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, 2017

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	**74-1828067**
(State or other jurisdiction of incorporation or organization)	(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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☑ Accelerated filer ☐ Non-accelerated filer ☐
Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant 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 28, 2017 was 447,231,409.

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, 2017	December 31, 2016
	(unaudited)	
ASSETS		
Current assets:		
Cash and temporary cash investments	$ 4,463	$ 4,816
Receivables, net	5,104	5,901
Inventories	6,025	5,709
Prepaid expenses and other	316	374
Total current assets	15,908	16,800
Property, plant, and equipment, at cost	38,571	37,733
Accumulated depreciation	(11,580)	(11,261)
Property, plant, and equipment, net	26,991	26,472
Deferred charges and other assets, net	3,148	2,901
Total assets	$ 46,047	$ 46,173
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of debt and capital lease obligations	$ 120	$ 115
Accounts payable	6,037	6,357
Accrued expenses	707	694
Taxes other than income taxes	971	1,084
Income taxes payable	64	78
Total current liabilities	7,899	8,328
Debt and capital lease obligations, less current portion	8,369	7,886
Deferred income taxes	7,196	7,361
Other long-term liabilities	1,932	1,744
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	7,096	7,088
Treasury stock, at cost; 226,338,916 and 222,000,024 common shares	(12,310)	(12,027)
Retained earnings	26,366	26,366
Accumulated other comprehensive loss	(1,334)	(1,410)
Total Valero Energy Corporation stockholders' equity	19,825	20,024
Noncontrolling interests	826	830
Total equity	20,651	20,854
Total liabilities and equity	$ 46,047	$ 46,173

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, 2017	Three Months Ended March 31, 2016
Operating revenues (a)	$ 21,772	$ 15,714
Costs and expenses:		
Cost of sales (excluding the lower of cost or market inventory valuation adjustment)	19,428	13,507
Lower of cost or market inventory valuation adjustment	—	(293)
Operating expenses	1,117	1,030
General and administrative expenses	190	156
Depreciation and amortization expense	500	485
Total costs and expenses	21,235	14,885
Operating income	537	829
Other income, net	17	9
Interest and debt expense, net of capitalized interest	(121)	(108)
Income before income tax expense	433	730
Income tax expense	112	217
Net income	321	513
Less: Net income attributable to noncontrolling interests	16	18
Net income attributable to Valero Energy Corporation stockholders	$ 305	$ 495
Earnings per common share	$ 0.68	$ 1.05
Weighted-average common shares outstanding (in millions)	448	469
Earnings per common share – assuming dilution	$ 0.68	$ 1.05
Weighted-average common shares outstanding – assuming dilution (in millions)	451	471
Dividends per common share	$ 0.70	$ 0.60

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Supplemental information:		
(a) Includes excise taxes on sales by certain of our international operations	$ 1,272	$ 1,395

See Condensed Notes to Consolidated Financial Statements.

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

	Three Months Ended March 31,	
	2017	**2016**
Net income	$ 321	$ 513
Other comprehensive income:		
Foreign currency translation adjustment	74	122
Net gain on pension and other postretirement benefits	3	3
Other comprehensive income before income tax expense (benefit)	77	125
Income tax expense (benefit) related to items of other comprehensive income	1	(7)
Other comprehensive income	76	132
Comprehensive income	397	645
Less: Comprehensive income attributable to noncontrolling interests	16	19
Comprehensive income attributable to Valero Energy Corporation stockholders	$ 381	$ 626

See Condensed Notes to Consolidated Financial Statements.

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

	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Cash flows from operating activities:		
Net income	$ 321	$ 513
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization expense	500	485
Lower of cost or market inventory valuation adjustment	—	(293)
Deferred income tax expense (benefit)	(4)	121
Changes in current assets and current liabilities	151	(177)
Changes in deferred charges and credits and other operating activities, net	20	(9)
Net cash provided by operating activities	988	640
Cash flows from investing activities:		
Capital expenditures	(279)	(316)
Deferred turnaround and catalyst costs	(245)	(161)
Investments in joint ventures	(117)	(2)
Acquisition of undivided interest in crude system assets	(72)	—
Other investing activities, net	(1)	(2)
Net cash used in investing activities	(714)	(481)
Cash flows from financing activities:		
Repayments of debt and capital lease obligations	(5)	(3)
Purchase of common stock for treasury	(314)	(265)
Common stock dividends	(315)	(282)
Proceeds from issuance of Valero Energy Partners LP common units	35	—
Distributions to noncontrolling interests (public unitholders) of Valero Energy Partners LP	(9)	(7)
Distributions to other noncontrolling interests	(25)	—
Other financing activities, net	(19)	13
Net cash used in financing activities	(652)	(544)
Effect of foreign exchange rate changes on cash	25	49
Net decrease in cash and temporary cash investments	(353)	(336)
Cash and temporary cash investments at beginning of period	4,816	4,114
Cash and temporary cash investments at end of period	$ 4,463	$ 3,778

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

General

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. Operating results for the three months ended March 31, 2017 are not necessarily indicative of the results that may be expected for the year ending December 31, 2017.

The balance sheet as of December 31, 2016 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, 2016.

Reclassifications

As of January 1, 2017, we revised our reportable segments to reflect a new reportable segment — VLP. The results of the VLP segment include the results of Valero Energy Partners LP (VLP), our majority-owned master limited partnership. Our prior period segment information has been retrospectively adjusted to reflect our current segment presentation. See Note 9 for additional information.

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 July 2015, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2015-11, “Inventory (Topic 330),” to simplify the measurement of inventory measured using the first-in, first-out or average cost methods. The provisions of this ASU require the inventory to be measured at the lower of cost and net realizable value rather than the lower of cost or market. Net realizable value is defined as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The provisions of this ASU are to be applied prospectively and are effective for annual reporting periods beginning after December 15, 2016, and interim reporting periods within those annual periods, with early adoption permitted. Our adoption of this ASU effective January 1, 2017 did not affect our financial position or results of operations since the majority of our inventory is stated at last-in, first-out (LIFO).

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

In October 2016, the FASB issued ASU No. 2016-16, "Income Taxes (Topic 740)," to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. The provisions of this ASU require an entity to recognize the income tax consequences of intra-entity transfers of assets other than inventory immediately when the transfer occurs. These provisions are effective for annual reporting periods beginning after December 15, 2017, and interim reporting periods within those annual periods, with early adoption permitted. The provisions should be applied on a modified retrospective basis with a cumulative-effect adjustment to the opening balance of retained earnings as of the beginning of the period of adoption to recognize the income tax consequences of intra-entity transfers of assets that occurred before the adoption date. Our early adoption of this ASU using the modified retrospective method effective January 1, 2017 did not have a material affect on our financial position or results of operations. Adoption of this guidance more accurately reflects the economics of an intra-entity asset transfer when it occurs by eliminating the previous exception that prohibited the recognition of the income tax consequences of an intra-entity asset transfer until the asset had been sold to an outside party.

In October 2016, the FASB issued ASU No. 2016-17, "Consolidation (Topic 810)," to provide guidance on how a reporting entity that is a single decision maker of a variable interest entity (VIE) should treat indirect interests in the entity held through related parties that are under common control with the reporting entity when determining whether it is the primary beneficiary. The provisions of this ASU are effective for annual reporting periods beginning after December 15, 2016, and interim reporting periods within those annual periods, with early adoption permitted. The provisions should be applied on a retrospective basis to all relevant prior periods beginning with the fiscal year in which the VIE guidance was adopted with a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. Our adoption of this ASU effective January 1, 2017 did not affect our financial position or results of operations.

In January 2017, the FASB issued ASU No. 2017-01, "Business Combinations (Topic 805)," to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The provisions of this ASU provide a more robust framework to use in determining when a set of assets and activities is a business by clarifying the requirements related to inputs, processes, and outputs. These provisions are to be applied prospectively and are effective for annual reporting periods beginning after December 15, 2017, with early adoption permitted. Our early adoption of this ASU effective January 1, 2017 did not have an affect on our financial position or results of operations. However, more of our future acquisitions may be accounted for as asset acquisitions.

Accounting Pronouncements Not Yet Adopted

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)," to clarify the principles for recognizing revenue. The ASU is effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within those annual periods. We recently completed our evaluation of the provisions of this ASU and concluded that our adoption of the ASU will not materially change the amount or timing of revenues recognized by us, nor will it materially affect our financial position. The majority of our revenues are generated from the sale of refined petroleum products and ethanol. These revenues are largely based on the current spot (market) prices of the products sold, which represents consideration specifically allocable to the products being sold on a given day, and we recognize those revenues upon delivery and transfer of title to the products to our customers. The time at which delivery and transfer of title occurs is the point when our control of the products is transferred to our customers and when our performance obligation to our customers is fulfilled. We will adopt this ASU effective January 1, 2018, and we expect to use the modified retrospective method of adoption as permitted by the ASU. Under that method, the cumulative effect of initially applying the standard is recognized as an adjustment to the opening balance of retained earnings, and revenues reported in the periods prior to the date of adoption are not changed. During 2017, we are developing our revenue disclosures and enhancing our accounting systems.

In January 2016, the FASB issued ASU No. 2016-01, “Financial Instruments—Overall (Subtopic 825-10),” to enhance the reporting model for financial instruments regarding certain aspects of recognition, measurement, presentation, and disclosure. The provisions of this ASU are effective for annual reporting periods beginning after December 15, 2017, and interim reporting periods within those annual periods. This ASU is to be applied using a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. The adoption of this ASU effective January 1, 2018 will not affect our financial position or results of operations, but will result in revised disclosures.

In February 2016, the FASB issued ASU No. 2016-02, “Leases (Topic 842),” 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 annual reporting periods beginning after December 15, 2018, and interim reporting periods within those annual periods, with early adoption permitted. We anticipate adopting the new standard on January 1, 2019 and we expect to use the modified retrospective method of adoption as permitted by the ASU. We recently completed our evaluation of the provisions of this standard, and a multi-disciplined implementation team has gained an understanding of the standard’s accounting and disclosure provisions. This team is developing enhanced contracting and lease evaluation processes and information systems to support such processes, as well as new and enhanced accounting systems to account for our leases and support the required disclosures. We continue to evaluate the effect that adopting this standard will have on our financial statements and related disclosures.

In March 2017, the FASB issued ASU 2017-07, “Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.” The new standard requires that an employer report the service cost component in the same line item as other compensation costs arising from services rendered by the pertinent employees during the period. It also requires the other components of net periodic pension cost and net periodic postretirement benefit cost to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations. This ASU is to be applied retrospectively for income statement items and prospectively for any capitalized benefit costs. The provisions of this ASU are effective for annual reporting periods beginning after December 15, 2017, and interim reporting periods within those annual periods, with early adoption permitted. The adoption of this guidance effective January 1, 2018 is not expected to materially affect our financial position or results of operations.

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

2. INVENTORIES

Inventories consisted of the following (in millions):

	March 31, 2017	December 31, 2016
Refinery feedstocks	$ 2,318	$ 2,068
Refined petroleum products and blendstocks	3,189	3,153
Ethanol feedstocks and products	268	238
Materials and supplies	250	250
Inventories	$ 6,025	$ 5,709

Inventories are valued at the lower of cost or market. As of December 31, 2015, we had a valuation reserve of $766 million 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.

As of March 31, 2017 and December 31, 2016, the replacement cost (market value) of LIFO inventories exceeded their LIFO carrying amounts by $1.8 billion and $1.9 billion, respectively. As of March 31, 2017 and December 31, 2016, our non-LIFO inventories accounted for $663 million and $641 million, respectively, of our total inventories.

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

3. DEBT AND CAPITAL LEASE OBLIGATIONS

There was no significant activity related to our debt during the three months ended March 31, 2017 and 2016.

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

					March 31, 2017					
	Facility Amount		Maturity Date	Outstanding Borrowings		Letters of Credit Issued		Availability		
Committed facilities:										
Valero Revolver	$	3,000	November 2020	$	—	$	150	$	2,850	
VLP Revolver	$	750	November 2020	$	30	$	—	$	720	
Canadian Revolver	C$	25	November 2017	C$	—	C$	10	C$	15	
Accounts receivable sales facility	$	1,300	July 2017	$	100		n/a	$	1,183	
Letter of credit facilities	$	225	June 2017 and November 2017		n/a	$	—	$	225	
Uncommitted facilities:										
Letter of credit facilities		n/a	n/a		n/a	$	235		n/a	

As of March 31, 2017 and December 31, 2016, the weighted-average interest rate on the VLP Revolver was 2.3125 percent. As of March 31, 2017 and December 31, 2016, the weighted-average interest rate on the accounts receivable sales facility was 1.4805 percent and 1.3422 percent, respectively.

Capital Leases
In January 2017, we recognized capital lease assets and related obligations of approximately $490 million for the lease of storage tanks located at three of our refineries. These lease agreements have initial terms of 10 years each with successive 10-year automatic renewal terms.

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 among 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, limitations, and potential rights for contribution from the other responsible parties. We have recorded a liability for our expected contribution obligations. However, because

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

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.

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,					
	2017			2016		
	Valero Stockholders' Equity	Non-controlling Interests (a)	Total Equity	Valero Stockholders' Equity	Non-controlling Interests (a)	Total Equity
Balance as of beginning of period	$ 20,024	$ 830	$ 20,854	$ 20,527	$ 827	$ 21,354
Net income	305	16	321	495	18	513
Dividends	(315)	—	(315)	(282)	—	(282)
Stock-based compensation expense	13	—	13	12	—	12
Stock purchases in connection with stock-based compensation plans	(10)	—	(10)	(42)	—	(42)
Stock purchases under purchase program	(292)	—	(292)	(198)	—	(198)
Distributions to noncontrolling interests	—	(34)	(34)	—	(7)	(7)
Other	24	14	38	13	—	13
Other comprehensive income	76	—	76	131	1	132
Balance as of end of period	$ 19,825	$ 826	$ 20,651	$ 20,656	$ 839	$ 21,495

(a) The noncontrolling interests relate to third-party ownership interests in VIEs for which we are the primary beneficiary and therefore consolidate. See Note 6 for information about our consolidated VIEs.

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

Share Activity
There was no significant share activity during the three months ended March 31, 2017 and 2016.

Common Stock Dividends
On May 3, 2017, our board of directors declared a quarterly cash dividend of $0.70 per common share payable on June 7, 2017 to holders of record at the close of business on May 17, 2017.

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

	Three Months Ended March 31,					
	2017			2016		
	Foreign Currency Translation Adjustment	Defined Benefit Plans Items	Total	Foreign Currency Translation Adjustment	Defined Benefit Plans Items	Total
Balance as of beginning of period	$ (1,021)	$ (389)	$ (1,410)	$ (605)	$ (328)	$ (933)
Other comprehensive income before reclassifications	74	—	74	121	8	129
Amounts reclassified from accumulated other comprehensive loss	—	2	2	—	2	2
Net other comprehensive income	74	2	76	121	10	131
Balance as of end of period	$ (947)	$ (387)	$ (1,334)	$ (484)	$ (318)	$ (802)

6. VARIABLE INTEREST ENTITIES

Overview
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.

Our significant VIE's include:
- VLP, a publicly traded master limited partnership formed to own, operate, develop, and acquire crude oil and refined petroleum products pipelines, terminals, and other transportation and logistics assets; and
- Diamond Green Diesel Holdings LLC (DGD), a joint venture formed to construct and operate a biodiesel plant that processes animal fats, used cooking oils, and other vegetable oils into renewable green diesel.

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

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, 2017			
	VLP	DGD	Other	Total
Assets				
Cash and temporary cash investments	$ 66	$ 159	$ 15	$ 240
Other current assets	2	48	—	50
Property, plant, and equipment, net	940	360	131	1,431
Liabilities				
Current liabilities	$ 17	$ 16	$ 7	$ 40
Debt and capital lease obligations, less current portion	525	—	45	570

	December 31, 2016			
	VLP	DGD	Other	Total
Assets				
Cash and temporary cash investments	$ 71	$ 167	$ 15	$ 253
Other current assets	3	87	—	90
Property, plant, and equipment, net	865	355	133	1,353
Liabilities				
Current liabilities	$ 15	$ 17	$ 7	$ 39
Debt and capital lease obligations, less current portion	525	—	46	571

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

7. 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	
	2017	2016	2017	2016
Three months ended March 31:				
Service cost	$ 31	$ 28	$ 1	$ 2
Interest cost	21	21	3	3
Expected return on plan assets	(37)	(35)	—	—
Amortization of:				
Net actuarial (gain) loss	13	12	(1)	—
Prior service credit	(5)	(5)	(4)	(4)
Net periodic benefit cost	$ 23	$ 21	$ (1)	$ 1

Our anticipated contributions to our pension and other post retirement benefit plans during 2017 have not changed from amounts previously disclosed in our financial statements for the year ended December 31, 2016. We contributed $7 million and $8 million, respectively, to our pension plans and $5 million and $4 million, respectively, to our other postretirement benefit plans during the three months ended March 31, 2017 and 2016.

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

8. 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,			
	2017		2016	
	Participating Securities	Common Stock	Participating Securities	Common Stock
Earnings per common share:				
Net income attributable to Valero stockholders		$ 305		$ 495
Less dividends paid:				
Common stock		314		281
Participating securities		1		1
Undistributed earnings (excess distributions over earnings)		$ (10)		$ 213
Weighted-average common shares outstanding	2	448	2	469
Earnings (loss) per common share:				
Distributed earnings	$ 0.70	$ 0.70	$ 0.60	$ 0.60
Undistributed earnings (excess distributions over earnings)	—	(0.02)	0.45	0.45
Total earnings per common share	$ 0.70	$ 0.68	$ 1.05	$ 1.05
Earnings per common share – assuming dilution:				
Net income attributable to Valero stockholders		$ 305		$ 495
Weighted-average common shares outstanding		448		469
Common equivalent shares		3		2
Weighted-average common shares outstanding – assuming dilution		451		471
Earnings per common share – assuming dilution		$ 0.68		$ 1.05

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)

9. SEGMENT INFORMATION

Effective January 1, 2017, we revised our reportable segments to align with certain changes in how our chief operating decision maker manages and allocates resources to our business. Accordingly, we created a new reportable segment — VLP. The results of the VLP segment, which include the results of our majority-owned master limited partnership referred to by the same name, were transferred from the refining segment. Our prior period segment information has been retrospectively adjusted to reflect our current segment presentation.

As a result, we have three reportable segments as follows:
- *Refining segment* includes our refining operations, the associated marketing activities, and certain logistics assets that support our refining operations that are not owned by VLP;
- *Ethanol segment* includes our ethanol operations, the associated marketing activities, and logistics assets that support our ethanol operations; and
- *VLP segment* includes the results of VLP, which provides transportation and terminaling services in support our refining segment.

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

Our reportable segments are strategic business units that offer different products and services. They are managed separately as each business requires unique technologies and marketing strategies. Performance is evaluated based on segment operating income, which includes revenues and expenses that are directly attributable to management of the respective segment. Intersegment sales are generally derived from transactions made at prevailing market rates.

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

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

	Refining	Ethanol	VLP	Corporate and Eliminations	Total
Three months ended March 31, 2017:					
Operating revenues:					
Operating revenues from external customers	$ 20,887	$ 885	$ —	$ —	$ 21,772
Intersegment revenues	—	60	106	(166)	—
Total operating revenues	20,887	945	106	(166)	21,772
Costs and expenses:					
Cost of sales:					
Cost of sales from external customers	18,641	787	—	—	19,428
Intersegment cost of sales	166	—	—	(166)	—
Total cost of sales	18,807	787	—	(166)	19,428
Operating expenses	984	109	24	—	1,117
General and administrative expenses	—	—	—	190	190
Depreciation and amortization expense	449	27	12	12	500
Total costs and expenses	20,240	923	36	36	21,235
Operating income (loss)	$ 647	$ 22	$ 70	$ (202)	$ 537
Three months ended March 31, 2016:					
Operating revenues:					
Operating revenues from external customers	$ 14,920	$ 794	$ —	$ —	$ 15,714
Intersegment revenues	—	34	79	(113)	—
Total operating revenues	14,920	828	79	(113)	15,714
Costs and expenses:					
Cost of sales (excluding the lower of cost or market inventory valuation adjustment):					
Cost of sales from external customers	12,799	708	—	—	13,507
Intersegment cost of sales	113	—	—	(113)	—
Total cost of sales (excluding the lower of cost or market inventory valuation adjustment)	12,912	708	—	(113)	13,507
Lower of cost or market inventory valuation adjustment	(263)	(30)	—	—	(293)
Operating expenses (a)	907	99	24	—	1,030
General and administrative expenses	—	—	—	156	156
Depreciation and amortization expense (a)	449	12	12	12	485
Total costs and expenses	14,005	789	36	55	14,885
Operating income (loss)	$ 915	$ 39	$ 43	$ (168)	$ 829

(a) The VLP segment information for the three months ended March 31, 2016 has been retrospectively adjusted for VLP's acquisitions that occurred subsequent to March 31, 2016.

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

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

	March 31, 2017	December 31, 2016
Refining	$ 38,219	$ 38,095
Ethanol	1,338	1,316
VLP	1,039	972
Corporate	5,451	5,790
Total assets	$ 46,047	$ 46,173

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,	
	2017	2016
Decrease (increase) in current assets:		
Receivables, net	$ 817	$ (47)
Inventories	(291)	147
Income taxes receivable	41	45
Prepaid expenses and other	12	(126)
Increase (decrease) in current liabilities:		
Accounts payable	(306)	108
Accrued expenses	20	(137)
Taxes other than income taxes	(123)	(113)
Income taxes payable	(19)	(54)
Changes in current assets and current liabilities	$ 151	$ (177)

Noncash investing and financing activities during the three months ended March 31, 2017 included the recognition of a capital lease asset and related obligation associated with an agreement for storage tanks near three of our refineries. This noncash transaction is further described in Note 3. There were no significant noncash investing or financing activities during the three months ended March 31, 2016.

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

	Three Months Ended March 31,	
	2017	2016
Interest paid in excess of amount capitalized	$ 128	$ 95
Income taxes paid, net	96	95

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

11. FAIR VALUE MEASUREMENTS

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, 2017 and December 31, 2016.

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, 2017							
	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	$ 661	$ 12	$ —	$ 673	$ (637)	$ —	$ 36	$ —
Investments of certain benefit plans	59	—	11	70	n/a	n/a	70	n/a
Total	$ 720	$ 12	$ 11	$ 743	$ (637)	$ —	$ 106	
Liabilities:								
Commodity derivative contracts	$ 636	$ 9	$ —	$ 645	$ (637)	$ (8)	$ —	$ (61)
Environmental credit obligations	—	289	—	289	n/a	n/a	289	n/a
Physical purchase contracts	—	3	—	3	n/a	n/a	3	n/a
Foreign currency contracts	2	—	—	2	n/a	n/a	2	n/a
Total	$ 638	$ 301	$ —	$ 939	$ (637)	$ (8)	$ 294	

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

	December 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	$ 874	$ 38	$ —	$ 912	$ (875)	$ —	$ 37	$ —
Foreign currency contracts	3	—	—	3	n/a	n/a	3	n/a
Investments of certain benefit plans	58	—	11	69	n/a	n/a	69	n/a
Total	$ 935	$ 38	$ 11	$ 984	$ (875)	$ —	$ 109	
Liabilities:								
Commodity derivative contracts	$ 872	$ 23	$ —	$ 895	$ (875)	$ (20)	$ —	$ (88)
Environmental credit obligations	—	188	—	188	n/a	n/a	188	n/a
Physical purchase contracts	—	5	—	5	n/a	n/a	5	n/a
Total	$ 872	$ 216	$ —	$ 1,088	$ (875)	$ (20)	$ 193	

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 levels for assets and liabilities held as of March 31, 2017 and December 31, 2016 that were measured at fair value on a recurring basis.

There was no activity during the three months ended March 31, 2017 and 2016 related to the fair value amounts categorized in Level 3 as of March 31, 2017 and December 31, 2016.

Nonrecurring Fair Value Measurements
There were no assets or liabilities that were measured at fair value on a nonrecurring basis as of March 31, 2017 and December 31, 2016.

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, 2017		December 31, 2016	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial assets:				
Cash and temporary cash investments	$ 4,463	$ 4,463	$ 4,816	$ 4,816
Financial liabilities:				
Debt (excluding capital leases)	7,926	8,935	7,926	8,882

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, and the price of credits needed to comply with various government and regulatory programs. We enter into derivative instruments to manage some of these risks, including derivative instruments related to the various commodities we purchase or produce, and foreign currency exchange and purchase contracts, as described below under *"Risk Management Activities by Type of Risk."* These derivative instruments are recorded as either assets or liabilities measured at their fair values (see Note 11), as summarized below under *"Fair Values of Derivative Instruments,"* with changes in fair value recognized currently in income. The effect of these derivative instruments on our income is summarized below under *"Effect of Derivative Instruments on Income."*

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 petroleum 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.

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

To manage commodity price risk, we use economic hedges, which are not designated as fair value or cash flow hedges, and we use fair value and cash flow hedges from time to time. We also enter into certain commodity derivative instruments for trading purposes. Our objectives for entering into hedges or trading derivatives are described below.

- *Economic Hedges* – Economic hedges represent commodity derivative instruments that are used to manage price volatility in certain (i) feedstock and refined petroleum product inventories, (ii) fixed-price purchase contracts, and (iii) forecasted feedstock, refined petroleum product or natural gas purchases and refined petroleum product sales. The objectives of our economic hedges are to hedge price volatility in certain feedstock and refined petroleum product inventories and to lock in the price of forecasted feedstock, refined petroleum product, or natural gas purchases or refined petroleum product sales at existing market prices that we deem favorable. Economic hedges are not designated as fair value or cash flow hedges for accounting purposes, usually due to the difficulty of establishing the required documentation at the date the derivative instrument is entered into for them to qualify as hedging instruments for accounting purposes.

  As of March 31, 2017, 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).

	Notional Contract Volumes by Year of Maturity	
Derivative Instrument	**2017**	**2018**
Crude oil and refined petroleum products:		
Swaps – long	22,246	—
Swaps – short	22,660	—
Futures – long	110,287	2,100
Futures – short	115,080	6,981
Corn:		
Futures – long	18,040	5
Futures – short	40,575	2,185
Physical contracts – long	16,273	2,177
Soybean oil:		
Futures – long	125,338	—
Futures – short	158,758	—

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 for crude oil and refined petroleum products.

  As of March 31, 2017, 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 corn contracts that are presented in thousands of bushels).

	Notional Contract Volumes by Year of Maturity	
Derivative Instrument	**2017**	**2018**
Crude oil and refined petroleum products:		
Swaps – long	3,105	—
Swaps – short	3,105	—
Futures – long	24,358	4,300
Futures – short	22,304	6,400
Options – long	106,990	29,700
Options – short	104,990	29,700
Corn:		
Futures – long	2,250	—
Futures – short	2,000	—

We had no commodity derivative contracts outstanding as of March 31, 2017 and 2016 or during the three months ended March 31, 2017 and 2016 that were designated as fair value or cash flow hedges.

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 are classified as economic hedges. As of March 31, 2017, we had forward contracts to purchase $350 million of U.S. dollars. These commitments matured on or before April 30, 2017.

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. 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. 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 by purchasing biofuel credits when prices are deemed favorable. The cost of meeting our obligations under these compliance programs was $146 million and $161 million for the three months ended March 31, 2017 and 2016, respectively. These amounts are reflected in cost of sales.

We are subject to additional requirements under greenhouse gas (GHG) emission programs, including the cap-and-trade systems, as discussed in Note 11. Under these cap-and-trade systems, we purchase various GHG 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, 2017 and 2016 and expect to continue to recover the majority of these costs in the future. For the three months ended March 31, 2017 and 2016, 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, 2017 and December 31, 2016 (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.

		March 31, 2017	
	Balance Sheet Location	**Asset Derivatives**	**Liability Derivatives**
Derivatives not designated as hedging instruments			
Commodity contracts:			
Futures	Receivables, net	$ 661	$ 636
Swaps	Receivables, net	7	7
Options	Receivables, net	5	2
Physical purchase contracts	Inventories	—	3
Foreign currency contracts	Accrued expenses	—	2
Total		$ 673	$ 650

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

	Balance Sheet Location	December 31, 2016 Asset Derivatives	December 31, 2016 Liability Derivatives
Derivatives not designated as hedging instruments			
Commodity contracts:			
Futures	Receivables, net	$ 874	$ 872
Swaps	Receivables, net	32	21
Options	Receivables, net	6	2
Physical purchase contracts	Inventories	—	5
Foreign currency contracts	Receivables, net	3	—
Total		$ 915	$ 900

Market Risk

Our price risk management activities involve the receipt or payment of fixed price commitments into the future. These transactions give rise to market risk, which is the risk that future changes in market conditions may make an instrument less valuable. We closely monitor and manage our exposure to market risk on a daily basis in accordance with policies 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	Location of Loss Recognized in Income on Derivatives	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Commodity contracts	Cost of sales	$ (97)	$ (139)
Foreign currency contracts	Cost of sales	(6)	(3)

Trading Derivatives	Location of Gain Recognized in Income on Derivatives	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Commodity contracts	Cost of sales	$ 1	$ 41

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 petroleum 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 petroleum 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, ethanol, and midstream 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 petroleum products or receive feedstocks;
- political and economic conditions in nations that produce crude oil or consume refined petroleum products;
- demand for, and supplies of, refined petroleum 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 petroleum 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 RINs needed to comply with the U.S. federal Renewable Fuel Standard) and 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 petroleum 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), 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, 2016 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.

This Form 10-Q includes references to financial measures that are not defined under U.S. GAAP. These non-GAAP financial measures include adjusted net income attributable to Valero stockholders, gross margin, and adjusted operating income. We have included these non-GAAP financial measures to help facilitate the comparison of operating results between periods. See the accompanying financial tables in "RESULTS OF OPERATIONS" and note (c) to the accompanying tables for reconciliations of these non-GAAP financial measures to the most directly comparable U.S. GAAP financial measures. Also in note (c), we disclose the reasons why we believe our use of the non-GAAP financial measures provides useful information.

OVERVIEW AND OUTLOOK

Overview

We reported net income attributable to Valero stockholders of $305 million in the first quarter of 2017 compared to $495 million in the first quarter of 2016, which represents a decrease of $190 million. This decrease is primarily due to lower operating income in the first quarter of 2017 compared to the first quarter of 2016 (net of the resulting decrease of $105 million in income tax expense between the periods). Operating income was $537 million in the first quarter of 2017 compared to $829 million in the first quarter of 2016, which represents a decrease of $292 million.

Operating income and net income attributable to Valero stockholders in the first quarter of 2016 were positively impacted by a noncash benefit from a lower of cost or market inventory valuation adjustment. By excluding that benefit from both amounts, adjusted operating income was $536 million and adjusted net income attributable to Valero stockholders was $283 million for the first quarter of 2016. Compared to these adjusted amounts, operating income and net income attributable to Valero stockholders in the first quarter of 2017 increased by $1 million and $22 million, respectively.

The $1 million increase in adjusted operating income is due primarily to the following:

- *Refining segment.* Refining segment operating income decreased by $5 million due to lower margins on other refined products (e.g. petroleum coke, propane, and sulfur), an increase in charges from the VLP segment related to additional transportation and terminaling services provided by that segment to the refining segment, and higher operating expenses, partially offset by higher margins on refined petroleum products. This is more fully described on pages 37 and 38.
- *Ethanol segment.* Ethanol segment operating income increased by $13 million due to higher ethanol margins, which improved because of higher ethanol prices. This is more fully described on pages 38 and 39.
- *VLP segment.* VLP segment operating income increased by $27 million due to incremental revenues generated from transportation and terminaling services provided to the refining segment associated with businesses acquired from Valero in 2016 and the acquisition of an undivided interest in crude system assets in January 2017. This is more fully described on page 39.
- *General and administrative expenses.* General and administrative expenses increased by $34 million primarily due to an increase in environmental reserves.

Additional details and analysis of the changes in operating income and adjusted operating income for our business segments and other components of net income and adjusted net income attributable to Valero stockholders, including a reconciliation of non-GAAP financial measures used in this Overview to their most comparable measures reported under U.S. GAAP, are provided below under “RESULTS OF OPERATIONS” beginning on page 30.

Effective January 1, 2017, we revised our reportable segments to reflect a new reportable segment — VLP. The results of operations of the VLP segment were previously included in the refining segment. Our prior period segment information has been retrospectively adjusted to reflect our current segment presentation. See Note 9 of Condensed Notes to Consolidated Financial Statements for additional segment information.

Outlook

In the second quarter of 2017, we expect margins to improve as demand follows typical seasonal patterns. Below are several factors that have impacted or may impact our results of operations during the second quarter of 2017:

- Gasoline margins are expected to improve as domestic and export demand strengthen with the upcoming driving season. Distillate margins are expected to remain near current levels.
- Medium and heavy sour crude oil discounts are expected to remain weaker than their five-year averages as supplies of sour crude oils available in the market continue to decline.
- Ethanol margins are expected to improve as domestic gasoline demand strengthens.

RESULTS OF OPERATIONS

The following tables highlight our results of operations, our operating performance, and market prices that directly impact our operations. In addition, these tables include financial measures that are not defined under U.S. GAAP and represent non-GAAP financial measures. These non-GAAP financial measures are reconciled to their most comparable U.S. GAAP financial measures and include adjusted net income attributable to Valero stockholders, adjusted operating income, and gross margin. In note (c) to these tables, we disclose the reasons why we believe our use of non-GAAP financial measures provides useful information.

Effective January 1, 2017, we revised our reportable segments to align with certain changes in how our chief operating decision maker manages and allocates resources to our business. Accordingly, we created a new reportable segment — VLP. The results of the VLP segment, which include the results of our majority-owned master limited partnership referred to by the same name, were transferred from the refining segment. Our prior period segment information has been retrospectively adjusted to reflect our current segment presentation. The narrative following these tables provides an analysis of our results of operations.

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

	Three Months Ended March 31, 2017				
	Refining	**Ethanol**	**VLP**	**Corporate and Eliminations**	**Total Company**
Operating revenues:					
Operating revenues from external customers	$ 20,887	$ 885	$ —	$ —	$ 21,772
Intersegment revenues	—	60	106	(166)	—
Total operating revenues	20,887	945	106	(166)	21,772
Costs and expenses:					
Cost of sales:					
Cost of sales from external customers	18,641	787	—	—	19,428
Intersegment cost of sales	166	—	—	(166)	—
Total cost of sales	18,807	787	—	(166)	19,428
Operating expenses	984	109	24	—	1,117
General and administrative expenses	—	—	—	190	190
Depreciation and amortization expense	449	27	12	12	500
Total costs and expenses	20,240	923	36	36	21,235
Operating income (loss)	$ 647	$ 22	$ 70	$ (202)	537
Other income, net					17
Interest and debt expense, net of capitalized interest					(121)
Income before income tax expense					433
Income tax expense					112
Net income					321
Less: Net income attributable to noncontrolling interests					16
Net income attributable to Valero Energy Corporation stockholders					$ 305

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

	Three Months Ended March 31, 2016				
	Refining	**Ethanol**	**VLP**	**Corporate and Eliminations**	**Total Company**
Operating revenues:					
Operating revenues from external customers	$ 14,920	$ 794	$ —	$ —	$ 15,714
Intersegment revenues	—	34	79	(113)	—
Total operating revenues	14,920	828	79	(113)	15,714
Costs and expenses:					
Cost of sales (excluding the lower of cost or market inventory valuation adjustment):					
Cost of sales from external customers	12,799	708	—	—	13,507
Intersegment cost of sales	113	—	—	(113)	—
Total cost of sales (excluding the lower of cost or market inventory valuation adjustment)	12,912	708	—	(113)	13,507
Lower of cost or market inventory valuation adjustment (a)	(263)	(30)	—	—	(293)
Operating expenses (b)	907	99	24	—	1,030
General and administrative expenses	—	—	—	156	156
Depreciation and amortization expense (b)	449	12	12	12	485
Total costs and expenses	14,005	789	36	55	14,885
Operating income (loss)	$ 915	$ 39	$ 43	$ (168)	829
Other income, net					9
Interest and debt expense, net of capitalized interest					(108)
Income before income tax expense					730
Income tax expense					217
Net income					513
Less: Net income attributable to noncontrolling interests					18
Net income attributable to Valero Energy Corporation stockholders					$ 495
Reconciliation of actual (U.S. GAAP) to adjusted (non-GAAP) amounts (c)					
Actual and adjusted operating income (loss)					
Operating income (loss)	$ 915	$ 39	$ 43	$ (168)	$ 829
Exclude adjustment:					
Lower of cost or market inventory valuation adjustment (a)	263	30	—	—	293
Adjusted operating income (loss)	$ 652	$ 9	$ 43	$ (168)	$ 536
Actual and adjusted net income attributable to Valero Energy Corporation stockholders					
Net income attributable to Valero Energy Corporation stockholders					$ 495
Exclude adjustment:					
Lower of cost or market inventory valuation adjustment (a)					293
Income tax expense related to lower of cost or market inventory valuation adjustment					(81)
Lower of cost or market inventory valuation adjustment, net of taxes					212
Adjusted net income attributable to Valero Energy Corporation stockholders					$ 283

See note references on pages 35 and 36.

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

	Three Months Ended March 31,		
	2017	2016	Change
Throughput volumes (thousand barrels per day)			
Feedstocks:			
Heavy sour crude oil	448	427	21
Medium/light sour crude oil	455	533	(78)
Sweet crude oil	1,245	1,172	73
Residuals	235	289	(54)
Other feedstocks	149	136	13
Total feedstocks	2,532	2,557	(25)
Blendstocks and other	306	322	(16)
Total throughput volumes	2,838	2,879	(41)
Yields (thousand barrels per day)			
Gasolines and blendstocks	1,360	1,378	(18)
Distillates	1,090	1,067	23
Other products (d)	425	470	(45)
Total yields	2,875	2,915	(40)
Operating statistics			
Gross margin (c)	$ 2,080	$ 2,008	$ 72
Adjusted operating income (c)	$ 647	$ 652	$ (5)
Throughput volumes (thousand barrels per day)	2,838	2,879	(41)
Throughput margin per barrel (e)	$ 8.14	$ 7.66	$ 0.48
Operating costs per barrel:			
Operating expenses	3.85	3.46	0.39
Depreciation and amortization expense	1.76	1.71	0.05
Total operating costs per barrel	5.61	5.17	0.44
Adjusted operating income per barrel (f)	$ 2.53	$ 2.49	$ 0.04

See note references on pages 35 and 36.

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

	Three Months Ended March 31,		
	2017	**2016**	**Change**
Operating statistics			
Gross margin (c)	$ 158	$ 120	$ 38
Adjusted operating income (c)	$ 22	$ 9	$ 13
Production volumes (thousand gallons per day)	4,041	3,740	301
Gross margin per gallon of production (e)	$ 0.43	$ 0.35	$ 0.08
Operating costs per gallon of production:			
Operating expenses	0.30	0.29	0.01
Depreciation and amortization expense	0.07	0.03	0.04
Total operating costs per gallon of production	0.37	0.32	0.05
Adjusted operating income per gallon of production (f)	$ 0.06	$ 0.03	$ 0.03

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

	Three Months Ended March 31,		
	2017	**2016**	**Change**
Volumes (thousand barrels per day)			
Pipeline transportation throughput	962	919	43
Terminaling throughput	2,734	1,850	884
Operating statistics			
Pipeline transportation revenue	$ 23	$ 20	$ 3
Pipeline transportation revenue per barrel (e)	$ 0.27	$ 0.24	$ 0.03
Terminaling revenue	$ 83	$ 59	$ 24
Terminaling revenue per barrel (e)	$ 0.34	$ 0.35	$ (0.01)
Total operating revenues	$ 106	$ 79	$ 27

See note references on pages 35 and 36.

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

	Three Months Ended March 31,		
	2017	**2016**	**Change**
Feedstocks			
Brent crude oil	$ 54.65	$ 35.14	$ 19.51
Brent less West Texas Intermediate (WTI) crude oil	2.82	1.90	0.92
Brent less Alaska North Slope (ANS) crude oil	0.82	0.69	0.13
Brent less Louisiana Light Sweet (LLS) crude oil (g)	1.13	0.05	1.08
Brent less Argus Sour Crude Index (ASCI) crude oil (h)	5.05	5.37	(0.32)
Brent less Maya crude oil	9.93	9.09	0.84
LLS crude oil (g)	53.52	35.09	18.43
LLS less ASCI crude oil (g) (h)	3.92	5.32	(1.40)
LLS less Maya crude oil (g)	8.80	9.04	(0.24)
WTI crude oil	51.83	33.24	18.59
Natural gas (dollars per million British thermal units (MMBtu))	2.95	1.93	1.02
Products			
U.S. Gulf Coast:			
CBOB gasoline less Brent	8.78	7.81	0.97
Ultra-low-sulfur diesel less Brent	11.12	7.92	3.20
Propylene less Brent	1.22	(2.39)	3.61
CBOB gasoline less LLS (g)	9.91	7.86	2.05
Ultra-low-sulfur diesel less LLS (g)	12.25	7.97	4.28
Propylene less LLS (g)	2.35	(2.34)	4.69
U.S. Mid-Continent:			
CBOB gasoline less WTI	12.71	10.00	2.71
Ultra-low-sulfur diesel less WTI	13.99	11.03	2.96
North Atlantic:			
CBOB gasoline less Brent	8.68	10.30	(1.62)
Ultra-low-sulfur diesel less Brent	12.06	9.53	2.53
U.S. West Coast:			
CARBOB 87 gasoline less ANS	16.77	17.34	(0.57)
CARB diesel less ANS	14.84	11.19	3.65
CARBOB 87 gasoline less WTI	18.77	18.55	0.22
CARB diesel less WTI	16.84	12.40	4.44
New York Harbor corn crush (dollars per gallon)	0.23	0.13	0.10

See note references on page 36.

The following notes relate to references on pages 30 through 34.

(a) During the three months ended March 31, 2016, we recorded a change in our lower of cost or market inventory valuation reserve that was established on December 31, 2015, resulting in a noncash benefit of $293 million ($263 million and $30 million attributable to our refining and ethanol segments, respectively). This adjustment is further discussed in Note 2 of Condensed Notes to Consolidated Financial Statements.

(b) The VLP segment information for the three months ended March 31, 2016 has been retrospectively adjusted for VLP's acquisitions that occurred subsequent to March 31, 2016.

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

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

Non-GAAP measures are as follows:

- **Adjusted net income attributable to Valero Energy Corporation stockholders** is defined as net income attributable to Valero Energy Corporation stockholders excluding the lower of cost or market inventory valuation adjustment and its related income tax effect.
- **Gross margin for the refining and ethanol segments** is defined as operating income excluding the lower of cost or market inventory valuation adjustment, operating expenses, and depreciation and amortization expense as shown below:

	Three Months Ended March 31, 2017	
	Refining	**Ethanol**
Reconciliation of operating income to gross margin		
Operating income	$ 647	$ 22
Add back:		
Operating expenses	984	109
Depreciation and amortization expense	449	27
Gross margin	$ 2,080	$ 158

	Three Months Ended March 31, 2016	
	Refining	**Ethanol**
Reconciliation of operating income to gross margin		
Operating income	$ 915	$ 39
Add back:		
Lower of cost or market inventory valuation adjustment (a)	(263)	(30)
Operating expenses	907	99
Depreciation and amortization expense	449	12
Gross margin	$ 2,008	$ 120

- **Adjusted operating income** is defined as operating income excluding the lower of cost or market inventory valuation adjustment.

(d) Other products primarily include petrochemicals, gas oils, No. 6 fuel oil, petroleum coke, sulfur, and asphalt.

(e) Throughput margin per barrel represents gross margin (as defined in (c) above) for our refining segment divided by throughput volumes. Gross margin per gallon of production represents gross margin (as defined in (c) above) for our ethanol segment divided by production volumes. Pipeline transportation revenue per barrel and terminaling revenue per barrel represents pipeline transportation revenue and terminaling revenue for our VLP segment divided by pipeline transportation throughput and terminaling throughput volumes, respectively. Throughput and production volumes are calculated by multiplying throughput and production volumes per day (as provided in the accompanying tables) by the number of days in the applicable period.

(f) Adjusted operating income per barrel represents adjusted operating income (defined in (c) above) for our refining segment divided by throughput volumes. Adjusted operating income per gallon of production represents adjusted operating income (defined in (c) above) for our ethanol segment divided by production volumes. Throughput and production volumes are calculated by multiplying throughput and production volumes per day (as provided in the accompanying tables) by the number of days in the applicable period.

(g) Average market reference prices for LLS crude oil, along with price differentials between the price of LLS crude oil and other types of crude oils are reflected without adjusting for the impact of the futures pricing for the corresponding delivery month. Therefore, the prices reported reflect the prompt month pricing only, without an adjustment for futures pricing (known in the industry as the Calendar Month Average (CMA) "roll" adjustment). We previously had provided average market reference prices that included the CMA "roll" adjustment. Accordingly, the average market reference price and price differentials for LLS crude oil for the three months ended March 31, 2016 have been adjusted to conform to the current presentation.

(h) Average market reference price differentials to Mars crude oil have been replaced by average market reference price differentials to ASCI crude oil. Mars crude oil is one of the three grades of sour crude oil used to create ASCI crude oil, and therefore, ASCI crude oil is a more comprehensive price marker for medium sour crude oil. Accordingly, the price differentials for ASCI crude oil for the three months ended March 31, 2016 are included to conform to the current presentation.

Total Company, Corporate, and Other
Operating revenues increased $6.1 billion and cost of sales increased $5.9 billion in the first quarter of 2017 compared to the first quarter of 2016 due primarily to increases in refined petroleum product prices and crude oil feedstock costs, respectively, associated with our refining segment, reflecting improved product margins of $137 million. This $137 million improvement was more than offset by the effect from the $293 million benefit in the first quarter of 2016 from the lower of cost or market inventory valuation adjustment and increases in operating expenses, general and administrative expenses, and depreciation and amortization expense of $87 million, $34 million, and $15 million, respectively, resulting in a decrease in operating income of $292 million. This decrease in operating income is the primary driver of the $190 million decrease in net income attributable to Valero stockholders from $495 million in the first quarter of 2016 to $305 million in the first quarter of 2017.

Excluding the $293 million benefit from the lower of cost or market inventory valuation adjustment, first quarter 2016 adjusted operating income was $536 million. Compared to this adjusted amount, operating income increased by $1 million in the first quarter of 2017 to $537 million, with improved product margins being almost fully offset by the increased costs discussed above. Details regarding changes in product margins, operating expenses, and depreciation and amortization expense are discussed by segment in the individual segment analysis below.

General and administrative expenses increased $34 million in the first quarter of 2017 compared to the first quarter of 2016 primarily due to an increase in environmental reserves.

Income tax expense decreased $105 million from the first quarter of 2016 to the first quarter of 2017 primarily as a result of lower income before income tax expense. The effective tax rates of 26 percent in the first quarter of 2017 and 30 percent in the first quarter of 2016 are lower than the U.S. statutory rate of 35 percent because income from our international operations is taxed at statutory rates that are lower than in the U.S. The effective tax rate in the first quarter of 2017 was also lower than the rate in the first quarter of 2016 due to a reduction in the statutory tax rate in Quebec and from the favorable resolution of several state income tax audits.

Refining Segment Results
Refining segment operating revenues increased $6.0 billion and cost of sales increased $5.9 billion in the first quarter of 2017 compared to the first quarter of 2016 primarily due to an increase in refined petroleum product prices and crude oil feedstock costs, respectively, reflecting improved product margins (refining gross margin) of $72 million. This $72 million improvement was more than offset by the effect from the $263 million benefit in the first quarter of 2016 from the lower of cost or market inventory valuation adjustment and an increase in operating expenses of $77 million, resulting in a decrease in operating income of $268 million. Excluding the $263 million benefit from the lower of cost or market inventory valuation adjustment, first quarter 2016 adjusted operating income for the refining segment was $652 million. Compared to this adjusted amount, operating income decreased by $5 million in the first quarter of 2017 to $647 million, with the $72 million increase in refining gross margin being more than offset by the $77 million increase in operating expenses.

Refining gross margin increased $72 million (a $0.48 per barrel increase) in the first quarter of 2017 compared to the first quarter of 2016, primarily due to the following:

- *Increase in distillate margins.* We experienced an increase in distillate margins throughout all of our regions in the first quarter of 2017 compared to the first quarter of 2016. For example, the Brent-based benchmark reference margin for U.S. Gulf Coast ultra-low-sulfur diesel was $11.12 per barrel in the first quarter of 2017 compared to $7.92 per barrel in the first quarter of 2016, representing a favorable increase of $3.20 per barrel. Another example is the WTI-based benchmark reference margin for U.S. Mid-Continent ultra-low-sulfur diesel that was $13.99 per barrel in the first quarter of 2017 compared to $11.03 per barrel in the first quarter of 2016, representing a favorable increase of $2.96 per barrel. We estimate that the increase in distillate margins in the first quarter of 2017 compared to the first quarter of 2016 had a favorable impact to our refining margin of approximately $244 million.

- *Lower costs of biofuel credits.* As more fully described in Note 12 of Condensed Notes to Consolidated Financial Statements, we must purchase biofuel credits in order to meet our biofuel blending obligation under various government and regulatory compliance programs, and the cost of these credits (primarily RINs in the U.S.) decreased by $15 million from $161 million in the first quarter of 2016 to $146 million in the first quarter of 2017. This decrease was due to a decrease in the market price of RINs.

- *Decrease in other refined product margins.* We experienced a decrease in the margins of other refined products (such as petroleum coke and sulfur) relative to Brent crude oil in the first quarter of 2017 compared to the first quarter of 2016 due to an increase in the cost of crude oils between the periods. Because the market prices for our other refined products remain relatively stable, our margins decline when the cost of crude oils that we process increases. For example, the benchmark price of Brent crude oil was $54.65 in the first quarter of 2017 compared to $35.14 in the first quarter of 2016, an increase of $19.51. We estimate that the decrease in other refinery products margins per barrel in the first quarter of 2017 compared to the first quarter of 2016 had an unfavorable impact of $130 million.

- *Lower throughput volumes.* Refining throughput volumes decreased by 41,000 barrels per day in the first quarter of 2017. We estimate that the decrease in refining throughput volumes had a negative impact on our refining margin of approximately $30 million.

- *Increase in charges from VLP.* Charges from the VLP segment for transportation and terminaling services increased $27 million in the first quarter of 2017 compared to the first quarter of 2016 primarily due to new charges from businesses acquired by VLP after the first quarter of 2016. Details regarding the increase in charges from VLP are discussed in the VLP segment analysis below.

The increase of $77 million in refining segment operating expenses was primarily due to a $38 million increase in energy costs driven by higher natural gas prices ($2.95 per MMBtu in the first quarter of 2017 compared to $1.93 per MMBtu in the first quarter of 2016) and a $27 million increase in costs associated with maintenance activities in the first quarter of 2017.

Ethanol Segment Results

Ethanol segment operating revenues increased $117 million and cost of sales increased $79 million in the first quarter of 2017 compared to the first quarter of 2016 primarily due to an increase in ethanol prices and corn costs, respectively, reflecting improved product margins (ethanol gross margin) of $38 million. This $38 million improvement was more than offset by the effect from the $30 million benefit in the first quarter of 2016 from the lower of cost or market inventory valuation adjustment and increases in operating expenses and depreciation and amortization expense of $10 million and $15 million, respectively, resulting in a decrease in operating income of $17 million. Excluding the $30 million benefit from the lower of cost or market inventory valuation adjustment, first quarter 2016 adjusted operating income for the ethanol segment was $9 million. Compared to this adjusted amount, operating income increased by $13 million in the first quarter of 2017 to $22 million, with the increase in ethanol gross margin being partially offset by the $10 million increase in operating expenses and the $15 million increase in depreciation and amortization expense.

The increase in ethanol segment gross margin of $38 million (or $0.08 per gallon) was primarily due to higher ethanol prices. Ethanol prices were higher in the first quarter of 2017 compared to the first quarter of 2016 driven by increased ethanol demand. For example, the New York Harbor ethanol price was $1.58 per gallon in the first quarter of 2017 compared to $1.45 per gallon in the first quarter of 2016. We estimate that the increase in the price of ethanol per gallon during the first quarter of 2017 had a favorable impact to our ethanol margin of approximately $35 million.

The increase of $10 million in ethanol segment operating expenses was primarily due to an increase in energy costs driven by higher natural gas prices ($2.95 per MMBtu in the first quarter of 2017 compared to $1.93 per MMBtu in the first quarter of 2016).

The increase of $15 million in ethanol segment depreciation and amortization expense was primarily due to write-offs for assets that were idled in the first quarter of 2017.

VLP Segment Results

VLP segment operating revenues increased $27 million in the first quarter of 2017 compared to the first quarter of 2016 primarily due to incremental revenues generated from transportation and terminaling services provided to the refining segment associated with businesses and assets acquired after the first quarter of 2016, as discussed below. This $27 million increase in revenues resulted in an increase in operating income of $27 million.

VLP segment operating revenues increased $27 million in the first quarter of 2017 compared to the first quarter of 2016, primarily due to the following:

- *Incremental terminaling throughput from acquired businesses.* VLP experienced a 38 percent increase in terminaling revenues in the first quarter of 2017 compared to the first quarter of 2016 generated by contributions from the McKee Terminal Services and the Meraux and Three Rivers Terminal Services Businesses, which were acquired by VLP from Valero in the second and third quarters of 2016, respectively. The incremental throughput volumes generated at these terminals had a favorable impact to VLP's operating revenues of $23 million.

- *Incremental operating revenues from acquired crude system assets.* Incremental throughput volumes related to the crude system assets that were acquired by VLP in January 2017, had a favorable impact to VLP's operating revenues of $2 million.

LIQUIDITY AND CAPITAL RESOURCES

Cash Flows for the Three Months Ended March 31, 2017

Our operations generated $988 million of cash in the first three months of 2017, driven primarily by net income of $321 million, noncash charges to income of $496 million, and a positive change in working capital of $151 million. Noncash charges primarily include $500 million of depreciation and amortization expense. See "RESULTS OF OPERATIONS" for further discussion of our operations. The change in our working capital is further detailed in Note 10 of Condensed Notes to Consolidated Financial Statements. This source of cash mainly resulted from:

- a decrease in receivables, partially offset by a decrease in accounts payable, primarily as a result of the timing of collections of receivables and payments of invoices, respectively; and
- an increase in inventory volumes held.

The $988 million of cash generated by our operations, along with (i) net proceeds of $35 million from VLP's sale of common units representing limited partner interests to the public and (ii) $353 million from available cash on hand, were used mainly to:

- fund $641 million in capital investments, which include capital expenditures, deferred turnaround and catalyst costs, and equity-method joint venture investments;
- acquire an undivided interest in crude system assets for $72 million;
- purchase common stock for treasury of $314 million;
- pay common stock dividends of $315 million; and
- pay distributions to noncontrolling interests of $34 million.

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 net noncash charges to income of $313 million. Noncash 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 include capital expenditures, deferred turnaround and catalyst costs, and equity-method joint venture investments;
- purchase common stock for treasury of $265 million; and
- pay common stock dividends of $282 million.

Capital Investments

For 2017, we expect to incur approximately $2.7 billion for capital investments, including capital expenditures, deferred turnaround and catalyst costs, and equity-method joint venture investments. This consists of approximately $1.6 billion for stay-in-business capital and $1.1 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 equity-method investments in joint ventures and we invest in these joint ventures or enter into new joint venture arrangements to enhance our operations. We have a 50 percent interest in Diamond Pipeline, which was formed by Plains All American 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 cost of $925 million. We have made cumulative cash contributions of $252 million in Diamond Pipeline and expect to continue making contributions as the construction progresses.

Contractual Obligations

As of March 31, 2017, 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, 2017. However, in the ordinary course of business, we recognized capital lease assets and related obligations of approximately $490 million each related to the lease of storage tanks located at three of our refineries. These lease agreements have initial terms of 10 years each with successive 10-year automatic renewal terms.

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 our ratings on our senior unsecured debt are at or above investment grade level as follows:

	Rating	
Rating Agency	**Valero**	**VLP**
Moody's Investors Service	Baa2 (stable outlook)	Baa3 (stable outlook)
Standard & Poor's Ratings Services	BBB (stable outlook)	BBB- (stable outlook)
Fitch Ratings	BBB (stable outlook)	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

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

	Facility Amount	Maturity Date	March 31, 2017 Outstanding Borrowings	Letters of Credit Issued	Availability
Committed facilities:					
Valero Revolver	$ 3,000	November 2020	$ —	$ 150	$ 2,850
VLP Revolver	$ 750	November 2020	$ 30	$ —	$ 720
Canadian Revolver	C$ 25	November 2017	C$ —	C$ 10	C$ 15
Accounts receivable sales facility	$ 1,300	July 2017	$ 100	n/a	$ 1,183
Letter of credit facilities	$ 225	June 2017 and November 2017	n/a	$ —	$ 225
Uncommitted facilities:					
Letter of credit facilities	n/a	n/a	n/a	$ 235	n/a

Letters of credit issued as of March 31, 2017 expire at various times in 2017 through 2018.

Other Matters Impacting Liquidity and Capital Resources

Stock Purchase Program

On September 21, 2016, our board of directors authorized our purchase of up to an additional $2.5 billion of our outstanding common stock (the 2016 program) with no expiration date. This authorization was in addition to the remaining amount available under a $2.5 billion program authorized on July 13, 2015 (the 2015 program). During the first quarter of 2017, we completed our purchases under the 2015 program. As of March 31, 2017, we had approximately $2.2 billion remaining available under the 2016 program. We have no obligation to make purchases under this program.

Pension Plan Funding

We plan to contribute approximately $28 million to our pension plans and $19 million to our other postretirement benefit plans during 2017.

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 income tax returns from 2010 through 2015, and we have received Revenue Agent Reports (RARs) in connection with the 2010 and 2011 audit. 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 believe that the ultimate settlement of these audits will not be material to our financial position, results of operations, or liquidity.

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, 2017, $2.5 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 petroleum product wholesalers and retailers. These concentrations of customers may impact our overall exposure to credit risk, either positively or negatively, in that these customers may be similarly affected by changes in economic or other conditions. 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 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 our financial statements and accompanying notes. Actual results could differ from those estimates. As of March 31, 2017, 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, 2016 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 petroleum 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 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 LIFO basis) differ from our previous year-end LIFO inventory levels, and
- forecasted feedstock and refined petroleum product purchases, refined petroleum 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, 2017:		
Gain (loss) in fair value resulting from:		
10% increase in underlying commodity prices	$ (67)	$ (3)
10% decrease in underlying commodity prices	67	(4)
December 31, 2016:		
Gain (loss) in fair value resulting from:		
10% increase in underlying commodity prices	61	(22)
10% decrease in underlying commodity prices	(61)	11

See Note 12 of Condensed Notes to Consolidated Financial Statements for notional volumes associated with these derivative contracts as of March 31, 2017.

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, 2017, 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 (dollars in millions), 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.

	March 31, 2017							
	Expected Maturity Dates							
	2017	2018	2019	2020	2021	There-after	Total (a)	Fair Value
Fixed rate	$ —	$ —	$ 750	$ 850	$ —	$ 6,224	$ 7,824	$ 8,755
Average interest rate	—%	—%	9.4%	6.1%	—%	5.6%	6.0%	
Floating rate (b)	$ 104	$ 5	$ 5	$ 35	$ 5	$ 26	$ 180	$ 180
Average interest rate	1.6%	3.4%	3.4%	2.5%	3.4%	3.4%	2.2%	

	December 31, 2016							
	Expected Maturity Dates							
	2017	2018	2019	2020	2021	There-after	Total (a)	Fair Value
Fixed rate	$ —	$ —	$ 750	$ 850	$ —	$ 6,224	$ 7,824	$ 8,701
Average interest rate	—%	—%	9.4%	6.1%	—%	5.6%	6.0%	
Floating rate (b)	$ 105	$ 5	$ 5	$ 35	$ 5	$ 26	$ 181	$ 181
Average interest rate	1.4%	3.4%	3.4%	2.5%	3.4%	3.4%	2.1%	

(a) Excludes unamortized discounts and debt issuance costs.

(b) As of March 31, 2017 and December 31, 2016, we had an interest rate swap associated with $50 million and $51 million, respectively, of our floating rate debt resulting in an effective interest rate of 3.85 percent as of each of those reporting dates. The fair value of the swap was immaterial for all periods presented.

FOREIGN CURRENCY RISK

As of March 31, 2017, we had commitments to purchase $350 million of U.S. dollars. Our market risk was minimal on these contracts, as all of them matured on or before April 30, 2017.

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, 2017.

(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, 2016.

Litigation
We 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.

U.S. EPA. In our Form 10-K for the year ended December 31, 2016, we reported that certain of our refineries had received one or more letters or demands from the Department of Justice (DOJ), on behalf of the U.S. EPA, concerning proposed stipulated penalties under an existing consent decree that we reasonably believed would result in penalties in excess of $100,000. We have resolved these matters with the DOJ and U.S. EPA.

U.S. EPA (Fuels). On February 28, 2017, we received a Notice of Violation from the U.S. EPA related to alleged violations from its Mobile Source Inspection of 2015, which we believe will result in penalties in excess of $100,000. We are working with the U.S. EPA to resolve this matter.

U.S. EPA (Meraux Refinery). In our Form 10-K for the year ended December 31, 2016, we reported that in November 2016, we received from the U.S. EPA a draft Consent Agreement and Final Order (CAFO) related to a previous Risk Management Plan inspection at our Meraux Refinery, which included proposed penalties of $182,000. We have finalized the CAFO and resolved this matter with the U.S. EPA.

Bay Area Air Quality Management District (BAAQMD) (Benicia Refinery). We currently have multiple outstanding Violation Notices (VNs) issued by the BAAQMD from 2013 to the present. These VNs are for alleged reporting violations and excess emissions at our Benicia Refinery and asphalt plant. On April 19, 2017, we entered into a Settlement Agreement with the BAAQMD to resolve various outstanding VNs and we continue to work with the BAAQMD to resolve the remaining VNs.

Environment Canada (EC) (Quebec Refinery). In our Form 10-K for the year ended December 31, 2016, we reported that we were involved in a legal proceeding initiated by the EC alleging breaches of certain conditions at our Quebec Refinery of a directive issued under the Canadian Fisheries Act. We have resolved this matter with the EC.

ITEM 1A. RISK FACTORS

There have been no changes from the risk factors disclosed in our annual report on Form 10-K for the year ended December 31, 2016.

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 2017.

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 2017	784,858	$ 67.54	132,555	652,303	$2.5 billion
February 2017	1,735,651	$ 66.41	5,692	1,729,959	$2.4 billion
March 2017	2,165,563	$ 67.14	2,935	2,162,628	$2.2 billion
Total	4,686,072	$ 66.93	141,182	4,544,890	$2.2 billion

(a) The shares reported in this column represent purchases settled in the first quarter of 2017 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 September 21, 2016, we announced that our board of directors authorized our purchase of up to $2.5 billion of our outstanding common stock (the 2016 program) with no expiration date, which was in addition to the remaining amount available under our $2.5 billion program previously authorized on July 13, 2015 (the 2015 program). During the first quarter of 2017, we completed our purchases under the 2015 program. As of March 31, 2017, we had $2.2 billion remaining available for purchase under the 2016 program.

ITEM 6. EXHIBITS

Exhibit No.	Description
*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 8, 2017

Exhibit 31.01

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 8, 2017

/s/ Joseph W. Gorder

Joseph W. Gorder
Chief Executive Officer and President

Exhibit 31.02

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 8, 2017

/s/ Michael S. Ciskowski

Michael S. Ciskowski
Executive Vice President and Chief Financial Officer

Exhibit 32.01

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, 2017, 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 8, 2017

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, 2017, 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 8, 2017

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.