089
Depreciation and amortization expense	2,351	231	80	(4)	2,658
Total cost of sales	124,960	6,139	4,990	(4,255)	131,834
Other operating expenses	17	—	16	—	33
General and administrative expenses (excluding depreciation and amortization expense reflected below)	—	—	—	998	998
Depreciation and amortization expense	—	—	—	43	43
Operating income by segment	$ 11,511	$ 852	$ 553	$ (1,058)	11,858
Other income, net					502
Interest and debt expense, net of capitalized interest					(592)
Income before income tax expense					$ 11,768
Total expenditures for long-lived assets (b)	$ 1,488	$ 294	$ 43	$ 91	$ 1,916

See notes on page 128.

	Refining	Renewable Diesel	Ethanol	Corporate and Eliminations	Total
Year ended December 31, 2022					
Revenues:					
Revenues from external customers	$ 168,154	$ 3,483	$ 4,746	$ —	$ 176,383
Intersegment revenues	56	2,018	740	(2,814)	—
Total revenues	168,210	5,501	5,486	(2,814)	176,383
Cost of sales:					
Cost of materials and other (a)	144,588	4,350	4,628	(2,796)	150,770
Operating expenses (excluding depreciation and amortization expense reflected below)	5,509	255	625	—	6,389
Depreciation and amortization expense	2,247	122	59	—	2,428
Total cost of sales	152,344	4,727	5,312	(2,796)	159,587
Asset impairment loss	—	—	61	—	61
Other operating expenses	63	—	3	—	66
General and administrative expenses (excluding depreciation and amortization expense reflected below)	—	—	—	934	934
Depreciation and amortization expense	—	—	—	45	45
Operating income by segment	$ 15,803	$ 774	$ 110	$ (997)	15,690
Other income, net					179
Interest and debt expense, net of capitalized interest					(562)
Income before income tax expense					$ 15,307
Total expenditures for long-lived assets (b)	$ 1,763	$ 879	$ 22	$ 73	$ 2,737

See notes on page 128.

	Refining	Renewable Diesel	Ethanol	Corporate and Eliminations	Total
Year ended December 31, 2021					
Revenues:					
Revenues from external customers	$ 106,947	$ 1,874	$ 5,156	$ —	$ 113,977
Intersegment revenues	14	468	433	(915)	—
Total revenues	106,961	2,342	5,589	(915)	113,977
Cost of sales:					
Cost of materials and other (a)	97,759	1,438	4,428	(911)	102,714
Operating expenses (excluding depreciation and amortization expense reflected below)	5,088	134	556	(2)	5,776
Depreciation and amortization expense	2,169	58	131	—	2,358
Total cost of sales	105,016	1,630	5,115	(913)	110,848
Other operating expenses	83	3	1	—	87
General and administrative expenses (excluding depreciation and amortization expense reflected below)	—	—	—	865	865
Depreciation and amortization expense	—	—	—	47	47
Operating income by segment	$ 1,862	$ 709	$ 473	$ (914)	2,130
Other income, net					16
Interest and debt expense, net of capitalized interest					(603)
Income before income tax expense					$ 1,543
Total expenditures for long-lived assets (b)	$ 1,374	$ 1,049	$ 18	$ 17	$ 2,458

(a) Cost of materials and other for our Renewable Diesel segment is net of the blender's tax credit on qualified fuel mixtures of $ 1.2 billion, $761 million, and $371 million for the years ended December 31, 2023, 2022, and 2021, respectively.

(b) Total expenditures for long-lived assets includes amounts related to capital expenditures; deferred turnaround and catalyst costs; and property, plant, and equipment for acquisitions.

The following table provides a disaggregation of revenues from external customers for our principal products by reportable segment (in millions):

	Year Ended December 31,		
	2023	2022	2021
Refining:			
Gasolines and blendstocks	$ 61,538	$ 70,496	$ 49,534
Distillates	63,664	82,521	45,939
Other product revenues	11,268	15,137	11,474
Total Refining revenues	136,470	168,154	106,947
Renewable Diesel:			
Renewable diesel	3,665	3,333	1,874
Renewable naphtha	158	150	—
Total Renewable Diesel revenues	3,823	3,483	1,874
Ethanol:			
Ethanol	3,300	3,653	4,122
Distillers grains	1,173	1,093	1,034
Total Ethanol revenues	4,473	4,746	5,156
Revenues	$ 144,766	$ 176,383	$ 113,977

Revenues by geographic area are shown in the following table (in millions). The geographic area is based on location of customer and no customer accounted for 10 percent or more of our revenues.

	Year Ended December 31,		
	2023	2022	2021
U.S.	$ 104,208	$ 126,722	$ 82,940
Canada	10,107	11,743	6,597
U.K. and Ireland	16,148	17,822	13,307
Mexico and Peru	6,438	8,396	3,855
Other countries	7,865	11,700	7,278
Revenues	$ 144,766	$ 176,383	$ 113,977

Long-lived assets include “property, plant, and equipment. net” and certain long-lived assets included in “deferred charges and other assets, net.” Long-lived assets by geographic area consisted of the following (in millions):

	December 31,	
	2023	2022
U.S.	$ 28,868	$ 29,378
Canada	1,598	1,634
U.K. and Ireland	1,346	1,301
Mexico and Peru	837	860
Total long-lived assets	$ 32,649	$ 33,173

Total assets by reportable segment were as follows (in millions):

	December 31,	
	2023	2022
Refining	$ 49,031	$ 48,484
Renewable Diesel	5,790	5,217
Ethanol	1,549	1,551
Corporate and eliminations	6,686	5,730
Total assets	$ 63,056	$ 60,982

As of December 31, 2023 and 2022, our investments in nonconsolidated joint ventures accounted for under the equity method were $713 million and $724 million, respectively, all of which related to the Refining segment and are reflected in “deferred charges and other assets, net” as presented in Note 7.

18. SUPPLEMENTAL CASH FLOW INFORMATION

In order to determine net cash provided by operating activities, net income is adjusted by, among other things, changes in current assets and current liabilities as follows (in millions):

	Year Ended December 31,		
	2023	2022	2021
Increase in current assets:			
Receivables, net	$ (387)	$ (1,619)	$ (4,382)
Inventories	(684)	(672)	(253)
Prepaid expenses and other	(34)	(180)	(22)
Increase (decrease) in current liabilities:			
Accounts payable	(169)	521	6,301
Accrued expenses	(50)	(5)	253
Taxes other than income taxes payable	(226)	98	104
Income taxes payable	(776)	231	224
Changes in current assets and current liabilities	$ (2,326)	$ (1,626)	$ 2,225

Changes in current assets and current liabilities for the year ended December 31, 2023 were primarily due to the following:

- The increase in receivables was primarily due to an increase in refined petroleum product sales volumes in December 2023 compared to December 2022, partially offset by a decrease in related prices;

- The increase in inventories was primarily due to an increase in inventory volumes in December 2023 compared to December 2022;

- The decrease in accounts payable was due to a decrease in crude oil and other feedstock prices in December 2023 compared to December 2022, partially offset by an increase in related volumes purchased; and

- The decrease in income taxes payable was primarily due to income tax payments made during the year ended December 31, 2023.

Changes in current assets and current liabilities for the year ended December 31, 2022 were primarily due to the following:

- The increase in receivables was primarily due to an increase in refined petroleum product prices in December 2022 compared to December 2021;

- The increase in inventories was primarily due to an increase in inventory volumes associated with the DGD Port Arthur Plant, which commenced operations in the fourth quarter of 2022; and

- The increase in accounts payable was primarily due to an increase in feedstock volumes purchased for the start-up of the DGD Port Arthur Plant in December 2022 compared to December 2021.

Changes in current assets and current liabilities for the year ended December 31, 2021 were primarily due to the following:

- The increase in receivables was primarily due to an increase in refined petroleum product prices combined with an increase in sales volumes in December 2021 compared to December 2020, partially offset by a decrease in income taxes receivable associated with the receipt of a $962 million refund related to our U.S. federal income tax return for 2020; and

- The increase in accounts payable was primarily due to an increase in crude oil and other feedstock prices combined with an increase in related volumes purchased in December 2021 compared to December 2020.

Cash flows related to interest and income taxes were as follows (in millions):

	Year Ended December 31,		
	2023	2022	2021
Interest paid in excess of amount capitalized, including interest on finance leases	$ 562	$ 570	$ 598
Income taxes paid (refunded), net (see Note 15)	3,494	3,288	(842)

Supplemental cash flow information related to our operating and finance leases was as follows (in millions):

	Year Ended December 31,					
	2023		2022		2021	
	Operating Leases	Finance Leases	Operating Leases	Finance Leases	Operating Leases	Finance Leases
Cash paid for amounts included in the measurement of lease liabilities:						
Operating cash flows	$ 428	$ 107	$ 395	$ 83	$ 397	$ 72
Investing cash flows	—	—	—	—	1	—
Financing cash flows	—	250	—	180	—	135
Changes in lease balances resulting from new and modified leases (a)	396	157	178	660	451	378

(a) Noncash activity for the year ended December 31, 2022 primarily included approximately $ 500 million for a finance lease ROU asset and related liability recognized in connection with the completion of the DGD Port Arthur Plant described in Note 5.

There were no significant noncash investing and financing activities during the years ended December 31, 2023, 2022, and 2021, except as noted in the table above.

19. FAIR VALUE MEASUREMENTS

General

GAAP requires or permits certain assets and liabilities to be measured at fair value on a recurring or nonrecurring basis in our balance sheets, and those assets and liabilities are presented below under "*Recurring Fair Value Measurements*" and "*Nonrecurring Fair Value Measurements*." Assets and liabilities measured at fair value on a recurring basis, such as derivative financial instruments, are measured at fair value at the end of each reporting period. Assets and liabilities measured at fair value on a nonrecurring basis, such as the impairment of property, plant and equipment, are measured at fair value in particular circumstances.

GAAP also requires the disclosure of the fair values of financial instruments when an option to elect fair value accounting has been provided, but such election has not been made. A debt obligation is an example of such a financial instrument. The disclosure of the fair values of financial instruments not recognized at fair value in our balance sheets is presented below under "*Financial Instruments*."

GAAP provides a framework for measuring fair value and establishes a three-level fair value hierarchy that prioritizes inputs to valuation techniques based on the degree to which objective prices in external active markets are available to measure fair value. The following is a description of each of the levels of the fair value hierarchy.

- *Level 1* – Observable inputs, such as unadjusted quoted prices in active markets for identical assets or liabilities.

- *Level 2* – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.

- *Level 3* – Unobservable inputs for the asset or liability. Unobservable inputs reflect our own assumptions about what market participants would use to price the asset or liability. The inputs are developed based on the best information available in the circumstances, which might include occasional market quotes or sales of similar instruments or our own financial data such as internally developed pricing models, discounted cash flow methodologies, as well as instruments for which the fair value determination requires significant judgment.

Recurring Fair Value Measurements

The following tables present information (in millions) about our assets and liabilities recognized at their fair values in our balance sheets categorized according to the fair value hierarchy of the inputs utilized by us to determine the fair values as of December 31, 2023 and 2022.

We have elected to offset the fair value amounts recognized for multiple similar derivative contracts executed with the same counterparty, including any related cash collateral assets or obligations as shown below; however, fair value amounts by hierarchy level are presented in the following tables on a gross basis. We have no derivative contracts that are subject to master netting arrangements that are reflected gross in our balance sheets.

	December 31, 2023							
	Fair Value Hierarchy			Total Gross Fair Value	Effect of Counter-party Netting	Effect of Cash Collateral Netting	Net Carrying Value on Balance Sheet	Cash Collateral Paid or Received Not Offset
	Level 1	Level 2	Level 3					
Assets								
Commodity derivative contracts	$ 803	$ —	$ —	$ 803	$ (642)	$ (66)	$ 95	$ —
Investments of certain benefit plans	76	—	4	80	n/a	n/a	80	n/a
Investments in AFS debt securities	36	75	—	111	n/a	n/a	111	n/a
Total	$ 915	$ 75	$ 4	$ 994	$ (642)	$ (66)	$ 286	
Liabilities								
Commodity derivative contracts	$ 643	$ —	$ —	$ 643	$ (642)	$ (1)	$ —	$ (67)
Blending program obligations	—	58	—	58	n/a	n/a	58	n/a
Physical purchase contracts	—	6	—	6	n/a	n/a	6	n/a
Foreign currency contracts	7	—	—	7	n/a	n/a	7	n/a
Total	$ 650	$ 64	$ —	$ 714	$ (642)	$ (1)	$ 71	

	December 31, 2022							
	Fair Value Hierarchy			Total Gross Fair Value	Effect of Counter-party Netting	Effect of Cash Collateral Netting	Net Carrying Value on Balance Sheet	Cash Collateral Paid or Received Not Offset
	Level 1	Level 2	Level 3					
Assets								
Commodity derivative contracts	$ 830	$ —	$ —	$ 830	$ (705)	$ (8)	$ 117	$ —
Physical purchase contracts	—	4	—	4	n/a	n/a	4	n/a
Investments of certain benefit plans	72	—	6	78	n/a	n/a	78	n/a
Investments in AFS debt securities	56	165	—	221	n/a	n/a	221	n/a
Total	$ 958	$ 169	$ 6	$ 1,133	$ (705)	$ (8)	$ 420	
Liabilities								
Commodity derivative contracts	$ 705	$ —	$ —	$ 705	$ (705)	$ —	$ —	$ (149)
Blending program obligations	—	55	—	55	n/a	n/a	55	n/a
Physical purchase contracts	—	4	—	4	n/a	n/a	4	n/a
Foreign currency contracts	2	—	—	2	n/a	n/a	2	n/a
Total	$ 707	$ 59	$ —	$ 766	$ (705)	$ —	$ 61	

A description of our assets and liabilities recognized at fair value along with the valuation methods and inputs we used to develop their fair value measurements are as follows:

- Commodity derivative contracts consist primarily of exchange-traded futures, which are used to reduce the impact of price volatility on our results of operations and cash flows as discussed in Note 20. These contracts are measured at fair value using a market approach based on quoted prices from the commodity exchange and are categorized in Level 1 of the fair value hierarchy.

- Physical purchase contracts represent the fair value of fixed-price corn purchase contracts. The fair values of these purchase contracts are measured using a market approach based on quoted prices from the commodity exchange or an independent pricing service and are categorized in Level 2 of the fair value hierarchy.

- Investments of certain benefit plans consist of investment securities held by trusts for the purpose of satisfying a portion of our obligations under certain U.S. nonqualified benefit plans. The plan assets categorized in Level 1 of the fair value hierarchy are measured at fair value using a market approach based on quoted prices from national securities exchanges. The plan assets categorized in Level 3 of the fair value hierarchy represent insurance contracts, the fair value of which is provided by the insurer.

- Investments in AFS debt securities consist primarily of commercial paper and U.S. government treasury bills and have maturities within one year. The securities categorized in Level 1 are measured at fair value using a market approach based on quoted prices from national securities exchanges, and the securities categorized in Level 2 are measured at fair value using a market approach based on quoted prices from independent pricing services. The amortized cost basis of the securities approximates fair value. Realized and unrealized gains and losses were de minimis for the years ended December 31, 2023 and 2022.

- Blending program obligations represent our liability for the purchase of compliance credits needed to satisfy our blending obligations under the Renewable and Low-Carbon Fuel Programs. The blending program obligations are categorized in Level 2 of the fair value hierarchy and are measured at fair value using a market approach based on quoted prices from an independent pricing service.

- Foreign currency contracts consist of foreign currency exchange and purchase contracts and foreign currency swap agreements related to our foreign operations to manage our exposure to exchange rate fluctuations on transactions denominated in currencies other than the local (functional) currencies of our operations. These contracts are valued based on quoted foreign currency exchange rates and are categorized in Level 1 of the fair value hierarchy.

Nonrecurring Fair Value Measurements

As discussed in Note 6, we concluded that our Lakota ethanol plant was impaired as of December 31, 2022, which resulted in an asset impairment loss of $61 million. The fair value of the Lakota ethanol plant was determined using a combination of the income and market approaches and was classified in Level 3. We employed a probability-weighted approach to possible future cash flow scenarios, including the use of peer company metrics and comparison to a recent sales transaction.

There were no assets or liabilities that were measured at fair value on a nonrecurring basis as of December 31, 2023 and 2022, except as noted above.

Financial Instruments

Our financial instruments include cash and cash equivalents, investments in AFS debt securities, receivables, payables, debt obligations, operating and finance lease obligations, commodity derivative contracts, and foreign currency contracts. The estimated fair values of cash and cash equivalents, receivables, payables, and operating and finance lease obligations approximate their carrying amounts; the carrying value and fair value of debt is shown in the table below (in millions).

		December 31, 2023		December 31, 2022	
	Fair Value Hierarchy	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial liabilities:					
Debt (excluding finance lease obligations)	Level 2	$ 9,218	$ 9,109	$ 9,241	$ 8,902

Investments in AFS debt securities, commodity derivative contracts, and foreign currency contracts are recognized at their fair values as shown in "*Recurring Fair Value Measurements*" above.

20. PRICE RISK MANAGEMENT ACTIVITIES

General

We are exposed to market risks primarily related to the volatility in the price of commodities, foreign currency exchange rates, and the price of credits needed to comply with the Renewable and Low-Carbon Fuel Programs. We enter into derivative instruments to manage some of these risks, including derivative instruments related to the various commodities we purchase or produce, and foreign currency exchange and purchase contracts, as described below under "*Risk Management Activities by Type of Risk*." These derivative instruments are recorded as either assets or liabilities measured at their fair values (see Note 19), as summarized below under "*Fair Values of Derivative Instruments*." The effect of these derivative instruments on our income and other comprehensive income (loss) is summarized below under "*Effect of Derivative Instruments on Income and Other Comprehensive Income (Loss)*."

Risk Management Activities by Type of Risk

Commodity Price Risk

We are exposed to market risks related to the volatility in the price of feedstocks (primarily crude oil, waste and renewable feedstocks, and corn), the products we produce, and natural gas used in our operations. To reduce the impact of price volatility on our results of operations and cash flows, we use commodity derivative instruments, such as futures and options. Our positions in commodity derivative instruments are monitored and managed on a daily basis by our risk control group to ensure compliance with our stated risk management policy that is periodically reviewed with our Board and/or relevant Board committee.

We primarily use commodity derivative instruments as cash flow hedges and economic hedges. Our objectives for entering into each type of hedge is described below.

- *Cash flow hedges* – The objective of our cash flow hedges is to lock in the price of forecasted purchases and/or product sales at existing market prices that we deem favorable.

- *Economic hedges* – Our objectives for holding economic hedges are to (i) manage price volatility in certain feedstock and product inventories and (ii) lock in the price of forecasted purchases and/or product sales at existing market prices that we deem favorable.

As of December 31, 2023, we had the following outstanding commodity derivative instruments that were used as cash flow hedges and economic hedges, as well as commodity derivative instruments related to the physical purchase of corn at a fixed price. The information presents the notional volume of outstanding contracts by type of instrument and year of maturity (volumes in thousands of barrels, except natural gas contracts that are presented in millions of British thermal units and corn contracts that are presented in thousands of bushels).

	Notional Contract Volumes by Year of Maturity
	2024
Derivatives designated as cash flow hedges:	
Refined petroleum products:	
Futures – long	1,925
Futures – short	8,821
Derivatives designated as economic hedges:	
Crude oil and refined petroleum products:	
Futures – long	98,244
Futures – short	94,194
Natural gas:	
Futures – long	1,595,000
Corn:	
Futures – long	47,135
Futures – short	63,660
Physical contracts – long	15,679

Foreign Currency Risk

We are exposed to exchange rate fluctuations on transactions related to our foreign operations that are denominated in currencies other than the local (functional) currencies of our operations. To manage our exposure to these exchange rate fluctuations, we often use foreign currency contracts. These contracts are not designated as hedging instruments for accounting purposes and therefore are classified as economic hedges. As of December 31, 2023, we had foreign currency contracts to purchase $622 million of U.S. dollars. These commitments matured on or before January 25, 2024.

Renewable and Low-Carbon Fuel Programs Price Risk

We are exposed to market risk related to the volatility in the price of credits needed to comply with the Renewable and Low-Carbon Fuel Programs. To manage this risk, we enter into contracts to purchase these credits. Some of these contracts are derivative instruments; however, we elect the normal purchase exception and do not record these contracts at their fair values. The Renewable and Low-Carbon Fuel Programs require us to blend a certain volume of renewable and low-carbon fuels into the petroleum-based transportation fuels we produce in, or import into, the respective jurisdiction to be consumed therein based on annual quotas. To the degree we are unable to blend at the required quotas, we must purchase compliance credits (primarily RINs). For the years ended December 31, 2023, 2022, and 2021,

the cost of meeting our credit obligations under the Renewable and Low-Carbon Fuel Programs was $1.3 billion, $1.5 billion, and $2.1 billion, respectively, which are reflected in cost of materials and other.

Fair Values of Derivative Instruments

The following table provides information about the fair values of our derivative instruments as of December 31, 2023 and 2022 (in millions) and the line items in our balance sheets in which the fair values are reflected. See Note 19 for additional information related to the fair values of our derivative instruments.

As indicated in Note 19, we net fair value amounts recognized for multiple similar derivative contracts executed with the same counterparty under master netting arrangements, including cash collateral assets and obligations. The following table, however, is presented on a gross asset and gross liability basis, which results in the reflection of certain assets in liability accounts and certain liabilities in asset accounts:

		December 31, 2023		December 31, 2022	
	Balance Sheet Location	Asset Derivatives	Liability Derivatives	Asset Derivatives	Liability Derivatives
Derivatives designated as hedging instruments:					
Commodity contracts	Receivables, net	$ 141	$ 34	$ 61	$ 44
Derivatives not designated as hedging instruments:					
Commodity contracts	Receivables, net	$ 662	$ 609	$ 769	$ 661
Physical purchase contracts	Inventories	—	6	4	4
Foreign currency contracts	Accrued expenses	—	7	—	2
Total		$ 662	$ 622	$ 773	$ 667

Market Risk

Our price risk management activities involve the receipt or payment of fixed price commitments into the future. These transactions give rise to market risk, which is the risk that future changes in market conditions may make an instrument less valuable. We closely monitor and manage our exposure to market risk on a daily basis in accordance with policies that are periodically reviewed with our Board and/or relevant Board committee. Market risks are monitored by our risk control group to ensure compliance with our stated risk management policy. We do not require any collateral or other security to support derivative instruments into which we enter. We also do not have any derivative instruments that require us to maintain a minimum investment-grade credit rating.

Effect of Derivative Instruments on Income and Other Comprehensive Income (Loss)

The following table provides information about the gain (loss) recognized in income and other comprehensive income (loss) due to fair value adjustments of our cash flow hedges (in millions):

Derivatives in Cash Flow Hedging Relationships	Location of Gain (Loss) Recognized in Income on Derivatives	Year Ended December 31,		
		2023	2022	2021
Commodity contracts:				
Gain (loss) recognized in other comprehensive income (loss)	n/a	$ 82	$ (292)	$ (44)
Loss reclassified from accumulated other comprehensive loss into income	Revenues	(8)	(286)	(46)

For cash flow hedges, no component of any derivative instrument's gain or loss was excluded from the assessment of hedge effectiveness for the years ended December 31, 2023, 2022, and 2021. For the years ended December 31, 2023, 2022, and 2021, cash flow hedges primarily related to forecasted sales of renewable diesel. As of December 31, 2023, the estimated deferred after-tax gain that is expected to be reclassified into revenues within the next 12 months was not material. The changes in accumulated other comprehensive loss by component, net of tax, for the years ended December 31, 2023, 2022, and 2021 are described in Note 11.

The following table provides information about the gain (loss) recognized in income on our derivative instruments with respect to our economic hedges and our foreign currency hedges and the line items in our statements of income in which such gains (losses) are reflected (in millions):

Derivatives Not Designated as Hedging Instruments	Location of Gain (Loss) Recognized in Income on Derivatives	Year Ended December 31,		
		2023	2022	2021
Commodity contracts	Revenues	$ (27)	$ (17)	$ 28
Commodity contracts	Cost of materials and other	208	(988)	(86)
Commodity contracts	Operating expenses (excluding depreciation and amortization expense)	1	(1)	54
Foreign currency contracts	Cost of materials and other	(34)	73	9
Foreign currency contracts	Other income, net	—	(119)	44

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management has evaluated, with the participation of our principal executive officer and principal financial officer, the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report, and has concluded that our disclosure controls and procedures were effective as of December 31, 2023.

Internal Control over Financial Reporting

(a) Management's Report on Internal Control over Financial Reporting.

The management report on our internal control over financial reporting required by this item appears in "ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA" on page 67 of this report, and is incorporated by reference into this item.

(b) Attestation Report of the Independent Registered Public Accounting Firm.

KPMG LLP's report on our internal control over financial reporting appears in "ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA" beginning on page 70 of this report, and is incorporated by reference into this item.

(c) Changes in Internal Control over Financial Reporting.

There has been no change in our internal control over financial reporting that occurred during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

(a) None.

(b) During the three months ended December 31, 2023, no director or officer (as defined in Rule 16a-1(f) of the Securities Exchange Act of 1934) of Valero adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408 of Regulation S-K.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Information regarding our executive officers appears in PART I of this report under "INFORMATION ABOUT OUR EXECUTIVE OFFICERS." All other information required by ITEMS 10 through 14 of Form 10-K is incorporated by reference from the discussions under the following anticipated headings in our definitive proxy statement for our 2024 annual meeting of stockholders (the 2024 Proxy Statement). We expect to file the 2024 Proxy Statement with the SEC on or before March 31, 2024. No other information other than what is required to satisfy ITEMS 10 through 14 of Form 10-K is incorporated by reference into these items from the 2024 Proxy Statement.

Copies of all documents incorporated by reference, other than exhibits to such documents, will be provided without charge to each person who receives a copy of this Form 10-K upon written request to Valero Energy Corporation, Attn: Secretary, P.O. Box 696000, San Antonio, Texas 78269-6000.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

In addition to the information regarding our executive officers that appearsin PART I of this report under "INFORMATION ABOUT OUR EXECUTIVE OFFICERS," the disclosures under the following anticipated headings in our 2024 Proxy Statement are incorporated by reference herein:

- "*How Our Board is Structured, Governed, and Operates—Overview of Our Board Committees—Audit Committee—Current Audit Committee Members*;"
- "*How Our Board is Structured, Governed, and Operates—Overview of Our Board Committees—Audit Committee—Audit Committee Financial Experts*;"
- "*How Our Board is Structured, Governed, and Operates—How Our Director Nominees are Selected*;"
- "*Proposal No. 1—Election of directors—Information Concerning Our Director Nominees*;"
- "*Proposal No. 1—Election of directors—Nominees*;" and
- "*Miscellaneous—Governance Documents and Codes of Ethics*."

ITEM 11. EXECUTIVE COMPENSATION

The disclosures under the following anticipated headings in our 2024 Proxy Statement are incorporated by reference herein:

- "*How Our Board is Structured, Governed, and Operates—Overview of Our Board Committees—Human Resources and Compensation Committee—Compensation Committee Interlocks and Insider Participation;"*
- "*How Our Board is Structured, Governed, and Operates—Overview of Our Board Committees—Human Resources and Compensation Committee—Limited Delegation of Authority;"*
- "*Compensation Discussion and Analysis*;"

- "*Human Resources and Compensation Committee Report*;"
- "*Executive Compensation*;"
- "*Director Compensation*;"
- "*Pay Ratio Disclosure*;" and
- "*Additional Information—Board Independence, Related Party Matters, and Beneficial Ownership—Certain Relationships and Transactions with Related Persons*."

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The disclosures under the following anticipated headings in our 2024 Proxy Statement are incorporated by reference herein:

- "*Additional Information—Board Independence, Related Party Matters, and Beneficial Ownership—Beneficial Ownership of Valero Securities*;" and
- "*Equity Compensation Plan Information*."

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The disclosures under the following anticipated headings in our 2024 Proxy Statement are incorporated by reference herein:

- "*Additional Information—Board Independence, Related Party Matters, and Beneficial Ownership—Certain Relationships and Transactions with Related Persons*;" and
- "*Additional Information—Board Independence, Related Party Matters, and Beneficial Ownership—Independence of Our Directors*."

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The disclosures under the following anticipated heading in our 2024 Proxy Statement are incorporated by reference herein: "*KPMG LLP Fees*."

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) 1. Financial Statements. The following are included in "ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA" of this Form 10-K:

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2. Financial Statement Schedules and Other Financial Information. No financial statement schedules are submitted because either they are inapplicable or because the required information is included in the consolidated financial statements or notes thereto.

3. Exhibits. Filed as part of this Form 10-K are the following exhibits:

Index to Exhibits

3.01 — Amended and Restated Certificate of Incorporation of Valero Energy Corporation, formerly known as Valero Refining and Marketing Company–incorporated by reference to Exhibit 3.1 to Valero's Registration Statement on Form S-1 (SEC File No. 333-27013) filed May 13, 1997.

3.02 — Certificate of Amendment (July 31, 1997) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.02 to Valero's annual report on Form 10-K for the year ended December 31, 2003 (SEC File No. 001-13175).

3.03 — Certificate of Merger of Ultramar Diamond Shamrock Corporation with and into Valero Energy Corporation dated December 31, 2001–incorporated by reference to Exhibit 3.03 to Valero's annual report on Form 10-K for the year ended December 31, 2003 (SEC File No. 001-13175).

3.04 — Amendment (effective December 31, 2001) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.1 to Valero's current report on Form 8-K dated December 31, 2001, and filed January 11, 2002 (SEC File No. 001-13175).

3.05 — Second Certificate of Amendment (effective September 17, 2004) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.04 to Valero's quarterly report on Form 10-Q for the quarter ended September 30, 2004 (SEC File No. 001-13175).

3.06 — Certificate of Merger of Premcor Inc. with and into Valero Energy Corporation effective September 1, 2005–incorporated by reference to Exhibit 2.01 to Valero's quarterly report on Form 10-Q for the quarter ended September 30, 2005 (SEC File No. 001-13175).

3.07 — Third Certificate of Amendment (effective December 2, 2005) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.07 to Valero's annual report on Form 10-K for the year ended December 31, 2005 (SEC File No. 001-13175).

3.08 — Fourth Certificate of Amendment (effective May 24, 2011) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 4.8 to Valero's current report on Form 8-K dated and filed May 24, 2011 (SEC File No. 001-13175).

3.09 — Fifth Certificate of Amendment (effective May 13, 2016) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.02 to Valero's current report on Form 8-K dated May 12, 2016, and filed May 18, 2016 (SEC File No. 001-13175).

3.10 — Amended and Restated Bylaws of Valero Energy Corporation–incorporated by reference to Exhibit 3.01 to Valero's current report on Form 8-K dated March 15, 2022 and filed March 18, 2022 (SEC File No. 001-13175).

4.01 — Indenture dated as of December 12, 1997 between Valero Energy Corporation and The Bank of New York–incorporated by reference to Exhibit 3.4 to Valero's Registration Statement on Form S-3 (SEC File No. 333-56599) filed June 11, 1998.

4.02 — Indenture (Senior Indenture) dated as of June 18, 2004 between Valero Energy Corporation and Bank of New York–incorporated by reference to Exhibit 4.7 to Valero's Registration Statement on Form S-3 (SEC File No. 333-116668) filed June 21, 2004.

4.03 — Form of Indenture related to subordinated debt securities–incorporated by reference to Exhibit 4.8 to Valero's Registration Statement on Form S-3 (SEC File No. 333-116668) filed June 21, 2004.

4.04 — Indenture dated as of March 10, 2015 between Valero Energy Corporation and U.S. Bank National Association, as trustee–incorporated by reference to Exhibit 4.1 to Valero's Registration Statement on Form S-3 (SEC File No. 333-202635) filed March 10, 2015.

4.05 — Indenture, dated as of November 30, 2016, between Valero Energy Partners LP, as issuer, and U.S. Bank National Association, as trustee–incorporated by reference to Exhibit 4.1 to Valero Energy Partners LP's Post-Effective Amendment No. 1 to Registration Statement on Form S-3 (Registration File No. 333-208052) filed November 30, 2016.

4.06 — First Supplemental Indenture (with Parent Guarantee), dated as of January 10, 2019, among Valero Energy Partners LP, as issuer; Valero Energy Corporation, as parent guarantor; and U.S. Bank National Association, as trustee–incorporated by reference to Exhibit 4.2 to Valero's current report on Form 8-K dated and filed January 10, 2019 (SEC File No. 001-13175).

4.07 — Specimen Certificate of Common Stock–incorporated by reference to Exhibit 4.1 to Valero's Registration Statement on Form S-3 (SEC File No. 333-116668) filed June 21, 2004.

4.08 — Description of Valero Energy Corporation common stock, $0.01 par value–incorporated by reference to Exhibit 4.09 to Valero's annual report on Form 10-K for the year ended December 31, 2019 (SEC File No. 001-13175).

+10.01 — Valero Energy Corporation Annual Bonus Plan, amended and restated as of February 28, 2018–incorporated by reference to Exhibit 10.01 to Valero's annual report on Form 10-K for the year ended December 31, 2017 (SEC File No. 001-13175).

+10.02 — Valero Energy Corporation 2011 Omnibus Stock Incentive Plan, amended and restated February 25, 2016–incorporated by reference to Exhibit 10.04 to Valero's annual report on Form 10-K for the year ended December 31, 2015 (SEC File No. 001-13175).

+10.03 — Valero Energy Corporation 2020 Omnibus Stock Incentive Plan–incorporated by reference to Appendix A to Valero's Definitive Proxy Statement on Schedule 14A, filed March 19, 2020 (SEC File No. 001-13175).

+10.04 — Amendment No. 1 to the Valero Energy Corporation 2020 Omnibus Stock Incentive Plan effective October 1, 2021–incorporated by reference to Exhibit 10.04 to Valero's annual report on Form 10-K for the year ended December 31, 2021 (SEC File No. 001-13175).

+10.05 — Valero Energy Corporation Deferred Compensation Plan, amended and restated as of January 1, 2008–incorporated by reference to Exhibit 10.04 to Valero's annual report on Form 10-K for the year ended December 31, 2008 (SEC File No. 001-13175).

+10.06 — Valero Energy Corporation Supplemental Executive Retirement Plan, as amended and restated effective July 1, 2023–incorporated by reference to Exhibit 10.01 to Valero's quarterly report on Form 10-Q for the quarter ended June 30, 2023 (SEC File No. 001-13175).

+10.07 — Valero Energy Corporation Excess Pension Plan, as amended and restated effective December 31, 2011–incorporated by reference to Exhibit 10.10 to Valero's annual report on Form 10-K for the year ended December 31, 2011 (SEC File No. 001-13175).

+10.08 — Form of Change of Control Severance Agreement (Tier I) between Valero Energy Corporation and executive officer–incorporated by reference to Exhibit 10.15 to Valero's annual report on Form 10-K for the year ended December 31, 2011 (SEC File No. 001-13175).

+10.09 — Form of Amendment (dated January 7, 2013) to Change of Control Severance Agreements (to eliminate excise tax gross-up benefit)–incorporated by reference to Exhibit 10.17 to Valero's annual report on Form 10-K for the year ended December 31, 2012 (SEC File No. 001-13175).

+10.10 — Form of Change of Control Severance Agreement (Tier II-A) between Valero Energy Corporation and executive officer–incorporated by reference to Exhibit 10.02 to Valero's current report on Form 8-K dated November 2, 2016, and filed November 7, 2016 (SEC File No. 001-13175).

+10.11 — Schedule of Tier II-A Change of Control Agreements–incorporated by reference to Exhibit 10.10 to Valero's annual report on Form 10-K for the year ended December 31, 2020 (SEC File No. 001-13175).

+10.12 — Form of Amendment (dated January 17, 2017) to Change of Control Severance Agreements, amending Section 9 thereof–incorporated by reference to Exhibit 10.01 to Valero's current report on Form 8-K dated and filed January 17, 2017 (SEC File No. 001-13175).

+10.13 — Form of Stock Option Agreement–incorporated by reference to Exhibit 10.21 to Valero's annual report on Form 10-K for the year ended December 31, 2011 (SEC File No. 001-13175).

+10.14 — Form of Performance Stock Option Agreement–incorporated by reference to Exhibit 10.21 to Valero's annual report on Form 10-K for the year ended December 31, 2012 (SEC File No. 001-13175).

+10.15 — Form of Restricted Stock Agreement (2020 and 2021 grants)–incorporated by reference to Exhibit 10.17 to Valero's annual report on Form 10-K for the year ended December 31, 2020 (SEC File No. 001-13175).

+10.16 — Long-Term Incentive Agreement dated as of December 18, 2019, between Valero Energy Corporation and R. Lane Riggs–incorporated by reference to Exhibit 10.17 to Valero's annual report on Form 10-K for the year ended December 31, 2019 (SEC File No. 001-13175).

+10.17 — Form of Stock Unit Award Agreement for Non-Employee Directors (standard)–incorporated by reference to Exhibit 10.01 to Valero's current report on Form 8-K dated April 30, 2019, and filed May 1, 2019 (SEC File No. 001-13175).

+10.18 — Form of Stock Unit Award Agreement for Non-Employee Directors (with one-year hold provision)–incorporated by reference to Exhibit 10.02 to Valero's current report on Form 8-K dated April 30, 2019, and filed May 1, 2019 (SEC File No. 001-13175).

10.19 — Fifth Amended and Restated Revolving Credit Agreement, dated as of November 22, 2022, among Valero Energy Corporation, as Borrower; JPMorgan Chase Bank, N.A., as Administrative Agent; and the lenders named therein–incorporated by reference to Exhibit 99.1 to Valero's current report on Form 8-K dated November 22, 2022, and filed November 22, 2022 (SEC File No. 001-13175).

+10.20 — Form of Amended and Restated Performance Share Agreement (2020 grant–second and third tranches)–incorporated by reference to Exhibit 10.01 to Valero's quarterly report on Form 10-Q for the quarter ended March 31, 2021 (SEC File No. 001-13175).

+10.21 — Form of Performance Share Agreement (2021 grant–second tranche and 2022 grant–first tranche)–incorporated by reference to Exhibit 10.02 to Valero's quarterly report on Form 10-Q for the quarter ended March 31, 2021 (SEC File No. 001-13175).

+10.22 — Form of Amended and Restated Performance Share Agreement (2021 grant–third tranche)–incorporated by reference to Exhibit 10.01 to Valero's quarterly report on Form 10-Q for the quarter ended March 31, 2023 (SEC File No. 001-13175).

+10.23 — Form of Amended and Restated Performance Share Agreement (2022 grant–second and third tranches)–incorporated by reference to Exhibit 10.02 to Valero's quarterly report on Form 10-Q for the quarter ended March 31, 2023 (SEC File No. 001-13175).

+10.24 — Form of Restricted Stock Agreement (current)–incorporated by reference to Exhibit 10.26 to Valero's annual report on Form 10-K for the year ended December 31, 2021 (SEC File No. 001-13175).

+10.25	—	Form of Performance Share Agreement (2023 grant and current)–incorporated by reference to Exhibit 10.03 to Valero's quarterly report on Form 10-Q for the quarter ended March 31, 2023 (SEC File No. 001-13175).
+10.26	—	Form of Aircraft Time Sharing Agreement–incorporated by reference to Exhibit 10.04 to Valero's quarterly report on Form 10-Q for the quarter ended March 31, 2023 (SEC File No. 001-13175).
*21.01	—	Valero Energy Corporation subsidiaries.
22.01	—	Subsidiary Issuer of Guaranteed Securities–incorporated by reference to Exhibit 22.01 to Valero's annual report on Form 10-K for the year ended December 31, 2020 (SEC File No. 001-13175).
*23.01	—	Consent of KPMG LLP dated February 22, 2024.
*24.01	—	Power of Attorney dated February 22, 2024 (on the signature page of this Form 10-K).
*31.01	—	Rule 13a-14(a) Certification (under Section 302 of the Sarbanes-Oxley Act of 2002) of principal executive officer.
*31.02	—	Rule 13a-14(a) Certification (under Section 302 of the Sarbanes-Oxley Act of 2002) of principal financial officer.
**32.01	—	Section 1350 Certifications (under Section 906 of the Sarbanes-Oxley Act of 2002).
*97.01	—	Executive Compensation Clawback Policy.
***101.INS	—	Inline XBRL Instance Document–the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
***101.SCH	—	Inline XBRL Taxonomy Extension Schema Document.
***101.CAL	—	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
***101.DEF	—	Inline XBRL Taxonomy Extension Definition Linkbase Document.
***101.LAB	—	Inline XBRL Taxonomy Extension Label Linkbase Document.
***101.PRE	—	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
***104	—	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.

** Furnished herewith.

*** Submitted electronically herewith.

\+ Identifies management contracts or compensatory plans or arrangements required to be filed as an exhibit hereto.

Pursuant to paragraph 601(b)(4)(iii)(A) of Regulation S-K, the registrant has omitted from the foregoing listing of exhibits, and hereby agrees to furnish to the SEC upon its request, copies of certain instruments, each relating to debt not exceeding 10 percent of the total assets of the registrant and its subsidiaries on a consolidated basis.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURE

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.

VALERO ENERGY CORPORATION
(Registrant)

By: /s/ R. Lane Riggs

(R. Lane Riggs)
Chief Executive Officer
and President

Date: February 22, 2024

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints R. Lane Riggs, Jason W. Fraser, and Richard J. Walsh, or any of them, each with power to act without the other, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all subsequent amendments and supplements to this annual report on Form 10-K, and to file the same, or cause to be filed the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each said attorney-in-fact and agent full power to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby qualifying and confirming all that said attorney-in-fact and agent or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

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 on the dates indicated.

Signature	Title	Date
/s/ R. Lane Riggs (R. Lane Riggs)	Chief Executive Officer and President, Director (Principal Executive Officer)	February 22, 2024
/s/ Jason W. Fraser (Jason W. Fraser)	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	February 22, 2024
/s/ Joseph W. Gorder (Joseph W. Gorder)	Executive Chairman of the Board	February 22, 2024
/s/ Fred M. Diaz (Fred M. Diaz)	Director	February 22, 2024
/s/ H. Paulett Eberhart (H. Paulett Eberhart)	Director	February 22, 2024
/s/ Marie A. Ffolkes (Marie A. Ffolkes)	Director	February 22, 2024
/s/ Kimberly S. Greene (Kimberly S. Greene)	Director	February 22, 2024
/s/ Deborah P. Majoras (Deborah P. Majoras)	Director	February 22, 2024
/s/ Eric D. Mullins (Eric D. Mullins)	Director	February 22, 2024
/s/ Donald L. Nickles (Donald L. Nickles)	Director	February 22, 2024
/s/ Robert A. Profusek (Robert A. Profusek)	Director	February 22, 2024
/s/ Randall J. Weisenburger (Randall J. Weisenburger)	Director	February 22, 2024
/s/ Rayford Wilkins, Jr. (Rayford Wilkins, Jr.)	Director	February 22, 2024