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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2016

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 1-13175

VALERO ENERGY CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

74-1828067

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

**One Valero Way
San Antonio, Texas**

(Address of principal executive offices)

78249

(Zip Code)

(210) 345-2000

(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes ☒ No ☐

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

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

The number of shares of the registrant's only class of common stock, \$0.01 par value, outstanding as of April 29, 2016 was 469,802,627 .

VALERO ENERGY CORPORATION

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PART I – FINANCIAL INFORMATION
Item 1. Financial Statements

VALERO ENERGY CORPORATION
CONSOLIDATED BALANCE SHEETS
(Millions of Dollars, Except Par Value)

	March 31, 2016	December 31, 2015
	(Unaudited)	
ASSETS		
Current assets:		
Cash and temporary cash investments	\$ 3,778	\$ 4,114
Receivables, net	4,518	4,464
Inventories	6,056	5,898
Income taxes receivable	174	218
Prepaid expenses and other	335	204
Total current assets	14,861	14,898
Property, plant, and equipment, at cost	37,275	36,907
Accumulated depreciation	(10,530)	(10,204)
Property, plant, and equipment, net	26,745	26,703
Deferred charges and other assets, net	2,653	2,626
Total assets	\$ 44,259	\$ 44,227
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of debt and capital lease obligations	\$ 128	\$ 127
Accounts payable	4,980	4,907
Accrued expenses	416	554
Taxes other than income taxes	957	1,069
Income taxes payable	294	337
Total current liabilities	6,775	6,994
Debt and capital lease obligations, less current portion	7,207	7,208
Deferred income taxes	7,192	7,060
Other long-term liabilities	1,590	1,611
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	7,057	7,064
Treasury stock, at cost; 203,711,810 and 200,462,208 common shares	(11,007)	(10,799)
Retained earnings	25,401	25,188
Accumulated other comprehensive loss	(802)	(933)
Total Valero Energy Corporation stockholders' equity	20,656	20,527
Noncontrolling interests	839	827
Total equity	21,495	21,354
Total liabilities and equity	\$ 44,259	\$ 44,227

See Condensed Notes to Consolidated Financial Statements.

VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF INCOME
(Millions of Dollars, Except Per Share Amounts)
(Unaudited)

	Three Months Ended March 31,	
	2016	2015
Operating revenues (a)	\$ 15,714	\$ 21,330
Costs and expenses:		
Cost of sales (excluding the lower of cost or market inventory valuation adjustment)	13,507	18,163
Lower of cost or market inventory valuation adjustment	(293)	—
Operating expenses	1,030	1,084
General and administrative expenses	156	147
Depreciation and amortization expense	485	441
Total costs and expenses	14,885	19,835
Operating income	829	1,495
Other income, net	9	24
Interest and debt expense, net of capitalized interest	(108)	(101)
Income before income tax expense	730	1,418
Income tax expense	217	450
Net income	513	968
Less: Net income attributable to noncontrolling interests	18	4
Net income attributable to Valero Energy Corporation stockholders	\$ 495	\$ 964
Earnings per common share	\$ 1.05	\$ 1.87
Weighted-average common shares outstanding (in millions)	469	513
Earnings per common share – assuming dilution	\$ 1.05	\$ 1.87
Weighted-average common shares outstanding – assuming dilution (in millions)	471	516
Dividends per common share	\$ 0.60	\$ 0.40
Supplemental information:		
(a) Includes excise taxes on sales by certain of our international operations	\$ 1,395	\$ 1,426

See Condensed Notes to Consolidated Financial Statements.

VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Millions of Dollars)
(Unaudited)

	Three Months Ended March 31,	
	2016	2015
Net income	\$ 513	\$ 968
Other comprehensive income (loss):		
Foreign currency translation adjustment	122	(366)
Net gain on pension and other postretirement benefits	3	5
Other comprehensive income (loss) before income tax expense (benefit)	125	(361)
Income tax expense (benefit) related to items of other comprehensive income (loss)	(7)	2
Other comprehensive income (loss)	132	(363)
Comprehensive income	645	605
Less: Comprehensive income attributable to noncontrolling interests	19	4
Comprehensive income attributable to Valero Energy Corporation stockholders	\$ 626	\$ 601

See Condensed Notes to Consolidated Financial Statements.

VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Millions of Dollars)
(Unaudited)

	Three Months Ended March 31,	
	2016	2015
Cash flows from operating activities:		
Net income	\$ 513	\$ 968
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization expense	485	441
Lower of cost or market inventory valuation adjustment	(293)	—
Deferred income tax expense (benefit)	121	(61)
Changes in current assets and current liabilities	(177)	57
Changes in deferred charges and credits and other operating activities, net	(9)	28
Net cash provided by operating activities	640	1,433
Cash flows from investing activities:		
Capital expenditures	(316)	(458)
Deferred turnaround and catalyst costs	(161)	(240)
Other investing activities, net	(4)	(15)
Net cash used in investing activities	(481)	(713)
Cash flows from financing activities:		
Proceeds from debt issuances or borrowings	—	1,446
Repayments of debt and capital lease obligations	(3)	(403)
Proceeds from the exercise of stock options	3	15
Purchase of common stock for treasury	(265)	(325)
Common stock dividends	(282)	(206)
Distributions to noncontrolling interests (public unitholders) of Valero Energy Partners LP	(7)	(5)
Other financing activities, net	10	4
Net cash provided by (used in) financing activities	(544)	526
Effect of foreign exchange rate changes on cash	49	(65)
Net increase (decrease) in cash and temporary cash investments	(336)	1,181
Cash and temporary cash investments at beginning of period	4,114	3,689
Cash and temporary cash investments at end of period	\$ 3,778	\$ 4,870

See Condensed Notes to Consolidated Financial Statements.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

As used in this report, the terms “Valero,” “we,” “us,” or “our” may refer to Valero Energy Corporation, one or more of its consolidated subsidiaries, or all of them taken as a whole.

These unaudited financial statements have been prepared in accordance with United States (U.S.) generally accepted accounting principles (GAAP) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X of the Securities Exchange Act of 1934. Accordingly, they do not include all of the information and notes required by U.S. GAAP for complete financial statements. In the opinion of management, all adjustments considered necessary for a fair presentation have been included. All such adjustments are of a normal recurring nature unless disclosed otherwise. Financial information for the three months ended March 31, 2016 and 2015 included in these Condensed Notes to Consolidated Financial Statements is derived from our unaudited financial statements. Operating results for the three months ended March 31, 2016 are not necessarily indicative of the results that may be expected for the year ending December 31, 2016.

The balance sheet as of December 31, 2015 has been derived from our audited financial statements as of that date. For further information, refer to our financial statements and notes thereto included in our annual report on Form 10-K for the year ended December 31, 2015 .

Reclassifications

Certain amounts reported as of December 31, 2015 have been reclassified in order to conform to the 2016 presentation, including the retrospective adoption of certain amendments to the Accounting Standards Codification (ASC) effective January 1, 2016. The adoption of the amendments to ASC Subtopic 835-30, “Interest–Imputation of Interest,” resulted in the reclassification of certain debt issuance costs from “deferred charges and other assets, net” to “debt and capital lease obligations, less current portion.” The adoption of the amendments to ASC Topic 740, “Income Taxes” resulted in the reclassification of current deferred income tax assets and current deferred income tax liabilities to noncurrent deferred income tax liabilities. The following table presents our previously reported balance sheet line items retrospectively adjusted for the adoption of these pronouncements (in millions):

	December 31, 2015		
	Previously Reported	Reclassifications	Currently Reported
Assets			
Current deferred income taxes	\$ 74	\$ (74)	\$ —
Deferred charges and other assets, net	2,668	(42)	2,626
Liabilities			
Current deferred income taxes	366	(366)	—
Debt and capital lease obligations, less current portion	7,250	(42)	7,208
Deferred income taxes	6,768	292	7,060

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with U.S. 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.

Accounting Pronouncements Adopted During the Period

In February 2015, the provisions of ASC Topic 810, "Consolidation," were amended to improve consolidation guidance for certain types of legal entities. The guidance modifies the evaluation of whether limited partnerships and similar legal entities are variable interest entities (VIEs) or voting interest entities, eliminates the presumption that a general partner should consolidate a limited partnership, affects the consolidation analysis of reporting entities that are involved with VIEs, particularly those that have fee arrangements and related party relationships. These provisions are effective for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods. With the adoption of this guidance effective January 1, 2016, we have determined that Valero Energy Partners LP (VLP) is a VIE. Since we previously consolidated the financial statements of VLP, the adoption of this guidance did not affect our financial position or results of operations. See Note 8 for disclosures related to our consolidated VIEs.

In April 2015, the provisions of ASC Subtopic 835-30, "Interest—Imputation of Interest," were amended to simplify the presentation of debt issuance costs. The guidance requires that debt issuance costs related to a note be reported in the balance sheet as a direct deduction from the face amount of that note, consistent with debt discounts, and that amortization of debt issuance costs be reported as interest expense. In August 2015, these provisions were further amended with guidance from the Securities and Exchange Commission staff that they would not object to an entity deferring and presenting debt issuance costs related to a line-of-credit arrangement as an asset and subsequently amortizing the deferred debt issuance costs ratably over the term of the line-of-credit arrangement, regardless of whether there are any outstanding borrowings on the line-of-credit arrangement. These provisions are to be applied retrospectively and are effective for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods. The adoption of this guidance effective January 1, 2016 did not materially affect our financial position and did not affect our results of operations because we already reported the amortization of debt issuance costs as interest expense. See "Basis of Presentation—Reclassifications" above for the reclassified presentation in our balance sheet. Debt issuance costs associated with our line-of-credit arrangements will continue to be reported in the balance sheet as "deferred charges and other assets, net."

In May 2015, the provisions of ASC Topic 820, "Fair Value Measurements," were amended to remove the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. The guidance also removes the requirement to make certain disclosures for all investments that are eligible to be measured using the net asset value per share practical expedient and limits those disclosures to investments for which the entity has elected to measure the fair value using that practical expedient. These provisions are to be applied retrospectively and are effective for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods. The adoption of this guidance effective January 1, 2016 did not affect our financial position or results of operations, but will result in revised annual disclosures related to the fair value presentation of

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

certain assets of our defined benefit pension plans for which fair value is measured using net asset value per share as a practical expedient. In accordance with the new guidance, these investments will no longer be categorized within the fair value hierarchy. Changes to prior period disclosures will be applied retrospectively in accordance with the guidance.

In September 2015, the provisions of ASC Topic 805, “Business Combinations,” were amended to simplify the accounting and reporting of adjustments made to provisional amounts recognized in a business combination. The amendment requires that an acquirer (i) record, in the same period’s financial statements, the effect on earnings of changes in depreciation, amortization, or other income effects, if any, as a result of the change to the provisional amounts, calculated as if the accounting had been completed at the acquisition date and (ii) present separately on the statement of income or disclose in the notes the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. These provisions are effective for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods, and should be applied prospectively to adjustments made to provisional amounts that occur after the effective date. The adoption of this guidance effective January 1, 2016 did not affect our financial position or results of operations; however, it may result in changes to the manner in which adjustments to provisional amounts recognized in a future business combination, if any, are presented in our financial statements.

In November 2015, the provisions of ASC Topic 740, “Income Taxes,” were amended to simplify the presentation of deferred income taxes. The amendments require that deferred tax liabilities and assets be classified as noncurrent in a classified balance sheet. The amendments are effective for financial statements for annual periods beginning after December 15, 2016, and interim periods within those annual periods, with early adoption permitted as of the beginning of any interim or annual period. The amendments may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. Entities applying the guidance retrospectively should disclose in the first interim and first annual period of adoption the nature of and reason for the change in accounting principle and quantitative information about the effects of the accounting change on prior periods. Effective January 1, 2016, we adopted this guidance on a retrospective basis, but such adoption did not materially affect our financial position and it did not impact our results of operations. Upon adoption, our current deferred income tax assets of \$74 million and current deferred income tax liabilities of \$366 million as of December 31, 2015 were reclassified to noncurrent deferred income tax liabilities. See “Basis of Presentation–Reclassifications” above for the reclassified presentation. Adoption of this guidance simplifies the future presentation of our deferred income tax assets and liabilities.

Accounting Pronouncements Not Yet Adopted

In May 2014, the ASC was amended and a new accounting standard, ASC Topic 606, “Revenue from Contracts with Customers,” was issued to clarify the principles for recognizing revenue. The standard is effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within those annual periods. We are currently evaluating the effect that adopting this standard will have on our financial statements and related disclosures.

In July 2015, the provisions of ASC Topic 330, “Inventory” were amended to simplify the measurement of inventory measured using the first-in, first-out or average cost methods. These provisions are to be applied

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

prospectively and are effective for annual reporting periods beginning after December 15, 2016, and interim periods within those annual periods, with early adoption permitted. The adoption of this guidance effective January 1, 2017 will not affect our financial position or results of operations.

In January 2016, the provisions of ASC Subtopic 825-10, “Financial Instruments–Overall,” were amended to enhance the reporting model for financial instruments regarding certain aspects of recognition, measurement, presentation, and disclosure. These provisions are effective for annual reporting periods beginning after December 15, 2017, and interim periods within those annual periods. We are currently evaluating the effect that adopting this standard will have on our financial statements and related disclosures.

In February 2016, the ASC was amended and a new accounting standard, ASC Topic 842, “Leases,” was issued to increase the transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The new standard is effective for public companies for annual reporting periods beginning after December 15, 2018, and interim reporting periods within those annual periods, with early adoption permitted. We are currently evaluating the effect that adopting this standard will have on our financial statements and related disclosures.

In March 2016, the provisions of ASC Topic 718, “Compensation–Stock Compensation,” were amended to simplify the accounting and reporting for employee share-based payments. These amendments involve several aspects of the accounting for share-based payment transactions, including accounting for income taxes as it pertains to the timing of when excess tax benefits are recognized and to the recognition of excess tax benefits and tax deficiencies in the statements of income, forfeitures, minimum statutory tax withholding requirements, as well as classification of excess tax benefits and employee taxes paid on the statement of cash flows. These provisions are effective for public companies for annual reporting periods beginning after December 15, 2016, and interim periods within those annual periods, with early adoption permitted. An entity that elects early adoption must adopt all of the amendments in the same period. The amendments provide specific transition and disclosure guidance for each provision. We are currently evaluating the effect that adopting this standard will have on our financial statements and related disclosures.

2. INVENTORIES

Inventories consisted of the following (in millions):

	March 31, 2016	December 31, 2015
Refinery feedstocks	\$ 2,574	\$ 2,404
Refined products and blendstocks	3,424	3,774
Ethanol feedstocks and products	264	242
Materials and supplies	249	244
Inventories, before lower of cost or market inventory valuation reserve	6,511	6,664
Lower of cost or market inventory valuation reserve	(455)	(766)
Inventories	<u>\$ 6,056</u>	<u>\$ 5,898</u>

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Inventories are valued at the lower of cost or market. As of March 31, 2016 and December 31, 2015 , we had a valuation reserve of \$455 million and \$766 million , respectively, in order to state our inventories at market. During the three months ended March 31, 2016 , we recorded a change in our lower of cost or market inventory valuation reserve that resulted in a net benefit to our results of operations of \$293 million . The income statement benefit for the first quarter of 2016 differs from the change in the balance sheet reserve due to the foreign currency effect of inventories held for our international operations.

As of March 31, 2016 and December 31, 2015 , our non-LIFO inventories accounted for \$685 million and \$668 million , respectively, of our total inventories.

3. DEBT

Credit Facilities

Revolver

We have a \$3 billion revolving credit facility (the Revolver) that matures in November 2020 . We have the option to increase the aggregate commitments under the Revolver to \$4.5 billion , subject to certain conditions. The Revolver also provides for the issuance of letters of credit of up to \$2.0 billion . No amounts were outstanding under the Revolver as of March 31, 2016 or December 31, 2015 , and we had no borrowings under the Revolver during the three months ended March 31, 2016 and 2015 .

VLP Revolver

VLP has a \$750 million senior unsecured revolving credit facility agreement (the VLP Revolver) that matures in November 2020 . The VLP Revolver is available only to the operations of VLP, and creditors of VLP do not have recourse against Valero. VLP has the option to increase the aggregate commitments under the VLP Revolver to \$1.0 billion , subject to certain conditions. The VLP Revolver also provides for the issuance of letters of credit of up to \$100 million . Outstanding borrowings under the VLP Revolver bear interest at a variable rate, which was 1.75 percent as of March 31, 2016 .

During the three months ended March 31, 2016 , VLP had no borrowings or repayments under the VLP Revolver. During the three months ended March 31, 2015 , VLP borrowed \$200 million under the VLP Revolver in connection with VLP's acquisition of the Houston and St. Charles Terminal Services Business from us.

On April 1, 2016 , VLP borrowed \$139 million under the VLP Revolver in connection with VLP's acquisition of the McKee Terminal Services Business from us.

Canadian Revolver

One of our Canadian subsidiaries has a C\$50 million committed revolving credit facility (the Canadian Revolver) that matures in November 2016 . No amounts were outstanding under the Canadian Revolver as of March 31, 2016 or December 31, 2015 , and we had no borrowings under the Canadian Revolver during the three months ended March 31, 2016 and 2015 .

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 \$1.4 billion of eligible trade receivables on a revolving basis. This facility matures in July 2016 .

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Proceeds from the sale of receivables under this facility are reflected as debt. 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.

During the three months ended March 31, 2016 and 2015, we had no proceeds from or repayments under the accounts receivable sales facility.

Summary of Credit Facilities

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

			March 31, 2016			
	Facility Amount	Maturity Date	Outstanding Borrowings	Letters of Credit	Availability	
Committed facilities:						
Revolver	\$ 3,000	November 2020	\$ —	\$ 53	\$ 2,947	
VLP Revolver	\$ 750	November 2020	\$ 175	\$ —	\$ 575	
Canadian Revolver	C\$ 50	November 2016	C\$ —	C\$ 10	C\$ 40	
Accounts receivable sales facility	\$ 1,400	July 2016	\$ 100	\$ —	\$ 974	
Letter of credit facilities	\$ 275	June 2016 and November 2016	\$ —	\$ 16	\$ 259	
Uncommitted facilities:						
Letter of credit facilities	\$ 700	N/A	\$ —	\$ 61	\$ 639	

As of March 31, 2016, the actual availability under the accounts receivable sales facility fell below the facility borrowing capacity to \$1.1 billion primarily due to a decrease in eligible trade receivables as a result of the decline in the market prices of the finished products that we produce.

Non-Bank Debt

During the three months ended March 31, 2016, we made no scheduled debt repayments. During the three months ended March 31, 2015, we made a scheduled debt repayment of \$400 million related to our 4.5 percent senior notes.

During the three months ended March 31, 2015, we issued \$600 million of 3.65 percent senior notes due March 15, 2025 and \$650 million of 4.9 percent senior notes due March 15, 2045. Proceeds from these debt issuances totaled \$1.246 billion. We also incurred \$12 million of debt issuance costs.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Capitalized Interest

Capitalized interest was \$20 million and \$16 million for the three months ended March 31, 2016 and 2015, respectively.

4. COMMITMENTS AND CONTINGENCIES

Environmental Matters

We are involved, together with several other companies, in an environmental cleanup in the Village of Hartford, Illinois (the Village) and during 2015, one of these companies assumed the ongoing remediation in the Village pursuant to a federal court order. We had previously conducted an initial response in the Village, along with other companies, pursuant to an administrative order issued by the U.S. Environmental Protection Agency (EPA). The parties involved in the initial response may have further claims between themselves for costs already incurred. We also continue to be engaged in site assessment and interim measures at the adjacent shutdown refinery site, which we acquired as part of an acquisition in 2005, and we are in litigation with other potentially responsible parties and the Illinois EPA relating to the remediation of the site. In each of these matters, we have various defenses and rights for contribution from the other responsible parties. We have recorded a liability for our own expected contribution obligations. However, because of the unpredictable nature of these cleanups, the methodology for allocation of liabilities and the state of Illinois' failure to directly sue third parties responsible for historic contamination at the site, it is reasonably possible that we could incur a loss in a range of \$0 to \$200 million in excess of the amount of our accrual to ultimately resolve these matters. Factors underlying this estimated range are expected to change from time to time, and actual results may vary significantly from this estimate.

Litigation Matters

We are party to claims and legal proceedings arising in the ordinary course of business. We have not recorded a loss contingency liability with respect to some of these matters because we have determined that it is remote that a loss has been incurred. For other matters, we have recorded a loss contingency liability where we have determined that it is probable that a loss has been incurred and that the loss is reasonably estimable. These loss contingency liabilities are not material to our financial position. We re-evaluate and update our loss contingency liabilities as matters progress over time, and we believe that any changes to the recorded liabilities will not be material to our financial position, results of operations, or liquidity.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. EQUITY

Reconciliation of Balances

The following is a reconciliation of the beginning and ending balances of equity attributable to our stockholders, equity attributable to noncontrolling interests, and total equity (in millions):

	Three Months Ended March 31,					
	2016			2015		
	Valero Stockholders ' Equity	Non- controlling Interests	Total Equity	Valero Stockholders ' Equity	Non- controlling Interests	Total Equity
Balance as of beginning of period	\$ 20,527	\$ 827	\$ 21,354	\$ 20,677	\$ 567	\$ 21,244
Net income	495	18	513	964	4	968
Dividends	(282)	—	(282)	(206)	—	(206)
Stock-based compensation expense	12	—	12	9	—	9
Tax deduction in excess of stock-based compensation expense	10	—	10	15	—	15
Transactions in connection with stock-based compensation plans:						
Stock issuances	3	—	3	15	—	15
Stock purchases	(42)	—	(42)	(50)	—	(50)
Stock purchases under purchase program	(198)	—	(198)	(287)	—	(287)
Contributions from noncontrolling interests	—	—	—	—	2	2
Distributions to noncontrolling interests	—	(7)	(7)	—	(5)	(5)
Other comprehensive income (loss)	131	1	132	(363)	—	(363)
Balance as of end of period	\$ 20,656	\$ 839	\$ 21,495	\$ 20,774	\$ 568	\$ 21,342

The noncontrolling interests relate to third-party ownership interests in VIEs for which we are the primary beneficiary and therefore consolidate. See Note 8 for information about our consolidated VIEs.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Share Activity

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

	Three Months Ended March 31,			
	2016		2015	
	Common Stock	Treasury Stock	Common Stock	Treasury Stock
Balance as of beginning of period	673	(200)	673	(159)
Transactions in connection with stock-based compensation plans:				
Stock issuances	—	1	—	2
Stock purchases	—	(1)	—	(1)
Stock purchases under purchase program	—	(4)	—	(5)
Balance as of end of period	673	(204)	673	(163)

Treasury Stock

We purchase shares of our common stock as authorized under our common stock purchase program and to meet our obligations under employee stock-based compensation plans.

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):

	Three Months Ended March 31,					
	2016			2015		
	Before-Tax Amount	Tax Expense (Benefit)	Net Amount	Before-Tax Amount	Tax Expense (Benefit)	Net Amount
Foreign currency translation adjustment	\$ 122	\$ —	\$ 122	\$ (366)	\$ —	\$ (366)
Pension and other postretirement benefits:						
Miscellaneous gain arising during the period	—	(8)	8	—	—	—
Amounts reclassified into income related to:						
Net actuarial loss	12	4	8	15	5	10
Prior service credit	(9)	(3)	(6)	(10)	(3)	(7)
Net gain on pension and other postretirement benefits	3	(7)	10	5	2	3
Other comprehensive income (loss)	\$ 125	\$ (7)	\$ 132	\$ (361)	\$ 2	\$ (363)

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

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	Total
Balance as of December 31, 2015	\$ (605)	\$ (328)	\$ (933)
Other comprehensive income before reclassifications	121	8	129
Amounts reclassified from accumulated other comprehensive loss	—	2	2
Net other comprehensive income	121	10	131
Balance as of March 31, 2016	\$ (484)	\$ (318)	\$ (802)

	Foreign Currency Translation Adjustment	Defined Benefit Plans Items	Total
Balance as of December 31, 2014	\$ 1	\$ (368)	\$ (367)
Other comprehensive loss before reclassifications	(366)	—	(366)
Amounts reclassified from accumulated other comprehensive loss	—	3	3
Net other comprehensive income (loss)	(366)	3	(363)
Balance as of March 31, 2015	\$ (365)	\$ (365)	\$ (730)

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. EMPLOYEE BENEFIT PLANS

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

	Pension Plans		Other Postretirement Benefit Plans	
	2016	2015	2016	2015
Three months ended March 31:				
Service cost	\$ 28	\$ 27	\$ 2	\$ 2
Interest cost	21	24	3	4
Expected return on plan assets	(35)	(33)	—	—
Amortization of:				
Prior service credit	(5)	(5)	(4)	(5)
Net actuarial loss	12	16	—	—
Net periodic benefit cost	<u>\$ 21</u>	<u>\$ 29</u>	<u>\$ 1</u>	<u>\$ 1</u>

Our anticipated contributions to our pension and other postretirement benefit plans during 2016 have not changed from amounts previously disclosed in our financial statements for the year ended December 31, 2015 . We contributed \$8 million and \$7 million , respectively, to our pension plans and \$4 million and \$2 million , respectively, to our other postretirement benefit plans during the three months ended March 31, 2016 and 2015 .

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. EARNINGS PER COMMON SHARE

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

	Three Months Ended March 31,			
	2016		2015	
	Participating Securities	Common Stock	Participating Securities	Common Stock
Earnings per common share:				
Net income attributable to Valero stockholders		\$ 495		\$ 964
Less dividends paid:				
Common stock		281		205
Participating securities		1		1
Undistributed earnings		\$ 213		\$ 758
Weighted-average common shares outstanding	2	469	2	513
Earnings per common share:				
Distributed earnings	\$ 0.60	\$ 0.60	\$ 0.40	\$ 0.40
Undistributed earnings	0.45	0.45	1.47	1.47
Total earnings per common share	\$ 1.05	\$ 1.05	\$ 1.87	\$ 1.87
Earnings per common share – assuming dilution:				
Net income attributable to Valero stockholders		\$ 495		\$ 964
Weighted-average common shares outstanding		469		513
Common equivalent shares:				
Stock options		1		2
Performance awards and nonvested restricted stock		1		1
Weighted-average common shares outstanding – assuming dilution		471		516
Earnings per common share – assuming dilution		\$ 1.05		\$ 1.87

Participating securities include restricted stock and performance awards granted under our 2011 Omnibus Stock Incentive Plan.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. VARIABLE INTEREST ENTITIES

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 (a) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (b) 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 VIEs, 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 our VIEs:

- VLP is a publicly traded master limited partnership whose common limited partner units are traded on the New York Stock Exchange under "VLP." We formed VLP in July 2013 to own, operate, develop, and acquire crude oil and refined petroleum products pipelines, terminals, and other transportation and logistics assets. VLP's assets include crude oil and refined products pipeline and terminal systems in the U.S. Gulf Coast and U.S. Mid-Continent regions that are integral to the operations of nine of our refineries. As of March 31, 2016, we owned a 65.7 percent limited partner interest and a 2 percent general partner interest in VLP, and public unitholders owned a 32.3 percent limited partner interest.

VLP was determined to be a VIE because the public limited partners of VLP (*i.e.*, parties other than entities under common control with the general partner) lack the power to direct the activities of VLP that most significantly impact its economic performance since they do not have substantive kick-out rights over the general partner or substantive participating rights in VLP. Furthermore, we determined that we are the primary beneficiary of VLP because (a) we are the single decision maker as our general partner interest provides us with the sole power to direct the activities that most significantly impact VLP's economic performance and (b) our 65.7 percent limited partner interest and 2 percent general partner interest provide us with significant economic rights and obligations. All of VLP's revenues are derived from us; therefore, there is limited risk to us associated with VLP's operations.

- Diamond Green Diesel Holdings LLC (DGD) is a joint venture with Darling Green Energy LLC, a subsidiary of Darling Ingredients Inc., that was formed to construct and operate a biodiesel plant that processes animal fats, used cooking oils, and other vegetable oils into renewable green diesel. The plant is located next to our St. Charles Refinery and began operations in June 2013. The significant agreements between DGD and us include a debt agreement whereby we financed approximately 60 percent of the construction costs of the plant, an operations agreement that outlines our responsibilities as operator of the plant, and a marketing agreement.

In the event of certain conditions, the debt agreement provides us (as lender) with certain power to direct the activities that most significantly impact DGD's economic performance. Because the loan agreement conveys such power to us and is separate from our ownership rights, DGD was determined to be 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 we are the primary beneficiary of

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

DGD. DGD has risk associated with its operations as it generates revenues from third-party customers.

- We also have financial interests in other entities in which we hold a 50 percent ownership interest, which is a significant variable interest. These entities were determined to be VIEs because the entities' contractual arrangements transfer the power 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 we were the primary beneficiary of these VIEs because (a) 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 (b) our 50 percent ownership interests provide us with significant economic rights and obligations. The financial position, results of operations, and cash flows of these VIEs are not material to us.

The VIEs' assets can only be used to settle their own obligations and the VIEs' creditors have no recourse to our assets. We do not provide financial guarantees to our VIEs. Although we have provided credit facilities to 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 our consolidated VIEs' performance, net of intercompany eliminations, to the extent of our ownership interest in each VIE.

The following tables present summarized balance sheet information for the significant assets and liabilities of our VIEs, which are included in our balance sheets (in millions).

	March 31, 2016			
	VLP	DGD	Other	Total
Assets				
Cash and temporary cash investments	\$ 102	\$ 17	\$ 11	\$ 130
Other current assets	—	231	—	231
Property, plant, and equipment, net	749	357	141	1,247
Liabilities				
Current liabilities	\$ 10	\$ 14	\$ 19	\$ 43
Debt and capital lease obligations, less current portion	175	—	—	175

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	December 31, 2015			
	VLP	DGD	Other	Total
Assets				
Cash and temporary cash investments	\$ 81	\$ 44	\$ 7	\$ 132
Other current assets	—	211	—	211
Property, plant, and equipment, net	747	356	140	1,243
Liabilities				
Current liabilities	\$ 13	\$ 12	\$ 18	\$ 43
Debt and capital lease obligations, less current portion	175	—	—	175

9. SEGMENT INFORMATION

The following table reflects activity related to our reportable segments (in millions):

	Refining	Ethanol	Corporate	Total
Three months ended March 31, 2016:				
Total segment revenues	\$ 14,920	\$ 828	\$ —	\$ 15,748
Less intersegment revenues	—	34	—	34
Operating revenues from external customers	\$ 14,920	\$ 794	\$ —	\$ 15,714
Lower of cost or market inventory valuation adjustment	\$ (263)	\$ (30)	\$ —	\$ (293)
Operating income (loss)	958	39	(168)	829
Three months ended March 31, 2015:				
Total segment revenues	\$ 20,529	\$ 829	\$ —	\$ 21,358
Less intersegment revenues	—	28	—	28
Operating revenues from external customers	\$ 20,529	\$ 801	\$ —	\$ 21,330
Operating income (loss)	\$ 1,641	\$ 12	\$ (158)	\$ 1,495

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

	March 31, 2016	December 31, 2015
Refining	\$ 38,427	\$ 38,068
Ethanol	1,040	1,016
Corporate	4,792	5,143
Total assets	\$ 44,259	\$ 44,227

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

10. 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):

	Three Months Ended March 31,	
	2016	2015
Decrease (increase) in current assets:		
Receivables, net	\$ (47)	\$ 892
Inventories	147	(166)
Income taxes receivable	45	39
Prepaid expenses and other	(126)	8
Increase (decrease) in current liabilities:		
Accounts payable	108	(688)
Accrued expenses	(137)	(80)
Taxes other than income taxes	(113)	(107)
Income taxes payable	(54)	159
Changes in current assets and current liabilities	\$ (177)	\$ 57

The above changes in current assets and current liabilities differ from changes between amounts reflected in the applicable balance sheets for the respective periods for the following reasons:

- the amounts shown above exclude changes in cash and temporary cash investments, deferred income taxes, and current portion of debt and capital lease obligations;
- amounts accrued for capital expenditures and deferred turnaround and catalyst costs are reflected in investing activities when such amounts are paid;
- amounts accrued for common stock purchases in the open market that are not settled as of the balance sheet date are reflected in financing activities when the purchases are settled and paid; and
- certain differences between balance sheet changes and the changes reflected above result from translating foreign currency denominated balances at the applicable exchange rates as of each balance sheet date.

There were no significant noncash investing or financing activities for the three months ended March 31, 2016 and 2015 .

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

	Three Months Ended March 31,	
	2016	2015
Interest paid in excess of amount capitalized	\$ 95	\$ 78
Income taxes paid, net	95	298

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. FAIR VALUE MEASUREMENTS

General

U.S. 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.

U.S. 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 sheet is presented below under “*Other Financial Instruments*.”

U.S. 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. 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.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Recurring Fair Value Measurements

The tables below 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 March 31, 2016 and December 31, 2015 .

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 tables below on a gross basis. We have no derivative contracts that are subject to master netting arrangements that are reflected gross on the balance sheet.

	March 31, 2016								
	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	\$ 702	\$ 17	\$ —	\$ 719	\$ (681)	\$ (21)	\$ 17	\$ —	
Investments of certain benefit plans	61	—	11	72	n/a	n/a	72	n/a	
Total	<u>\$ 763</u>	<u>\$ 17</u>	<u>\$ 11</u>	<u>\$ 791</u>	<u>\$ (681)</u>	<u>\$ (21)</u>	<u>\$ 89</u>		
Liabilities:									
Commodity derivative contracts	\$ 722	\$ 18	\$ —	\$ 740	\$ (681)	\$ (59)	\$ —	\$ (120)	
Environmental credit obligations	—	20	—	20	n/a	n/a	20	n/a	
Physical purchase contracts	—	5	—	5	n/a	n/a	5	n/a	
Foreign currency contracts	3	—	—	3	n/a	n/a	3	n/a	
Total	<u>\$ 725</u>	<u>\$ 43</u>	<u>\$ —</u>	<u>\$ 768</u>	<u>\$ (681)</u>	<u>\$ (59)</u>	<u>\$ 28</u>		

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2015

	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	\$ 649	\$ 33	\$ —	\$ 682	\$ (557)	\$ (12)	\$ 113	\$ —	
Foreign currency contracts	3	—	—	3	n/a	n/a	3	n/a	
Investments of certain benefit plans	64	—	11	75	n/a	n/a	75	n/a	
Total	\$ 716	\$ 33	\$ 11	\$ 760	\$ (557)	\$ (12)	\$ 191		
Liabilities:									
Commodity derivative contracts	\$ 522	\$ 35	\$ —	\$ 557	\$ (557)	\$ —	\$ —	\$ (31)	
Environmental credit obligations	—	2	—	2	n/a	n/a	2	n/a	
Physical purchase contracts	—	6	—	6	n/a	n/a	6	n/a	
Total	\$ 522	\$ 43	\$ —	\$ 565	\$ (557)	\$ —	\$ 8		

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 and swaps, and as disclosed in Note 12, some of these contracts are designated as hedging instruments. These contracts are measured at fair value using the market approach. Exchange-traded futures are valued based on quoted prices from the exchange and are categorized in Level 1 of the fair value hierarchy. Swaps are priced using third-party broker quotes, industry pricing services, and exchange-traded curves, with appropriate consideration of counterparty credit risk, but because they have contractual terms that are not identical to exchange-traded futures instruments with a comparable market price, these financial instruments are categorized in Level 2 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 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 assets categorized in Level 3 of the fair value hierarchy represent insurance contracts, the fair value of which is provided by the insurer.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- Foreign currency contracts consist of foreign currency exchange and purchase contracts entered into for our international operations to manage our exposure to exchange rate fluctuations on transactions denominated in currencies other than the local (functional) currencies of those operations. These contracts are valued based on quoted prices from the exchange and are categorized in Level 1 of the fair value hierarchy.
- Environmental credit obligations represent our liability for the purchase of (i) biofuel credits (primarily Renewable Identification Numbers (RINs) in the U.S.) needed to satisfy our obligation to blend biofuels into the products we produce and (ii) emission credits under the California Global Warming Solutions Act (the California cap-and-trade system, also known as AB 32) and Quebec's *Regulation respecting the cap-and-trade system for greenhouse gas emission allowances* (the Quebec cap-and-trade system), (collectively, the cap-and-trade systems). To the degree we are unable to blend biofuels (such as ethanol and biodiesel) at percentages required under the biofuel programs, we must purchase biofuel credits to comply with these programs. Under the cap-and-trade systems, we must purchase emission credits to comply with these systems. These programs are further described in Note 12 under "Environmental Compliance Program Price Risk." The liability for environmental credits is based on our deficit for such credits as of the balance sheet date, if any, after considering any credits acquired or under contract, and is equal to the product of the credits deficit and the market price of these credits as of the balance sheet date. The environmental credit obligations are categorized in Level 2 of the fair value hierarchy and are measured at fair value using the market approach based on quoted prices from an independent pricing service.

There were no transfers between Level 1 and Level 2 for assets and liabilities held as of March 31, 2016 and December 31, 2015 that were measured at fair value on a recurring basis.

There was no activity during the three months ended March 31, 2016 and 2015 related to the fair value amounts categorized in Level 3 as of March 31, 2016 and December 31, 2015 .

Nonrecurring Fair Value Measurements

There were no assets or liabilities that were measured at fair value on a nonrecurring basis as of March 31, 2016 and December 31, 2015 .

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Other Financial Instruments

Financial instruments that we recognize in our balance sheets at their carrying amounts are shown in the table below along with their associated fair values (in millions):

	March 31, 2016		December 31, 2015	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial assets:				
Cash and temporary cash investments	\$ 3,778	\$ 3,778	\$ 4,114	\$ 4,114
Financial liabilities:				
Debt (excluding capital leases)	7,252	8,005	7,292	7,759

The methods and significant assumptions used to estimate the fair value of these financial instruments are as follows:

- The fair value of cash and temporary cash investments approximates the carrying value due to the low level of credit risk of these assets combined with their short maturities and market interest rates (Level 1).
- The fair value of debt is determined primarily using the market approach based on quoted prices provided by third-party brokers and vendor pricing services (Level 2).

12. PRICE RISK MANAGEMENT ACTIVITIES

We are exposed to market risks primarily related to the volatility in the price of commodities and foreign currency exchange rates. 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 11), as summarized below under *“Fair Values of Derivative Instruments.”* In addition, the effect of these derivative instruments on our income is summarized below under *“Effect of Derivative Instruments on Income.”*

When we enter into a derivative instrument, it is designated as a fair value hedge, a cash flow hedge, an economic hedge, or a trading derivative. The gain or loss on a derivative instrument designated and qualifying as a fair value hedge, as well as the offsetting loss or gain on the hedged item attributable to the hedged risk, is recognized currently in income in the same period. The effective portion of the gain or loss on a derivative instrument designated and qualifying as a cash flow hedge is initially reported as a component of other comprehensive income and is then recorded into income in the period or periods during which the hedged forecasted transaction affects income. The ineffective portion of the gain or loss on the cash flow derivative instrument, if any, is recognized in income as incurred. For our economic hedges (derivative instruments not designated as fair value or cash flow hedges) and for derivative instruments entered into by us for trading purposes, the derivative instrument is recorded at fair value and changes in the fair value of the derivative instrument are recognized currently in income. The cash flow effects of all of our derivative instruments are reflected in operating activities in our statements of cash flows for all periods presented.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

We are also exposed to market risk related to the volatility in the price of credits needed to comply with various governmental and regulatory programs. To manage this risk, we enter into contracts to purchase these credits when prices are deemed favorable. Some of these contracts are derivative instruments; however, we elect the normal purchase exception and do not record these contracts at their fair values.

Risk Management Activities by Type of Risk

Commodity Price Risk

We are exposed to market risks related to the volatility in the price of crude oil, refined products (primarily gasoline and distillate), grain (primarily corn), soybean oil, 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, swaps, and options. We use the futures markets for the available liquidity, which provides greater flexibility in transacting our hedging and trading operations. We use swaps primarily to manage our price exposure. 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 has been approved by our board of directors.

For risk management purposes, we use fair value hedges, cash flow hedges, and economic hedges, from time to time. In addition to the use of derivative instruments to manage commodity price risk, we also enter into certain commodity derivative instruments for trading purposes. Our objective for entering into each type of hedge or trading derivative is described below.

- *Fair Value Hedges* – Fair value hedges are used to hedge price volatility in certain refining inventories and firm commitments to purchase inventories. The level of activity for our fair value hedges is based on the level of our operating inventories, and generally represents the amount by which our inventories exceed our previous year-end LIFO inventory levels. We had no commodity derivative instruments outstanding that were entered into as fair value hedges as of March 31, 2016 or during the three months ended March 31, 2016 and 2015 .
- *Cash Flow Hedges* – Cash flow hedges are used to hedge price volatility in certain forecasted feedstock and refined product purchases, refined product sales, and natural gas purchases. The objective of our cash flow hedges is to lock in the price of forecasted feedstock, refined product, or natural gas purchases or refined product sales at existing market prices that we deem favorable. We had no commodity derivative instruments outstanding that were entered into as cash flow hedges as of March 31, 2016 or during the three months ended March 31, 2016 and 2015 .

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- *Economic Hedges* – Economic hedges represent commodity derivative instruments that are not designated as fair value or cash flow hedges and are used to manage price volatility in certain (i) feedstock and refined product inventories, (ii) forecasted feedstock and product purchases, and product sales, and (iii) fixed-price purchase contracts. Our objective for entering into economic hedges is consistent with the objectives discussed above for fair value hedges and cash flow hedges. However, the economic hedges are not designated as a fair value hedge or a cash flow hedge for accounting purposes, usually due to the difficulty of establishing the required documentation at the date that the derivative instrument is entered into that would qualify as hedging instruments for accounting purposes.

As of March 31, 2016, we had the following outstanding commodity derivative instruments that were used as 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 those identified as corn contracts that are presented in thousands of bushels and soybean oil contracts that are presented in thousands of pounds).

Derivative Instrument	Notional Contract Volumes by Year of Maturity	
	2016	2017
Crude oil and refined products:		
Swaps – long	24,120	—
Swaps – short	23,676	—
Futures – long	85,898	—
Futures – short	89,219	—
Corn:		
Futures – long	18,180	10
Futures – short	36,810	345
Physical contracts – long	15,770	335
Soybean oil:		
Futures – long	67,920	—
Futures – short	122,880	—

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- *Trading Derivatives* – Our objective for entering into commodity derivative instruments for trading purposes is to take advantage of existing market conditions related to future results of operations and cash flows.

As of March 31, 2016, we had the following outstanding commodity derivative instruments that were entered into for trading purposes. The information presents the notional volume of outstanding contracts by type of instrument and year of maturity (volumes represent thousands of barrels, except those identified as natural gas contracts that are presented in billions of British thermal units and corn contracts that are presented in thousands of bushels).

Derivative Instrument	Notional Contract Volumes by Year of Maturity	
	2016	2017
Crude oil and refined products:		
Swaps – long	5,240	300
Swaps – short	5,240	300
Futures – long	33,036	3,550
Futures – short	32,792	3,550
Options – long	22,800	55,000
Options – short	22,200	55,000
Natural gas:		
Futures – long	1,400	—
Corn:		
Futures – long	3	—
Futures – short	3	—

Foreign Currency Risk

We are exposed to exchange rate fluctuations on transactions entered into by our international 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 use foreign currency exchange and purchase contracts. These contracts are not designated as hedging instruments for accounting purposes, and therefore they are classified as economic hedges. As of March 31, 2016, we had commitments to purchase \$261 million of U.S. dollars. These commitments matured on or before April 30, 2016.

Environmental Compliance Program Price Risk

We are exposed to market risk related to the volatility in the price of credits needed to comply with various governmental and regulatory environmental compliance programs. Certain of these programs require us to blend biofuels into the products we produce, and we are subject to such programs in most of the countries in which we operate. These countries set annual quotas for the percentage of biofuels that must be blended into the motor fuels consumed in these countries. As a producer of motor fuels from petroleum, we are obligated to blend biofuels into the products we produce at a rate that is at least equal to the applicable quota. To the degree we are unable to blend at the applicable rate, we must purchase biofuel credits (primarily RINs in the U.S.). We are exposed to the volatility in the market price of these credits, and we manage that risk.

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

by purchasing biofuel credits when prices are deemed favorable. The cost of meeting our obligations under these compliance programs was \$161 million and \$133 million for the three months ended March 31, 2016 and 2015, respectively. These amounts are reflected in cost of sales.

Effective January 1, 2015, we became subject to additional requirements under greenhouse gas emission programs, including the cap-and-trade systems, as discussed in Note 11. Under these cap-and-trade systems, we purchase various greenhouse gas emission credits available on the open market. Therefore, we are exposed to the volatility in the market price of these credits. The cost to implement certain provisions of the cap-and-trade systems are significant; however, we recovered the majority of these costs from our customers for the three months ended March 31, 2016 and 2015 and expect to continue to recover the majority of these costs in the future. For the three months ended March 31, 2016 and 2015, the net cost of meeting our obligations under these compliance programs was immaterial.

Fair Values of Derivative Instruments

The following tables provide information about the fair values of our derivative instruments as of March 31, 2016 and December 31, 2015 (in millions) and the line items in the balance sheets in which the fair values are reflected. See Note 11 for additional information related to the fair values of our derivative instruments.

As indicated in Note 11, 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 tables below, however, are 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.

	Balance Sheet Location	March 31, 2016	
		Asset Derivatives	Liability Derivatives
Derivatives not designated as hedging instruments			
Commodity contracts:			
Futures	Receivables, net	\$ 700	\$ 720
Swaps	Receivables, net	11	17
Options	Receivables, net	8	3
Physical purchase contracts	Inventories	—	5
Foreign currency contracts	Accrued expenses	—	3
Total		\$ 719	\$ 748

VALERO ENERGY CORPORATION
CONDENSED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	Balance Sheet Location	December 31, 2015	
		Asset Derivatives	Liability Derivatives
Derivatives not designated as hedging instruments			
Commodity contracts:			
Futures	Receivables, net	\$ 648	\$ 522
Swaps	Receivables, net	30	33
Options	Receivables, net	4	2
Physical purchase contracts	Inventories	—	6
Foreign currency contracts	Receivables, net	3	—
Total		\$ 685	\$ 563

Market and Counterparty 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 approved by our board of directors. 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

The following tables provide information about the gain or loss recognized in income on our derivative instruments and the income statement line items in which such gains and losses are reflected (in millions).

Derivatives Designated as Economic Hedges and Other Derivative Instruments	Location of Gain (Loss) Recognized in Income on Derivatives	Three Months Ended March 31,	
		2016	2015
Commodity contracts	Cost of sales	\$ (139)	\$ 64
Foreign currency contracts	Cost of sales	(3)	22

Trading Derivatives	Location of Gain Recognized in Income on Derivatives	Three Months Ended March 31,	
		2016	2015
Commodity contracts	Cost of sales	\$ 41	\$ 20

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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

This Form 10-Q, including without limitation our disclosures below under the heading "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," "estimate," "project," "projection," "predict," "budget," "forecast," "goal," "guidance," "target," "could," "should," "may," and similar expressions.

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

- future refining margins, including gasoline and distillate margins;
- future ethanol margins;
- expectations regarding feedstock costs, including crude oil differentials, and operating expenses;
- anticipated levels of crude oil and refined product inventories;
- our anticipated level of capital investments, including deferred costs for refinery turnarounds and catalyst, capital expenditures for environmental and other purposes, and joint venture investments, and the effect of those capital investments on our results of operations;
- anticipated trends in the supply of and demand for crude oil and other feedstocks and refined products in the regions where we operate, as well as globally;
- expectations regarding environmental, tax, and other regulatory initiatives; and
- the effect of general economic and other conditions on refining and ethanol industry fundamentals.

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

- acts of terrorism aimed at either our facilities or other facilities that could impair our ability to produce or transport refined products or receive feedstocks;
- political and economic conditions in nations that produce crude oil or consume refined products;
- demand for, and supplies of, refined products such as gasoline, diesel, jet fuel, petrochemicals, and ethanol;
- demand for, and supplies of, crude oil and other feedstocks;
- the ability of the members of the Organization of Petroleum Exporting Countries to agree on and to maintain crude oil price and production controls;
- the level of consumer demand, including seasonal fluctuations;
- refinery overcapacity or undercapacity;
- our ability to successfully integrate any acquired businesses into our operations;
- the actions taken by competitors, including both pricing and adjustments to refining capacity in response to market conditions;
- the level of competitors' imports into markets that we supply;

- accidents, unscheduled shutdowns, or other catastrophes affecting our refineries, machinery, pipelines, equipment, and information systems, or those of our suppliers or customers;
- changes in the cost or availability of transportation for feedstocks and refined products;
- the price, availability, and acceptance of alternative fuels and alternative-fuel vehicles;
- the levels of government subsidies for alternative fuels;
- the volatility in the market price of biofuel credits (primarily Renewable Identification Numbers (RINs) needed to comply with the U.S. federal Renewable Fuel Standard) and greenhouse gas (GHG) emission credits needed to comply with the requirements of various GHG emission programs;
- delay of, cancellation of, or failure to implement planned capital projects and realize the various assumptions and benefits projected for such projects or cost overruns in constructing such planned capital projects;
- earthquakes, hurricanes, tornadoes, and irregular weather, which can unforeseeably affect the price or availability of natural gas, crude oil, grain and other feedstocks, and refined products and ethanol;
- rulings, judgments, or settlements in litigation or other legal or regulatory matters, including unexpected environmental remediation costs, in excess of any reserves or insurance coverage;
- legislative or regulatory action, including the introduction or enactment of legislation or rulemakings by governmental authorities, including tax and environmental regulations, such as those implemented under the California Global Warming Solutions Act (also known as AB 32), Quebec's *Regulation respecting the cap-and-trade system for greenhouse gas emission allowances* (the Quebec cap-and-trade system), and the U.S. EPA's regulation of GHGs, which may adversely affect our business or operations;
- changes in the credit ratings assigned to our debt securities and trade credit;
- changes in currency exchange rates, including the value of the Canadian dollar, the pound sterling, and the euro relative to the U.S. dollar;
- overall economic conditions, including the stability and liquidity of financial markets; and
- other factors generally described in the "Risk Factors" section included in our annual report on Form 10-K for the year ended December 31, 2015 that is incorporated by reference herein.

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 suggested in any forward-looking statements. We do not intend to update these statements unless we are required by the 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. 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.

OVERVIEW AND OUTLOOK

Overview

In the first quarter of 2016, we reported net income attributable to Valero stockholders of \$495 million, or \$1.05 per share (assuming dilution), compared to \$964 million, or \$1.87 per share (assuming dilution), in the first quarter of 2015. Included in our results for the first quarter of 2016 was a noncash benefit for a lower of cost or market inventory valuation adjustment of \$293 million (\$212 million after taxes, or \$0.45 per share (assuming dilution)), of which \$263 million was attributable to our refining segment and \$30 million was attributable to our ethanol segment. This matter is more fully described in Note 2 of Notes to Condensed Consolidated Financial Statements.

Our operating income decreased \$666 million from the first quarter of 2015 to the first quarter of 2016 as outlined by business segment in the following table (in millions):

	Three Months Ended March 31,		
	2016	2015	Change
Operating income by business segment:			
Refining	\$ 958	\$ 1,641	\$ (683)
Ethanol	39	12	27
Corporate	(168)	(158)	(10)
Total	\$ 829	\$ 1,495	\$ (666)

However, excluding the effect of the lower of cost or market inventory valuation adjustment benefit discussed above, total operating income in the first quarter of 2016 was \$536 million, reflecting a \$959 million unfavorable decrease between the years, with refining segment operating income of \$695 million (an unfavorable decrease of \$946 million) and ethanol segment operating income of \$9 million (an unfavorable decrease of \$3 million).

The \$946 million decrease in refining segment operating income in the first quarter of 2016 compared to the first quarter of 2015 was due primarily to lower margins on refined products and lower discounts on light sweet and sour crude oils relative to Brent crude oil, partially offset by higher margins on other refined products (e.g., petroleum coke, propane, and sulfur). Our ethanol segment operating income decreased \$3 million in the first quarter of 2016 compared to the first quarter of 2015 due primarily to lower ethanol margins that resulted from lower ethanol prices.

Additional details and analysis of the changes in the operating income of our business segments and other components of net income attributable to Valero stockholders are provided below under “RESULTS OF OPERATIONS.”

Outlook

Energy markets and margins were volatile during the first quarter of 2016, and we expect them to continue to be volatile during the remainder of 2016. Below is a summary of factors that have impacted or may impact our results of operations during the second quarter of 2016:

- Gasoline margins are expected to improve as domestic and export demand strengthen with the upcoming driving season. Distillate margins are expected to be volatile.
- Medium and heavy sour crude oil discounts are expected to remain wide as sour crude oil remains oversupplied. Fuel oil price weakness continues to put pressure on heavy sour crude oil discounts.

Sweet crude oil discounts are expected to remain narrow with the expectation of continued declines in domestic sweet crude oil production.

- Ethanol margins are expected to improve as ethanol prices are expected to increase with gasoline prices.
- A decline in market prices of refined products may negatively impact the carrying value of our inventories.

RESULTS OF OPERATIONS

The following tables highlight our results of operations, our operating performance, and market prices that directly impact our operations. The narrative following these tables provides an analysis of our results of operations.

Financial Highlights (millions of dollars, except per share amounts)

	Three Months Ended March 31,		
	2016	2015	Change
Operating revenues	\$ 15,714	\$ 21,330	\$ (5,616)
Costs and expenses:			
Cost of sales (excluding the lower of cost or market inventory valuation adjustment)	13,507	18,163	(4,656)
Lower of cost or market inventory valuation adjustment (a)	(293)	—	(293)
Operating expenses:			
Refining	931	964	(33)
Ethanol	99	120	(21)
General and administrative expenses	156	147	9
Depreciation and amortization expense:			
Refining	461	417	44
Ethanol	12	13	(1)
Corporate	12	11	1
Total costs and expenses	14,885	19,835	(4,950)
Operating income	829	1,495	(666)
Other income, net	9	24	(15)
Interest and debt expense, net of capitalized interest	(108)	(101)	(7)
Income before income tax expense	730	1,418	(688)
Income tax expense	217	450	(233)
Net income	513	968	(455)
Less: Net income attributable to noncontrolling interests	18	4	14
Net income attributable to Valero Energy Corporation stockholders	\$ 495	\$ 964	\$ (469)
Earnings per common share – assuming dilution	\$ 1.05	\$ 1.87	\$ (0.82)

See note references on page 38 .

Refining Operating Highlights
(millions of dollars, except per barrel amounts)

	Three Months Ended March 31,		
	2016	2015	Change
Refining:			
Operating income	\$ 958	\$ 1,641	\$ (683)
Throughput margin per barrel (a) (b)	\$ 7.96	\$ 12.39	\$ (4.43)
Operating costs per barrel:			
Operating expenses	3.55	3.95	(0.40)
Depreciation and amortization expense	1.76	1.71	0.05
Total operating costs per barrel	5.31	5.66	(0.35)
Operating income per barrel	\$ 2.65	\$ 6.73	\$ (4.08)
Throughput volumes (thousand barrels per day):			
Feedstocks:			
Heavy sour crude oil	427	430	(3)
Medium/light sour crude oil	533	377	156
Sweet crude oil	1,172	1,145	27
Residuals	289	257	32
Other feedstocks	136	176	(40)
Total feedstocks	2,557	2,385	172
Blendstocks and other	322	325	(3)
Total throughput volumes	2,879	2,710	169
Yields (thousand barrels per day):			
Gasolines and blendstocks	1,378	1,316	62
Distillates	1,067	1,027	40
Other products (c)	470	406	64
Total yields	2,915	2,749	166

See note references on page 38 .

Refining Operating Highlights by Region (a) (d)
(millions of dollars, except per barrel amounts)

	Three Months Ended March 31,		
	2016	2015	Change
U.S. Gulf Coast:			
Operating income	\$ 437	\$ 872	\$ (435)
Throughput volumes (thousand barrels per day)	1,693	1,527	166
Throughput margin per barrel (b)	\$ 8.03	\$ 11.98	\$ (3.95)
Operating costs per barrel:			
Operating expenses	3.48	3.83	(0.35)
Depreciation and amortization expense	1.71	1.81	(0.10)
Total operating costs per barrel	5.19	5.64	(0.45)
Operating income per barrel	\$ 2.84	\$ 6.34	\$ (3.50)
U.S. Mid-Continent:			
Operating income	\$ 73	\$ 317	\$ (244)
Throughput volumes (thousand barrels per day)	455	432	23
Throughput margin per barrel (b)	\$ 6.95	\$ 13.82	\$ (6.87)
Operating costs per barrel:			
Operating expenses	3.43	3.96	(0.53)
Depreciation and amortization expense	1.76	1.70	0.06
Total operating costs per barrel	5.19	5.66	(0.47)
Operating income per barrel	\$ 1.76	\$ 8.16	\$ (6.40)
North Atlantic:			
Operating income	\$ 167	\$ 370	\$ (203)
Throughput volumes (thousand barrels per day)	472	495	(23)
Throughput margin per barrel (b)	\$ 7.94	\$ 12.45	\$ (4.51)
Operating costs per barrel:			
Operating expenses	2.90	2.98	(0.08)
Depreciation and amortization expense	1.16	1.17	(0.01)
Total operating costs per barrel	4.06	4.15	(0.09)
Operating income per barrel	\$ 3.88	\$ 8.30	\$ (4.42)
U.S. West Coast:			
Operating income	\$ 18	\$ 82	\$ (64)
Throughput volumes (thousand barrels per day)	259	256	3
Throughput margin per barrel (b)	\$ 9.34	\$ 12.33	\$ (2.99)
Operating costs per barrel:			
Operating expenses	5.43	6.57	(1.14)
Depreciation and amortization expense	3.16	2.18	0.98
Total operating costs per barrel	8.59	8.75	(0.16)
Operating income per barrel	\$ 0.75	\$ 3.58	\$ (2.83)
Operating income for regions above	\$ 695	\$ 1,641	\$ (946)
Lower of cost or market inventory valuation adjustment (a)	263	—	263
Total refining operating income	\$ 958	\$ 1,641	\$ (683)

See note references on page 38 .

Average Market Reference Prices and Differentials
(dollars per barrel, except as noted)

	Three Months Ended March 31,		
	2016	2015	Change
Feedstocks:			
Brent crude oil	\$ 35.14	\$ 55.13	\$ (19.99)
Brent less West Texas Intermediate (WTI) crude oil	1.90	6.57	(4.67)
Brent less Alaska North Slope (ANS) crude oil	0.69	1.44	(0.75)
Brent less Louisiana Light Sweet (LLS) crude oil	0.80	3.76	(2.96)
Brent less Mars crude oil	6.00	7.43	(1.43)
Brent less Maya crude oil	9.09	11.00	(1.91)
LLS crude oil	34.34	51.37	(17.03)
LLS less Mars crude oil	5.20	3.67	1.53
LLS less Maya crude oil	8.29	7.24	1.05
WTI crude oil	33.24	48.56	(15.32)
Natural gas (dollars per million British thermal units (MMBtu))	1.93	2.77	(0.84)
Products:			
U.S. Gulf Coast:			
CBOB gasoline less Brent	7.81	7.69	0.12
Ultra-low-sulfur diesel less Brent	7.92	15.74	(7.82)
Propylene less Brent	(2.39)	13.10	(15.49)
CBOB gasoline less LLS	8.61	11.45	(2.84)
Ultra-low-sulfur diesel less LLS	8.72	19.50	(10.78)
Propylene less LLS	(1.59)	16.86	(18.45)
U.S. Mid-Continent:			
CBOB gasoline less WTI	10.00	14.70	(4.70)
Ultra-low-sulfur diesel less WTI	11.03	22.53	(11.50)
North Atlantic:			
CBOB gasoline less Brent	10.30	8.05	2.25
Ultra-low-sulfur diesel less Brent	9.53	22.05	(12.52)
U.S. West Coast:			
CARBOB 87 gasoline less ANS	17.34	19.40	(2.06)
CARB diesel less ANS	11.19	19.16	(7.97)
CARBOB 87 gasoline less WTI	18.55	24.53	(5.98)
CARB diesel less WTI	12.40	24.29	(11.89)
New York Harbor corn crush (dollars per gallon)	0.13	0.13	—

Ethanol Operating Highlights
(millions of dollars, except per gallon amounts)

	Three Months Ended March 31,		
	2016	2015	Change
Ethanol:			
Operating income	\$ 9	\$ 12	\$ (3)
Production (thousand gallons per day)	3,740	3,776	(36)
Gross margin per gallon of production (b)	\$ 0.35	\$ 0.43	\$ (0.08)
Operating costs per gallon of production:			
Operating expenses	0.29	0.35	(0.06)
Depreciation and amortization expense	0.03	0.04	(0.01)
Total operating costs per gallon of production	0.32	0.39	(0.07)
Operating income per gallon of production	\$ 0.03	\$ 0.04	\$ (0.01)
Operating income from above	\$ 9	\$ 12	\$ (3)
Lower of cost or market inventory valuation adjustment (a)	30	—	30
Total ethanol operating income	\$ 39	\$ 12	\$ 27

See note references below.

The following notes relate to references on pages 34 through 38 .

- (a) In March 2016, we recorded a change in our lower of cost or market inventory valuation adjustment reserve that resulted in a net benefit of \$293 million (\$212 million after taxes), of which \$263 million is attributable to our refining segment and \$30 million is attributable to our ethanol segment. In accordance with U.S. generally accepted accounting principles (GAAP), we are required to state our inventories at the lower of cost or market. When the market price of our inventory falls below cost, we record an inventory valuation adjustment to write down the value to market. The lower of cost or market inventory valuation adjustment benefit for the three months ended March 31, 2016 has been excluded from (1) the segment and regional throughput margins per barrel and the regional operating income amounts for the refining segment, and (2) the gross operating income and the gross margin per gallon of production amounts for the ethanol segment, respectively. This adjustment is further discussed in Note 2 of Condensed Notes to Consolidated Financial Statements.
- (b) Throughput margin per barrel represents operating revenues less cost of sales of our refining segment divided by throughput volumes. Gross margin per gallon of production represents operating revenues less cost of sales of our ethanol segment divided by production volumes.
- (c) Other products primarily include petrochemicals, gas oils, No. 6 fuel oil, petroleum coke, sulfur, and asphalt.
- (d) The regions reflected herein contain the following refineries: the U.S. Gulf Coast region includes the Corpus Christi East, Corpus Christi West, Houston, Meraux, Port Arthur, St. Charles, Texas City, and Three Rivers Refineries; the U.S. Mid-Continent region includes the Ardmore, McKee, and Memphis Refineries; the North Atlantic region includes the Pembroke and Quebec City Refineries; and the U.S. West Coast region includes the Benicia and Wilmington Refineries.

General

Operating revenues decreased \$5.6 billion (or 26 percent) and cost of sales decreased \$4.7 billion (or 26 percent) in the first quarter of 2016 compared to the first quarter of 2015 primarily due to a decrease in refined product prices and crude oil feedstock costs, respectively. Operating income decreased \$666 million in the first quarter of 2016 compared to the first quarter of 2015 , with refining segment operating income decreasing by \$683 million and ethanol segment operating income increasing by \$27 million . The reasons for these changes in the operating results of our segments, as well as other items that affected our income, are discussed below.

Refining

Refining segment operating income decreased \$683 million from \$1.6 billion in the first quarter of 2015 to \$958 million in the first quarter of 2016. Excluding the effect of the lower of cost or market inventory valuation adjustment benefit of \$263 million in the first quarter of 2016, our refining segment operating income decreased \$946 million. This decrease was primarily due to a \$935 million decrease in refining margin and a \$44 million increase in depreciation and amortization expense, partially offset by a \$33 million decrease in operating expenses.

Refining margin decreased \$935 million (a \$4.43 per barrel decrease) for the first quarter of 2016 compared to the first quarter of 2015, due primarily to the following:

- *Decrease in distillate margins* - We experienced a decrease in distillate margins in all of our regions in the first quarter of 2016 compared to the first quarter of 2015. For example, the Brent-based benchmark reference margin for U.S. Gulf Coast ultra-low-sulfur diesel was \$7.92 per barrel in the first quarter of 2016 compared to \$15.74 per barrel in the first quarter of 2015, representing an unfavorable decrease of \$7.82 per barrel. We estimate that the decrease in distillate margins in the first quarter of 2016 compared to the first quarter of 2015 had an unfavorable impact to our refining margin of approximately \$870 million.
- *Decrease in gasoline margins* - We experienced a decrease in gasoline margins throughout most of our regions in the first quarter of 2016 compared to the first quarter of 2015. For example, the WTI-based reference margin for U.S. Mid-Continent CBOB gasoline was \$10.00 per barrel in the first quarter of 2016 compared to \$14.70 per barrel in the first quarter of 2015, representing an unfavorable decrease of \$4.70 per barrel. Another example is the ANS-based reference margin for U.S. West Coast CARBOB gasoline that was \$17.34 per barrel in the first quarter of 2016 compared to \$19.40 per barrel in the first quarter of 2015, representing an unfavorable decrease of \$2.06 per barrel. We estimate that the decrease in gasoline margins per barrel in the first quarter of 2016 compared to the first quarter of 2015 had an unfavorable impact to our refining margin of approximately \$120 million.
- *Lower discounts on light sweet crude oils and sour crude oils* - Because the market prices for refined products generally track the price of Brent crude oil, which is a benchmark sweet crude oil, we benefit when we process crude oils that are priced at a discount to Brent crude oil. In the first quarter of 2016, the discount in the price of most crude oils compared to the price of Brent crude oil narrowed. Therefore, while we benefitted from processing crude oils priced at a discount to Brent crude oil, that benefit declined in the first quarter of 2016 compared to the first quarter of 2015. For example, we processed LLS crude oil (a type of light sweet crude oil) in our U.S. Gulf Coast region that sold at a discount of \$0.80 per barrel to Brent crude oil in the first quarter of 2016 compared to a discount of \$3.76 per barrel in the first quarter of 2015, representing an unfavorable decrease of \$2.96 per barrel. Another example is Maya crude oil (a type of sour crude oil) that sold at a discount of \$9.09 per barrel to Brent crude oil in the first quarter of 2016 compared to a discount of \$11.00 per barrel in the first quarter of 2015, representing an unfavorable decrease of \$1.91 per barrel. We estimate that the narrowing of the discounts for light sweet crude oils and sour crude oils that we processed in the first quarter of 2016 had a combined unfavorable impact to our refining margin of approximately \$140 million.
- *Lower benefit from processing other feedstocks* - In addition to crude oil, we use other feedstocks and blendstocks in our refining processes, such as natural gas. When combined with steam, natural gas produces hydrogen that is used in our hydrotreater and hydrocracker processing units to produce refined products. Although natural gas costs declined from the first quarter of 2015 to the first quarter of 2016, the decline was not as significant as the decline in the cost of Brent crude oil; therefore, the benefit we

normally derive by using natural gas as a feedstock declined. We estimate that the decline in the benefit derived from processing other feedstocks in the first quarter of 2016 had an unfavorable impact to our refining margin of approximately \$110 million.

- *Increase in other refined products margins* - We experienced an increase in the margins of other refined products (such as petroleum coke and sulfur) relative to Brent crude oil in the first quarter of 2016 compared to the first quarter of 2015 . Margins for other refined products were higher in the first quarter of 2016 due to the decrease in the cost of crude oils in the period compared to the first quarter of 2015 . Because the market prices for our other refined products remain relatively stable, we benefit when the cost of crude oils that we process declines. For example, the benchmark price of Brent crude oil was \$35.14 per barrel in the first quarter of 2016 compared to \$55.13 per barrel in the first quarter of 2015 . We estimate that the increase in other refined products margins in the first quarter of 2016 compared to the first quarter of 2015 had a positive impact to our refining margin of approximately \$150 million.
- *Higher throughput volumes* - Refining throughput volumes increased by 169,000 barrels per day in the first quarter of 2016 . We estimate that the increase in refining throughput volumes had a positive impact to our refining margin of approximately \$120 million.

The decrease of \$33 million in operating expenses was primarily due to a \$26 million decrease in energy costs driven by lower natural gas prices (\$1.93 per MMBtu in the first quarter of 2016 compared to \$2.77 per MMBtu in the first quarter of 2015) and a \$13 million decrease in costs associated with lower levels of unplanned maintenance activities in the first quarter of 2016 .

The increase of \$44 million in depreciation and amortization expense was primarily due to an increase of \$17 million in depreciation expense associated with new capital projects and \$19 million in refinery turnaround and catalyst amortization expense resulting from the completion of turnaround projects at several of our refineries.

Ethanol

Ethanol segment operating income was \$39 million in the first quarter of 2016 compared to \$12 million in the first quarter of 2015 . Excluding the effect of the lower of cost or market inventory valuation adjustment benefit of \$30 million , our ethanol segment operating income decreased \$3 million . This decrease was due primarily to a \$25 million (or \$0.08 per gallon) decrease in gross margin, partially offset by a \$21 million decrease in operating expenses.

The decrease in ethanol segment gross margin of \$25 million was due primarily to the following:

- *Lower ethanol prices* - Ethanol prices were lower in the first quarter of 2016 primarily due to the decrease in crude oil and gasoline prices in the first quarter of 2016 compared to the first quarter of 2015 . For example, the New York Harbor ethanol price was \$1.45 per gallon in the first quarter of 2016 compared to \$1.53 per gallon in the first quarter of 2015 . We estimate that the decrease in the price of ethanol per gallon in the first quarter of 2016 had an unfavorable impact to our ethanol margin of approximately \$30 million.
- *Lower corn prices* - Corn prices were lower in the first quarter of 2016 compared to the first quarter of 2015 primarily due to ample corn supplies. For example, the Chicago Board of Trade corn price was \$3.63 per bushel in the first quarter of 2016 compared to \$3.85 per bushel in the first quarter of 2015 . We estimate that the decrease in the price of corn that we processed during the first quarter of 2016 had a favorable impact to our ethanol margin of approximately \$20 million.

- *Lower co-product prices* - The decrease in corn prices in the first quarter of 2016 compared to the first quarter of 2015 had an unfavorable effect on the prices we received for corn-related ethanol co-products, such as distillers grains and corn oil. We estimate that the decrease in co-products prices had an unfavorable impact to our ethanol margin of approximately \$20 million.

The \$21 million decrease in operating expenses was primarily due to a \$16 million decrease in energy costs related to lower natural gas prices (\$1.93 per MMBtu in the first quarter of 2016 compared to \$2.77 per MMBtu in the first quarter of 2015).

Other

Income tax expense decreased \$233 million from the first quarter of 2015 to the first quarter of 2016 primarily as a result of lower income before income tax expense.

LIQUIDITY AND CAPITAL RESOURCES

Cash Flows for the Three Months Ended March 31, 2016

Our operations generated \$640 million of cash in the first three months of 2016 , driven primarily by net income of \$513 million and excluding \$313 million of noncash charges to income. Non cash charges include \$485 million of depreciation and amortization expense and \$121 million of deferred income tax expense, partially offset by a benefit of \$293 million from a lower of cost or market inventory valuation adjustment. See “RESULTS OF OPERATIONS” for further discussion of our operations. However, the change in our working capital in the first three months of 2016 had a negative impact to cash generated by our operations of \$177 million as shown in Note 10 of Condensed Notes to Consolidated Financial Statements. This use of cash mainly resulted from:

- the prepayment of certain expenses, primarily for the purchase of emissions credits related to cap-and-trade systems at prices we deemed favorable in anticipation of our annual obligation;
- the payment of accrued incentive compensation related to 2015;
- payments of sales, excise, and ad valorem taxes; and
- the partial liquidation of our inventories.

The \$640 million of cash generated by our operations, along with \$336 million from our total cash on hand, were used mainly to:

- fund \$479 million in capital investments, which are comprised of capital expenditures, deferred turnaround and catalyst costs, and joint venture investments;
- make payments on capital lease obligations of \$3 million ;
- purchase common stock for treasury of \$265 million ; and
- pay common stock dividends of \$282 million .

Cash Flows for the Three Months Ended March 31, 2015

Our operations generated \$1.4 billion of cash in the first three months of 2015 , driven primarily by net income of \$968 million and excluding \$380 million of noncash charges to income comprised of depreciation and amortization expense of \$441 million , offset by a deferred income tax benefit of \$61 million . See “RESULTS OF OPERATIONS” for further discussion of our operations. The change in our working capital in the first three months of 2015 did not have a significant impact to cash generated by our operations.

The \$1.4 billion of cash generated by our operations in the first three months of 2015 , along with \$1.45 billion in proceeds from the issuance of debt (\$600 million of 3.65 percent senior notes due March 15, 2025 , \$650 million of 4.9 percent senior notes due March 15, 2045 , and borrowings under the VLP Revolver of \$200 million), were used to:

- fund \$713 million of investing activities, including \$698 million in capital investments. Capital investments are comprised of capital expenditures, deferred turnaround and catalyst costs, and joint venture investments;
- make note repayments of \$400 million related to our 4.5 percent senior notes and \$2 million related to other non-bank debt;
- purchase common stock for treasury of \$325 million ;
- pay common stock dividends of \$206 million ; and
- increase available cash on hand by \$1.2 billion .

Capital Investments

For 2016, we expect to incur approximately \$2.6 billion for capital investments, including capital expenditures, deferred turnaround and catalyst costs, and joint venture investments. This consists of approximately \$1.6 billion for stay-in-business capital and \$1.0 billion for growth strategies, including our continued investment in Diamond Pipeline LLC (Diamond Pipeline) described below. This capital investment estimate excludes potential strategic acquisitions. We continuously evaluate our capital budget and make changes as conditions warrant.

We hold investments in joint ventures and we invest in these joint ventures or enter into new joint venture arrangements to enhance our operations. In December 2015, we exercised our option to purchase a 50 percent interest in Diamond Pipeline, which was formed by Plains Pipeline, L.P. (Plains) to construct and operate a 440-mile, 20-inch crude oil pipeline expected to provide capacity of up to 200,000 barrels per day of domestic sweet crude oil from the Plains Cushing, Oklahoma terminal to our Memphis Refinery, with the ability to connect into the Capline Pipeline. The pipeline is expected to be completed in 2017 for an estimated \$925 million, pending receipt of necessary regulatory approvals. We contributed \$136 million upon exercise of our option and expect to invest an additional \$170 million in 2016.

Contractual Obligations

As of March 31, 2016 , our contractual obligations included debt, capital lease obligations, operating leases, purchase obligations, and other long-term liabilities. There were no material changes outside the ordinary course of business with respect to these contractual obligations during the three months ended March 31, 2016 .

We have an accounts receivable sales facility with a group of third-party entities and financial institutions to sell eligible trade receivables on a revolving basis up to \$1.4 billion . As of March 31, 2016 , the actual availability under the facility fell below the facility borrowing capacity to \$1.1 billion primarily due to a decrease in eligible trade receivables as a result of the decline in the market prices of the finished products that we produce.

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 would increase. All of the ratings on our senior unsecured debt are 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 and may be revised or withdrawn at any time by the rating agency. 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.

Summary of Credit Facilities

As of March 31, 2016, we had outstanding borrowings and letters of credit issued under our credit facilities as follows (in millions):

	Facility Amount	Maturity Date	March 31, 2016			
			Outstanding Borrowings	Letters of Credit	Availability	
Committed facilities:						
Revolver	\$ 3,000	November 2020	\$ —	\$ 53	\$ 2,947	
VLP Revolver	\$ 750	November 2020	\$ 175	\$ —	\$ 575	
Canadian Revolver	C\$ 50	November 2016	C\$ —	C\$ 10	C\$ 40	
Accounts receivable sales facility	\$ 1,400	July 2016	\$ 100	\$ —	\$ 974	
Letter of credit facilities	\$ 275	June 2016 and November 2016	\$ —	\$ 16	\$ 259	
Uncommitted facilities:						
Letter of credit facilities	\$ 700	N/A	\$ —	\$ 61	\$ 639	

Letters of credit issued as of March 31, 2016 expire in 2016 through 2018.

Other Matters Impacting Liquidity and Capital Resources

Stock Purchase Program

As of March 31, 2016, we had approximately \$1.1 billion of our common stock remaining to be purchased under our \$2.5 billion common stock purchase program, but we have no obligation to make purchases under this program.

Pension Plan Funding

We plan to contribute approximately \$36 million to our pension plans and \$20 million to our other postretirement benefit plans during 2016.

Environmental Matters

Our operations are subject to extensive environmental regulations by governmental authorities relating to the discharge of materials into the environment, waste management, pollution prevention measures, GHG emissions, and characteristics and composition of gasolines and distillates. 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 expenditures required for environmental matters could increase in the future as previously discussed above in “OUTLOOK.” In addition, any major upgrades in any of our operating facilities could require material additional expenditures to comply with environmental laws and regulations. See Note 4 of Condensed Notes to Consolidated Financial Statements for a further discussion of our environmental matters.

Tax Matters

The Internal Revenue Service (IRS) has ongoing tax audits related to our U.S. federal tax returns from 2008 through 2011, and we have received Revenue Agent Reports (RARs) in connection with these audits. We are contesting certain tax positions and assertions included in the RARs and continue to make progress in resolving certain of these matters with the IRS. We expect to settle our audit for tax years 2008 and 2009 within the next 12 months and we believe the audit will be settled for amounts consistent with the recorded amounts of uncertain tax position liabilities associated with that audit. In addition, our net uncertain tax position liabilities, including related penalties and interest, did not change significantly during the three months ended March 31, 2016. Should we ultimately settle these audits for amounts consistent with our estimates, we believe that we will have sufficient cash on hand at that time to make such payments.

Cash Held by Our International Subsidiaries

We operate in countries outside the U.S. through subsidiaries incorporated in these countries, and the earnings of these subsidiaries are taxed by the countries in which they are incorporated. We intend to reinvest these earnings indefinitely in our international operations even though we are not restricted from repatriating such earnings to the U.S. in the form of cash dividends. Should we decide to repatriate such earnings, we would incur and pay taxes on the amounts repatriated. In addition, such repatriation could cause us to record deferred tax expense that could significantly impact our results of operations. We believe, however, that a substantial portion of our international cash can be returned to the U.S. without significant tax consequences through means other than a repatriation of earnings. As of March 31, 2016, \$1.8 billion of our cash and temporary cash investments was held by our international subsidiaries.

Concentration of Customers

Our operations have a concentration of customers in the refining industry and customers who are refined 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. 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.

Sources of Liquidity

We believe that we have sufficient funds from operations and, to the extent necessary, from borrowings under our credit facilities, to fund our ongoing operating requirements. We expect that, to the extent necessary, we can raise additional funds from time to time through equity or debt financings in the public and private capital markets 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.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in our financial statements and accompanying notes. Actual results could differ from those estimates. As of March 31, 2016, there were no significant changes to our critical accounting policies since the date our annual report on Form 10-K for the year ended December 31, 2015 was filed.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

COMMODITY PRICE RISK

We are exposed to market risks related to the volatility in the price of crude oil, refined products (primarily gasoline and distillate), grain (primarily corn), 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 swaps, 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 last-in, first-out (LIFO) basis) differ from our previous year-end LIFO inventory levels, and
- forecasted feedstock and refined product purchases, refined product sales, natural gas purchases, and corn purchases to lock in the price of those forecasted transactions at existing market prices that we deem favorable.

We use the futures markets for the available liquidity, which provides greater flexibility in transacting our price risk activities. We use swaps primarily to manage our price exposure. We also enter into certain commodity derivative instruments for trading purposes to take advantage of existing market conditions related to future results of operations and cash flows.

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 has been approved by our board of directors.

The following sensitivity analysis includes all positions at the end of the reporting period with which we have market risk (in millions):

	Derivative Instruments Held For	
	Non-Trading Purposes	Trading Purposes
March 31, 2016:		
Gain (loss) in fair value resulting from:		
10% increase in underlying commodity prices	\$ (6)	\$ 3
10% decrease in underlying commodity prices	6	(8)
December 31, 2015:		
Gain (loss) in fair value resulting from:		
10% increase in underlying commodity prices	(45)	—
10% decrease in underlying commodity prices	45	5

See Note 12 of Condensed Notes to Consolidated Financial Statements for notional volumes associated with these derivative contracts as of March 31, 2016 .

COMPLIANCE PROGRAM PRICE RISK

We are exposed to market risk related to the volatility in the price of biofuel credits and GHG emission credits needed to comply with various governmental and regulatory programs. To manage these risks, we enter into contracts to purchase these credits when prices are deemed favorable. Some of these contracts are derivative instruments; however, we elect the normal purchase exception and do not record these contracts at their fair values. As of March 31, 2016 , there was an immaterial amount of gain or loss in the fair value of derivative instruments that would result from a 10 percent increase or decrease in the underlying price of the contracts. See Note 12 of Condensed Notes to Consolidated Financial Statements for a discussion about these compliance programs.

INTEREST RATE RISK

The following table provides information about our debt instruments, the fair values of which are sensitive to changes in interest rates. Principal cash flows and related weighted-average interest rates by expected maturity dates are presented. We had no interest rate derivative instruments outstanding as of March 31, 2016 or December 31, 2015 .

March 31, 2016									
Expected Maturity Dates									
	2016	2017	2018	2019	2020	There- after	Total	Fair Value	
Debt:									
Fixed rate	\$ —	\$ 950	\$ —	\$ 750	\$ 850	\$ 4,474	\$ 7,024	\$	7,712
Average interest rate	—%	6.4%	—%	9.4%	6.1%	6.3%	6.6%		
Floating rate	\$ 118	\$ —	\$ —	\$ —	\$ 175	\$ —	\$ 293	\$	293
Average interest rate	1.8%	—%	—%	—%	1.8%	—%	1.8%		

December 31, 2015									
Expected Maturity Dates									
	2016	2017	2018	2019	2020	There- after	Total	Fair Value	
Debt:									
Fixed rate	\$ —	\$ 950	\$ —	\$ 750	\$ 850	\$ 4,474	\$ 7,024	\$	7,467
Average interest rate	—%	6.4%	—%	9.4%	6.1%	6.3%	6.6%		
Floating rate	\$ 117	\$ —	\$ —	\$ —	\$ 175	\$ —	\$ 292	\$	292
Average interest rate	1.7%	—%	—%	—%	1.5%	—%	1.6%		

FOREIGN CURRENCY RISK

As of March 31, 2016 , we had commitments to purchase \$261 million of U.S. dollars. Our market risk was minimal on these contracts, as all of them matured on or before April 30, 2016 .

Item 4. Controls and Procedures

(a) Evaluation of 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 March 31, 2016 .

(b) 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.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

The information below describes new proceedings or material developments in proceedings that we previously reported in our annual report on Form 10-K for the year ended December 31, 2015 .

Litigation

We hereby incorporate by reference into this Item our disclosures made in Part I, Item 1 of this report included in Note 4 of Condensed Notes to Consolidated Financial Statements under the caption “*Litigation Matters.*”

Environmental Enforcement Matters

While it is not possible to predict the outcome of the following environmental proceedings, if any one or more of them were decided against us, we believe that there would be no material effect on our financial position, results of operations, or liquidity. We are reporting these 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 protecting the environment if we reasonably believe that such proceedings will result in monetary sanctions of \$100,000 or more.

Environmental Protection Agency (EPA). Certain of our refineries received one or more letters or demands from the Department of Justice on behalf of the EPA concerning proposed stipulated penalties under an existing consent decree. Some penalty amounts are in excess of \$100,000 but are still being evaluated. We are currently working with the EPA to resolve these matters.

Texas Commission on Environmental Quality (TCEQ) (Port Arthur Refinery). We received a Notice of Enforcement (NOE) from the TCEQ for excess emissions at our Port Arthur Refinery. We are currently working with the TCEQ to resolve the NOE.

Item 1A. Risk Factors

There have been no material changes from the risk factors disclosed in our annual report on Form 10-K for the year ended December 31, 2015 .

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

(a) *Unregistered Sales of Equity Securities* . Not applicable.

(b) *Use of Proceeds* . Not applicable.

(c) *Issuer Purchases of Equity Securities* . The following table discloses purchases of shares of our common stock made by us or on our behalf during the first quarter of 2016 .

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Not Purchased as Part of Publicly Announced Plans or Programs (a)	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 (b)
January 2016	3,142,266	\$ 69.92	595,893	2,546,373	\$1.1 billion
February 2016	697,918	\$ 64.64	1,418	696,500	\$1.1 billion
March 2016	801	\$ 65.49	801	—	\$1.1 billion
Total	3,840,985	\$ 68.96	598,112	3,242,873	\$1.1 billion

- (a) The shares reported in this column represent purchases settled in the first quarter of 2016 relating to (i) our purchases of shares in open-market transactions to meet our obligations under stock-based compensation plans, and (ii) our purchases of shares from our 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) On July 13, 2015, we announced that our board of directors authorized our purchase of up to \$2.5 billion of our outstanding common stock. This authorization has no expiration date. The \$1.1 billion amount stated above describes the approximate dollar value of shares that may yet be purchased under that authorization as of March 31, 2016 .

Item 6. Exhibits

Exhibit

<u>No.</u>	<u>Description</u>
*12.01	Statements of Computations of Ratios of Earnings to Fixed Charges.
*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 (as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002).
***101	Interactive Data Files

* Filed herewith.

** Furnished herewith.

***Submitted electronically herewith.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

VALERO ENERGY CORPORATION
(Registrant)

By: /s/ Michael S. Ciskowski
Michael S. Ciskowski
Executive Vice President and
Chief Financial Officer
(Duly Authorized Officer and Principal
Financial and Accounting Officer)

Date: May 5, 2016

VALERO ENERGY CORPORATION
STATEMENTS OF COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES
(Millions of Dollars)

	Three Months Ended March 31, 2016	Year Ended December 31,				
		2015	2014	2013	2012	2011
Earnings:						
Income from continuing operations before income tax expense, excluding income from equity investees	\$ 728	\$ 5,962	\$ 5,538	\$ 3,951	\$ 4,736	\$ 3,562
Add:						
Fixed charges	198	783	687	695	727	732
Amortization of capitalized interest	10	37	35	31	24	22
Distributions from equity investees	1	26	6	3	1	—
Less:						
Interest capitalized	(20)	(71)	(70)	(118)	(220)	(144)
Total earnings	\$ 917	\$ 6,737	\$ 6,196	\$ 4,562	\$ 5,268	\$ 4,172
Fixed charges:						
Interest and debt expense, net of capitalized interest	\$ 108	\$ 433	\$ 397	\$ 365	\$ 314	\$ 409
Interest capitalized	20	71	70	118	220	144
Rental expense interest factor (a)	70	279	220	212	193	179
Total fixed charges	\$ 198	\$ 783	\$ 687	\$ 695	\$ 727	\$ 732
Ratio of earnings to fixed charges	4.6 x	8.6 x	9.0 x	6.6 x	7.2 x	5.7 x

(a) The interest portion of rental expense represents one-third of rents, which is deemed representative of the interest portion of rental expense.

**CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, Joseph W. Gorder, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Valero Energy Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 5, 2016

/s/ Joseph W. Gorder

Joseph W. Gorder

Chief Executive Officer and President

**CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, Michael S. Ciskowski, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Valero Energy Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 5, 2016

/s/ Michael S. Ciskowski

Michael S. Ciskowski
Executive Vice President and Chief Financial Officer

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Valero Energy Corporation (the Company) on Form 10-Q for the quarter ended March 31, 2016 , as filed with the Securities and Exchange Commission on the date hereof (the Report), the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Joseph W. Gorder

Joseph W. Gorder

Chief Executive Officer and President

May 5, 2016

A signed original of the written statement required by Section 906 has been provided to Valero Energy Corporation and will be retained by Valero Energy Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Valero Energy Corporation (the Company) on Form 10-Q for the quarter ended March 31, 2016 , as filed with the Securities and Exchange Commission on the date hereof (the Report), the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Michael S. Ciskowski

Michael S. Ciskowski

Executive Vice President and Chief Financial Officer

May 5, 2016

A signed original of the written statement required by Section 906 has been provided to Valero Energy Corporation and will be retained by Valero Energy Corporation and furnished to the Securities and Exchange Commission or its staff upon request.