PART II

Item 5. *Market for Registrant's Common Units, Related Unitholder Matters and Issuer Purchases of Equity Securities*

Market Information, Holders and Distributions

Our common units are listed and traded on The Nasdaq Global Select Market under the symbol "PAA." As of February 11, 2021, there were 722,052,254 common units outstanding and approximately 99,000 record holders and beneficial owners (held in street name).

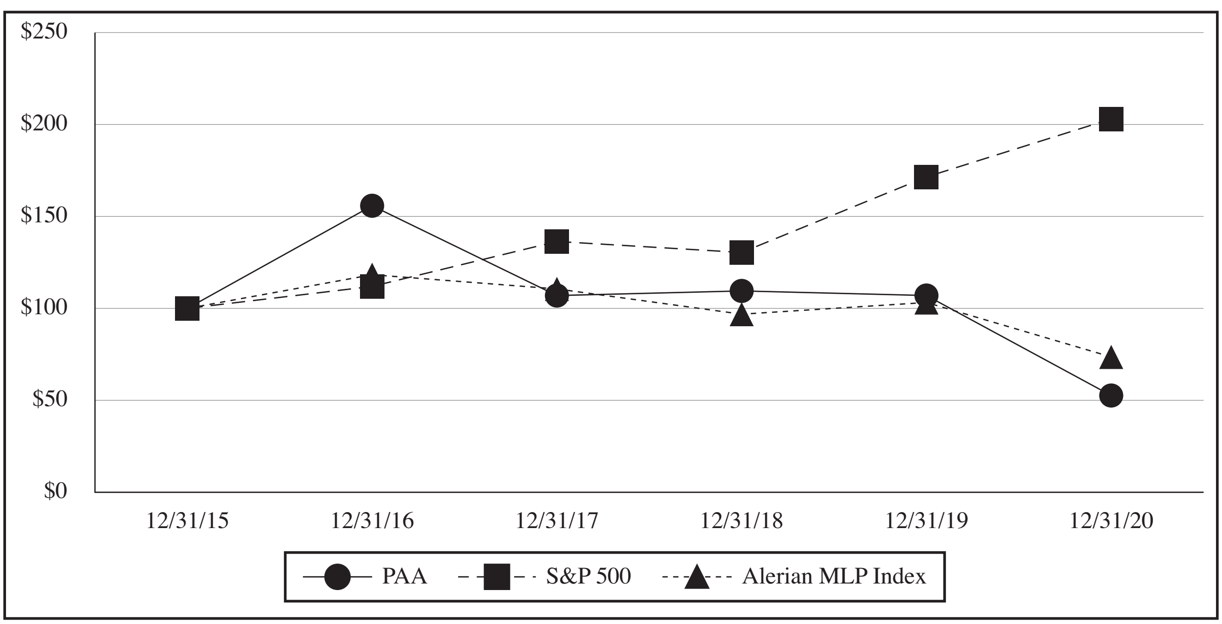
The following table presents cash distributions per common unit pertaining to the quarter presented, which were declared and paid in the following calendar quarter (see the "Cash Distribution Policy" section below for a discussion of our policy regarding distribution payments):

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2020	$0.18	$0.18	$0.18	$0.18
2019	$0.36	$0.36	$0.36	$0.36

Our common units are also used as a form of compensation to our employees and PAGP GP directors. See Note 18 to our Consolidated Financial Statements for additional information regarding our equity-indexed compensation plans.

Performance Graph

The following graph compares the total unitholder return performance of our common units with the performance of: (i) the Standard & Poor's 500 Stock Index ("S&P 500") and (ii) the Alerian MLP Index. The Alerian MLP Index is a composite of the most prominent energy master limited partnerships that provides investors with a comprehensive benchmark for this asset class. The graph assumes that $100 was invested in our common units and each comparison index beginning on December 31, 2015 and that all distributions were reinvested on a quarterly basis.



	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020
PAA	$100.00	$155.83	$106.99	$109.50	$107.01	$ 52.62
S&P 500	$100.00	$111.96	$136.40	$130.42	$171.49	$203.04
Alerian MLP Index	$100.00	$118.31	$110.59	$ 96.86	$103.21	$ 73.60

This information shall not be deemed to be "soliciting material" or to be "filed" with the Commission or subject to Regulation 14A or 14C under the Exchange Act, other than as provided in Item 201(e) of Regulation S-K, or to the liabilities of Section 18 of the Exchange Act, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that we specifically request that such information be treated as soliciting material or specifically incorporate it by reference into a filing under the Securities Act or the Exchange Act.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

The following table summarizes our equity repurchase activity during the fourth quarter of 2020:

	Total Number of Common Units Purchased	Average Price Paid per Common Unit(1)	Total Number of Common Units Purchased as Part of Publicly Announced Program(2)	Approximate Dollar Value of Common Units that may yet be purchased under the Program(2)
November 1, 2020 - November 30, 2020	3,132,806	$7.60	3,132,806	$476,266,424
December 1, 2020 - December 31, 2020	3,089,942	$8.61	3,089,942	$449,708,839

(1) Average price paid per common unit includes costs associated with the repurchases.

(2) On November 2, 2020, we announced that the board of directors of PAA GP Holdings LLC ("PAGP GP") approved a $500 million common equity repurchase program (the "Program"), which authorizes the repurchase from time to time of up to $500 million of our common units and/or PAGP Class A shares via open market purchases or negotiated transactions conducted in accordance with applicable regulatory requirements. No time limit has been set for completion of the Program, and the Program may be suspended or discontinued at any time. The Program does not obligate us or PAGP to acquire a particular number of common units or PAGP Class A shares. Any common units or Class A shares that are repurchased will be canceled. No PAGP Class A shares were repurchased during the periods presented. The common units repurchased under the Program during the periods presented were cancelled immediately upon acquisition.

Cash Distribution Policy

In accordance with our partnership agreement, after making distributions to holders of our outstanding preferred units, we distribute the remainder of our available cash to our common unitholders of record within 45 days following the end of each quarter. Available cash is generally defined as, for any quarter ending prior to liquidation, all of our cash and cash equivalents on hand at the end of each quarter less reserves established in the reasonable discretion of our general partner for future requirements to:

- provide for the proper conduct of our business and the business of our operating partnerships (including reserves for future capital expenditures and for our anticipated future credit needs);
- comply with applicable law or any loan agreement, security agreement, mortgage, debt instrument or other agreement or obligation; or
- provide funds for distributions to our Series A and Series B preferred unitholders or distributions to our common unitholders for any one or more of the next four calendar quarters.

Our available cash also includes cash on hand resulting from borrowings made after the end of the quarter.

Under the terms of the agreements governing our debt, we are prohibited from declaring or paying any distribution to unitholders if a default or event of default (as defined in such agreements) exists. No such default has occurred. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Credit Agreements, Commercial Paper Program and Indentures."

Under the terms of our partnership agreement, our Series A preferred units and our Series B preferred units rank senior to all classes or series of equity securities in us with respect to distribution rights.

Item 6. *Selected Financial Data*

The historical financial information below was derived from our audited Consolidated Financial Statements as of December 31, 2020, 2019, 2018, 2017 and 2016 and for the years then ended. The selected financial data should be read in conjunction with Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations," and the Consolidated Financial Statements, including the notes thereto, in Item 8. "Financial Statements and Supplementary Data."

	Year Ended December 31,				
	2020	2019	2018	2017	2016
	(in millions, except per unit data)				
Statement of operations data:					
Total revenues	$23,290	$33,669	$34,055	$26,223	$20,182
Operating income/(loss)[1]	$ (2,375)	$ 1,988	$ 2,277	$ 1,153	$ 994
Net income/(loss)[1]	$ (2,580)	$ 2,180	$ 2,216	$ 858	$ 730
Net income/(loss) attributable to PAA[1]	$ (2,590)	$ 2,171	$ 2,216	$ 856	$ 726
Per unit data:					
Basic net income/(loss) per common unit[1]	$ (3.83)	$ 2.70	$ 2.77	$ 0.96	$ 0.43
Diluted net income/(loss) per common unit[1]	$ (3.83)	$ 2.65	$ 2.71	$ 0.95	$ 0.43
Declared distributions per common unit[2]	$ 0.90	$ 1.38	$ 1.20	$ 1.95	$ 2.65
Balance sheet data (at end of period):					
Property and equipment, net[1][3]	$14,611	$15,355	$14,787	$14,089	$13,872
Total assets[1][4]	$24,497	$28,677	$25,511	$25,351	$24,210
Long-term debt	$ 9,382	$ 9,187	$ 9,143	$ 9,183	$10,124
Long-term operating lease liabilities[4]	$ 317	$ 387	$ —	$ —	$ —
Total debt	$10,213	$ 9,691	$ 9,209	$ 9,920	$11,839
Partners' capital	$ 9,738	$13,195	$12,002	$10,958	$ 8,816
Other data:					
Net cash provided by operating activities	$ 1,514	$ 2,504	$ 2,608	$ 2,499	$ 733
Net cash used in investing activities	$ (1,093)	$ (1,765)	$ (813)	$ (1,570)	$ (1,273)
Net cash provided by/(used in) financing activities	$ (435)	$ (720)	$ (1,757)	$ (943)	$ 556
Capital expenditures:					
Investment capital	$ 921	$ 1,340	$ 1,888	$ 1,135	$ 1,405
Maintenance capital	$ 216	$ 287	$ 252	$ 247	$ 186
Acquisition capital	$ 310	$ 50	$ —	$ 1,323	$ 289

	Year Ended December 31,				
	2020	2019	2018	2017	2016
Volumes[5][6]					
Transportation segment (average daily volumes in thousands of barrels per day):					
Tariff activities	6,266	6,805	5,791	5,083	4,523
Trucking	74	88	98	103	114
Transportation segment total volumes	6,340	6,893	5,889	5,186	4,637
Facilities segment:					
Liquids storage (average monthly capacity in millions of barrels)[7]	109	110	109	112	107
Natural gas storage (average monthly working capacity in billions of cubic feet)	66	63	66	82	97
NGL fractionation (average volumes in thousands of barrels per day)	129	144	131	126	115
Facilities segment total volumes (average monthly volumes in millions of barrels)	124	125	124	130	127
Supply and Logistics segment (average daily volumes in thousands of barrels per day):					
Crude oil lease gathering purchases	1,174	1,162	1,054	945	894
NGL sales	144	207	255	274	259
Supply and Logistics segment total volumes	1,318	1,369	1,309	1,219	1,153

(1) During the year ended December 31, 2020, we recognized impairments of approximately $3.4 billion. See Note 6, Note 7 and Note 8 to our Consolidated Financial Statements for additional information.

(2) Represents cash distributions declared and paid per unit during the year presented. See Note 12 to our Consolidated Financial Statements for further discussion regarding our distributions.

(3) See Note 7 for discussion of our acquisitions and dispositions completed during the three years ended December 31, 2020.

(4) On January 1, 2019, we adopted Accounting Standards Update 2016-02, *Leases (Topic 842)* using the optional transitional method. Prior period amounts have not been adjusted and continue to be reported in accordance with our historic accounting under Accounting Standards Codification Topic 840.

(5) Average volumes are calculated as the total volumes (attributable to our interest) for the year divided by the number of days or months in the year.

(6) Facilities segment total volumes are calculated as the sum of: (i) liquids storage capacity; (ii) natural gas storage working capacity divided by 6 to account for the 6:1 thousand cubic feet ("mcf") of natural gas to crude British thermal unit ("Btu") equivalent ratio and further divided by 1,000 to convert to monthly volumes in millions; and (iii) NGL fractionation volumes multiplied by the number of days in the year and divided by the number of months in the year.

(7) Includes volumes (attributable to our interest) from facilities owned by unconsolidated entities.

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

Introduction

The following discussion is intended to provide investors with an understanding of our financial condition and results of our operations and should be read in conjunction with our historical Consolidated Financial Statements and accompanying notes.

Our discussion and analysis includes the following:

- Executive Summary
- Critical Accounting Policies and Estimates
- Recent Accounting Pronouncements
- Results of Operations
- Liquidity and Capital Resources

A comparative discussion of our 2019 to 2018 operating results and performance measures can be found in Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Results of Operations" included in our Annual Report on Form 10-K for the year ended December 31, 2019 filed with the SEC on February 27, 2020.

Executive Summary

Company Overview

Our business model integrates large-scale supply aggregation capabilities with the ownership and operation of critical midstream infrastructure systems that connect major producing regions to key demand centers and export terminals. As one of the largest midstream service providers in North America, we own an extensive network of pipeline transportation, terminalling, storage and gathering assets in key crude oil and NGL producing basins (including the Permian Basin) and transportation corridors and at major market hubs in the United States and Canada. Our assets and the services we provide are primarily focused on crude oil, NGL and natural gas. Our business activities are conducted through three operating segments: Transportation, Facilities and Supply and Logistics. See "— Results of Operations — Analysis of Operating Segments" for further discussion.

Recent Events and Outlook

During the first quarter of 2020, COVID-19 escalated into a global pandemic, which led to widespread shelter-in-place or similar requirements throughout North America and across the world, resulting in significantly reduced energy demand. As a result, North American producers responded aggressively by shutting in significant levels of production early in the second quarter, which mitigated the pace of crude oil inventory builds and the risk of testing storage maximums. Subsequently, United States refinery utilization increased, the previously steep contango market structure tempered, and crude oil prices improved to more constructive levels. Over the course of the second half of the year, the more constructive price environment allowed oil and gas producers to return to production wells that were previously shut-in, resume completion activities and begin to increase drilling activities during the third quarter at a level that is lower than pre-pandemic, but likely at a level that is sufficient to offset natural declines.

While prices have rebounded to levels that are near pre-pandemic levels, drilling activity is at a fraction of pre-pandemic levels as evidenced by the Lower 48 rig count, which is approximately 40% of peak levels reached in 2020 pre-COVID-19. Many oil and gas producers in the United States have publicly stated their intention to reduce capital investment in oil and gas drilling activities in 2021 as they strive to improve their financial metrics and increase returns to shareholders. Accordingly, we expect oil and gas drilling activities to continue to be lower than pre-pandemic levels which in turn will slow the growth in oil production, relative to pre-pandemic expectations of production growth. We expect that the combination of a muted growth in production, with excess pipeline capacity in most of our operating areas will have a negative impact on our business relative to pre-pandemic levels, with the impacts in 2021 being more pronounced than in 2020.

Similar to the actions taken by oil and gas producers, we have implemented a number of initiatives, as described below, to ensure that we are positioned to manage through the current challenging market environment. Longer term, we expect global demand for hydrocarbons will recover, which should drive higher production levels in key onshore shale basins, which should support growing demand for our assets. Also see Items 1. and 2. "Business and Properties — Global Petroleum Market Overview and Fundamental Themes" for additional information.

Our response to the challenging near-term market conditions has been to focus on measures to strengthen our balance sheet, liquidity and long-term financial flexibility. These actions include significantly reducing our capital program, reducing the amount of our common equity distributions, progressing asset sales, and reducing costs, while remaining focused on operating safely and responsibly.

Specifically, since April, we have reduced our 2020/2021 capital program by $950 million, or 41%, and have decreased our common unit distributions and PAGP's Class A share distributions by 50% versus the distributions paid in February 2020, which reflects a reduction of $525 million on an annualized basis. We have also completed approximately $450 million of asset sales. While each of these actions should contribute to a stronger balance sheet and enhanced liquidity and long-term financial flexibility, we can provide no assurance that we will be able to effect certain future actions (such as additional capital reductions, asset sales and expense reductions) and additional actions may be necessary to achieve our balance sheet, liquidity and financial security objectives. See "Risk Factors — Risks Related to Our Business" in Item 1A.

While some modifications in our operations have been necessary to deal with risks associated with the COVID-19 pandemic, we have not experienced any material constraints in our ability to continue our essential business functions and have not incurred any significant additional operating costs as a result of the pandemic. We remain focused on the health and safety of our workforce, and have modified our operations in ways that we believe are prudent and appropriate in order to protect our employees while continuing to operate our assets in an effective, safe and responsible manner.

In addition, many governments have enacted or are contemplating measures to provide aid and economic stimulus in response to the COVID-19 pandemic. These measures include actions by both the United States federal government and the government of Canada. There has been no material direct impact to our financial position, results of operations or cash flows resulting from these measures. However, our Canadian subsidiary participated in a wage subsidy program during the second, third and fourth quarters of 2020 for subsidies totaling approximately $23 million. The impact of such subsidies is included in the line items "Field operating costs" and "Segment general and administrative expenses" of the applicable segments. See "— Results of Operations — Analysis of Operating Segments" for further discussion.

Overview of Operating Results, Capital Investments and Other Significant Activities

The macroeconomic and industry specific challenges discussed above have resulted in a number of impairment charges recognized during 2020 as discussed further below. See "— Liquidity and Capital Resources" for additional discussion of the expected and potential impact of COVID-19 and related market conditions on our business.

We recognized a net loss of $2.580 billion for the year ended December 31, 2020 compared to net income of $2.180 billion recognized for the year ended December 31, 2019. The net loss for the period was driven by goodwill impairment losses of $2.515 billion and was also impacted by non-cash impairment charges of approximately $914 million related to the write-down of certain pipeline and other long-lived assets, certain of our investments in unconsolidated entities, and assets upon classification as held for sale. In addition, we recognized approximately $233 million of inventory valuation adjustments due to declines in commodity prices primarily during the first quarter of 2020.

Our results for the comparative period were also impacted by:

- Less favorable results from our Supply and Logistics segment due to less favorable crude oil differentials, lower NGL margins and the unfavorable impact of the mark-to-market of certain derivative instruments, resulting in higher losses recognized in 2020 compared to 2019, partially offset by the favorable impact of contango market conditions during 2020;
- Less favorable results from our Transportation segment driven by lower volumes from shut-ins of crude oil production, reduced drilling and completion activity and compressed regional basis differentials, a portion of which are covered by minimum volume commitments that will be made up or paid for in future periods, and lower pipeline loss allowance revenue in 2020 due to lower prices and volumes, partially offset by lower field operating costs;

- Higher depreciation and amortization expense in the 2020 period primarily due to additional depreciation expense associated with acquired assets, the completion of various investment capital projects and a reduction in the useful lives of certain assets;
- A gain of $21 million recognized in the current period related to the sale of a portion of our interest in Saddlehorn Pipeline Company, LLC in February 2020, compared to a non-cash gain of $269 million recognized in the 2019 period related to a fair value adjustment resulting from the accounting for the contribution of our undivided joint interest in the Capline pipeline system for an equity interest in Capline Pipeline Company LLC; partially offset by
- Favorable results from our Facilities segment primarily due to lower field operating costs; and
- The favorable impact on income tax expense of lower taxable earnings and lower year-over-year income as impacted by fluctuations in the derivative mark-to-market valuations in our Canadian operations.

See further discussion of our operating results in the "— Results of Operations — Analysis of Operating Segments" and "— Other Income and Expenses" sections below.

We invested $921 million in midstream infrastructure projects during 2020, which primarily related to projects under development in the Permian Basin. See "— Liquidity and Capital Resources — Investing Activities — Investment Capital Projects" for additional information. Additionally, during the first quarter of 2020, we acquired $310 million of assets, which primarily included a crude oil gathering system located in the Delaware Basin.

We also paid approximately $853 million of cash distributions to our common unitholders and our Series A and B preferred unitholders during 2020.

In June 2020, we completed the issuance of $750 million, 3.80% senior notes due September 2030. We used the net proceeds from this offering of $742 million, after deducting the underwriting discount and offering expenses, to repay the principal amounts of our 5.00% senior notes due February 2021 in November 2020. See "— Liquidity and Capital Resources — Financing Activities — Senior Notes" for additional information.

During the fourth quarter of 2020, we repurchased 6.6 million common units for $53 million, which includes repurchases of 350,000 common units for $3 million that did not settle until January 2021. See "— Liquidity and Capital Resources — Financing Activities — Common Equity Repurchase Program" for additional information.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with GAAP and rules and regulations of the SEC requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, as well as the disclosure of contingent assets and liabilities, at the date of the financial statements. Such estimates and assumptions also affect the reported amounts of revenues and expenses during the reporting period. Although we believe these estimates are reasonable, actual results could differ from these estimates. On a regular basis, we evaluate our assumptions, judgments and estimates. We also discuss our critical accounting policies and estimates with the Audit Committee of the Board of Directors.

We believe that the assumptions, judgments and estimates involved in the accounting for our (i) estimated fair value of assets and liabilities acquired and identification of associated goodwill and intangible assets, (ii) impairment assessments of goodwill and intangible assets, (iii) fair value of derivatives, (iv) accruals and contingent liabilities, (v) property and equipment, depreciation and amortization expense and asset retirement obligations, (vi) impairment assessments of property and equipment and investments in unconsolidated entities and (vii) inventory valuations have the greatest potential impact on our Consolidated Financial Statements. These areas are key components of our results of operations and are based on complex rules which require us to make judgments and estimates. Therefore, we consider these to be our critical accounting policies and estimates, which are discussed further as follows. For further information on all of our significant accounting policies, see Note 2 to our Consolidated Financial Statements.

Fair Value of Assets and Liabilities Acquired and Identification of Associated Goodwill and Intangible Assets. In accordance with Financial Accounting Standards Board ("FASB") guidance regarding business combinations, with each acquisition, we allocate the cost of the acquired entity to the assets and liabilities assumed based on their estimated fair values at the date of acquisition. If the initial accounting for the business combination is incomplete when the combination occurs, an estimate will be recorded. We also expense the transaction costs as incurred in connection with each acquisition, except for acquisitions of equity method investments. In addition, we are required to recognize intangible assets separately from goodwill.

Determining the fair value of assets and liabilities acquired, as well as intangible assets that relate to such items as customer relationships, acreage dedications and other contracts, involves professional judgment and is ultimately based on acquisition models and management's assessment of the value of the assets acquired and, to the extent available, third-party assessments.

Impairment Assessments of Goodwill and Intangible Assets. Goodwill and intangible assets with indefinite lives are not amortized but are instead periodically assessed for impairment. Intangible assets with finite lives are amortized over their estimated useful life as determined by management. See Note 8 and Note 10 to our Consolidated Financial Statements for further discussion of goodwill and intangible assets.

Impairment testing entails estimating future net cash flows relating to the business, based on management's estimate of future revenues, future cash flows and market conditions including pricing, demand, competition, operating costs and other factors. Uncertainties associated with these estimates include changes in production decline rates, production interruptions, fluctuations in refinery capacity or product slates, economic obsolescence factors in the area and potential future sources of cash flow. In addition, changes in our weighted average cost of capital from our estimates could have a significant impact on fair value. We cannot provide assurance that actual amounts will not vary significantly from estimated amounts. Resolutions of these uncertainties have resulted, and in the future may result, in impairments that impact our results of operations and financial condition.

Fair Value of Derivatives. The fair value of a derivative at a particular period end does not reflect the end results of a particular transaction, and will most likely not reflect the gain or loss at the conclusion of a transaction. We reflect estimates for these items based on our internal records and information from third parties. We have commodity derivatives, interest rate derivatives and foreign currency derivatives that are accounted for as assets and liabilities at fair value on our Consolidated Balance Sheets. The valuations of our derivatives that are exchange traded are based on market prices on the applicable exchange on the last day of the period. For our derivatives that are not exchange traded, the estimates we use are based on indicative broker quotations or an internal valuation model. Our valuation models utilize market observable inputs such as price, volatility, correlation and other factors and may not be reflective of the price at which they can be settled due to the lack of a liquid market. Less than 1% of total annual revenues are based on estimates derived from internal valuation models.

We also have embedded derivatives that are recorded at fair value on our Consolidated Balance Sheets. These embedded derivatives are valued using models that contain inputs, some of which involve management judgment.

Although the resolution of the uncertainties involved in these estimates has not historically had a material impact on our results of operations or financial condition, we cannot provide assurance that actual amounts will not vary significantly from estimated amounts. See Item 7A. Quantitative and Qualitative Disclosures About Market Risk and Note 13 to our Consolidated Financial Statements for a discussion regarding our derivatives and risk management activities.

Accruals and Contingent Liabilities. We record accruals or liabilities for, among other things, environmental remediation, potential legal claims or settlements and fees for legal services associated with loss contingencies, and bonuses. Accruals are made when our assessment indicates that it is probable that a liability has occurred and the amount of liability can be reasonably estimated. Our estimates are based on all known facts at the time and our assessment of the ultimate outcome. Among the many uncertainties that impact our estimates are the necessary regulatory approvals for, and potential modification of, our environmental remediation plans, the limited amount of data available upon initial assessment of the impact of soil or water contamination, changes in costs associated with environmental remediation services and equipment, the duration of the natural resource damage assessment and the ultimate amount of damages determined, the determination and calculation of fines and penalties, the possibility of existing legal claims giving rise to additional claims and the nature, extent and cost of legal services that will be required in connection with lawsuits, claims and other matters. Our estimates for contingent liability accruals are increased or decreased as additional information is obtained or resolution is achieved. A hypothetical variance of 5% in our aggregate estimate for the accruals and contingent liabilities discussed above would have an impact on earnings of up to approximately $19 million. Although the resolution of these uncertainties has not historically had a material impact on our results of operations or financial condition, we cannot provide assurance that actual amounts will not vary significantly from estimated amounts.

Property and Equipment, Depreciation and Amortization Expense and Asset Retirement Obligations. We compute depreciation and amortization using the straight-line method based on estimated useful lives. These estimates are based on various factors including condition, manufacturing specifications, technological advances and historical data concerning useful lives of similar assets. Uncertainties that impact these estimates include changes in laws and regulations relating to restoration and abandonment requirements, economic conditions and supply and demand in the area. When assets are put into service, we make estimates with respect to useful lives and salvage values that we believe are reasonable. However, subsequent events could cause us to change our estimates, thus impacting the future calculation of depreciation and amortization.

We record retirement obligations associated with tangible long-lived assets based on estimates related to the costs associated with cleaning, purging and, in some cases, completely removing the assets and returning the land to its original state. In addition, our estimates include a determination of the settlement date or dates for the potential obligation, which may or may not be determinable. Uncertainties that impact these estimates include the costs associated with these activities and the timing of incurring such costs.

Impairment Assessments of Property and Equipment and Investments in Unconsolidated Entities. We periodically evaluate property and equipment for impairment when events or circumstances indicate that the carrying value of these assets may not be recoverable. Any evaluation is highly dependent on the underlying assumptions of related cash flows. We consider the fair value estimate used to calculate impairment of property and equipment a critical accounting estimate. In determining the existence of an impairment of carrying value, we make a number of subjective assumptions as to:

- whether there is an event or circumstance that may be indicative of an impairment;
- the grouping of assets;
- the intention of "holding", "abandoning" or "selling" an asset;
- the forecast of undiscounted expected future cash flow over the asset's estimated useful life; and
- if an impairment exists, the fair value of the asset or asset group.

In addition, when we evaluate property and equipment and other long-lived assets for recoverability, it may also be necessary to review related depreciation estimates and methods.

Investments in unconsolidated entities accounted for under the equity method of accounting are assessed for impairment when events or circumstances suggest that a decline in value may be other than temporary. Examples of such events or circumstances include continuing operating losses of the entity and/or long-term negative changes in the entity's core business. When it is determined that an indicated impairment is other than temporary, a charge is recognized for the difference between the investment's carrying amount and its estimated fair value. We consider the fair value estimate used to calculate the impairment of investments in unconsolidated entities a critical accounting estimate. In determining the existence of an other-than-temporary impairment of carrying value, we make a number of subjective assumptions as to:

- whether there is an event or circumstance that may be indicative of a decline in value of the investment;
- whether the decline in value is other than temporary; and
- the fair value of the investment.

A change in our outlook or use could result in impairments that may be material to our results of operations or financial condition. See "— Executive Summary — Recent Events and Outlook" and Note 6 and Note 9 to our Consolidated Financial Statements for additional information.

Inventory Valuations. Inventory, including long-term inventory, primarily consists of crude oil and NGL and is valued at the lower of cost or net realizable value, with cost determined using an average cost method within specific inventory pools. At the end of each reporting period, we assess the carrying value of our inventory and use estimates and judgment when making any adjustments necessary to reduce the carrying value to net realizable value. Among the uncertainties that impact our estimates are the applicable quality and location differentials to include in our net realizable value analysis. Additionally, we estimate the upcoming liquidation timing of the inventory. Changes in assumptions made as to the timing of a sale can materially impact net realizable value. During the years ended December 31, 2020, 2019 and 2018, we recorded charges of $233 million, $11 million and $8 million, respectively, related to the valuation adjustment of our crude oil inventory due to declines in prices. See Note 5 to our Consolidated Financial Statements for further discussion regarding inventory.

Recent Accounting Pronouncements

See Note 2 to our Consolidated Financial Statements for information regarding the effect of recent accounting pronouncements on our Consolidated Financial Statements.

Results of Operations

The following table sets forth an overview of our consolidated financial results calculated in accordance with GAAP (in millions, except per unit data):

	Year Ended December 31,		Variance	
	2020	2019	$	%
Transportation Segment Adjusted EBITDA[1]	$ 1,616	$1,722	$ (106)	(6)%
Facilities Segment Adjusted EBITDA[1]	731	705	26	4%
Supply and Logistics Segment Adjusted EBITDA[1]	210	803	(593)	(74)%
Adjustments:				
Depreciation and amortization of unconsolidated entities	(73)	(62)	(11)	(18)%
Selected items impacting comparability – Segment Adjusted EBITDA	(617)	(163)	(454)	**
Depreciation and amortization	(653)	(601)	(52)	(9)%
Gains/(losses) on asset sales and asset impairments, net	(719)	(28)	(691)	**
Goodwill impairment losses	(2,515)	—	(2,515)	N/A
Gain on/(impairment of) investments in unconsolidated entities, net	(182)	271	(453)	(167)%
Interest expense, net	(436)	(425)	(11)	(3)%
Other income, net	39	24	15	63%
Income tax (expense)/benefit	19	(66)	85	129%
Net income/(loss)	(2,580)	2,180	(4,760)	(218)%
Net income attributable to noncontrolling interests	(10)	(9)	(1)	(11)%
Net income/(loss) attributable to PAA	$(2,590)	$2,171	$(4,761)	(219)%
Basic net income/(loss) per common unit	$ (3.83)	$ 2.70	$ (6.53)	**
Diluted net income/(loss) per common unit	$ (3.83)	$ 2.65	$ (6.48)	**
Basic weighted average common units outstanding	728	727	1	**
Diluted weighted average common units outstanding	728	800	(72)	**

** Indicates that variance as a percentage is not meaningful.

(1) Segment Adjusted EBITDA is the measure of segment performance that is utilized by our Chief Operating Decision Maker ("CODM") to assess performance and allocate resources among our

operating segments. This measure is adjusted for certain items, including those that our CODM believes impact comparability of results across periods. See Note 21 to our Consolidated Financial Statements for additional discussion of such adjustments.

Non-GAAP Financial Measures

To supplement our financial information presented in accordance with GAAP, management uses additional measures known as "non-GAAP financial measures" in its evaluation of past performance and prospects for the future and to assess the amount of cash that is available for distributions, debt repayments, common equity repurchases and other general partnership purposes.

The primary additional measures used by management are earnings before interest, taxes, depreciation and amortization (including our proportionate share of depreciation and amortization of unconsolidated entities), gains and losses on asset sales and asset impairments, goodwill impairment losses and gains on and impairments of investments in unconsolidated entities, adjusted for certain selected items impacting comparability ("Adjusted EBITDA"), Implied distributable cash flow ("DCF"), Free Cash Flow and Free Cash Flow After Distributions.

Our definition and calculation of certain non-GAAP financial measures may not be comparable to similarly-titled measures of other companies. Adjusted EBITDA and Implied DCF are reconciled to Net Income/(Loss), and Free Cash Flow and Free Cash Flow After Distributions are reconciled to Net Cash Provided by Operating Activities, the most directly comparable measures as reported in accordance with GAAP, and should be viewed in addition to, and not in lieu of, our Consolidated Financial Statements and accompanying notes. See "— Liquidity and Capital Resources — Liquidity Measures" for additional information regarding Free Cash Flow and Free Cash Flow After Distributions.

Performance Measures

Management believes that the presentation of Adjusted EBITDA and Implied DCF provides useful information to investors regarding our performance and results of operations because these measures, when used to supplement related GAAP financial measures, (i) provide additional information about our core operating performance and ability to fund distributions to our unitholders through cash generated by our operations, (ii) provide investors with the same financial analytical framework upon which management bases financial, operational, compensation and planning/budgeting decisions and (iii) present measures that investors, rating agencies and debt holders have indicated are useful in assessing us and our results of operations. These non-GAAP measures may exclude, for example, (i) charges for obligations that are expected to be settled with the issuance of equity instruments, (ii) gains and losses on derivative instruments that are related to underlying activities in another period (or the reversal of such adjustments from a prior period), gains and losses on derivatives that are related to investing activities (such as the purchase of linefill) and inventory valuation adjustments, as applicable, (iii) long-term inventory costing adjustments, (iv) items that are not indicative of our core operating results and business outlook and/or (v) other items that we believe should be excluded in understanding our core operating performance. These measures may further be adjusted to include amounts related to deficiencies associated with minimum volume commitments whereby we have billed the counterparties for their deficiency obligation and such amounts are recognized as deferred revenue in "Other current liabilities" in our Consolidated Financial Statements. Such amounts are presented net of applicable amounts subsequently recognized into revenue. We have defined all such items as "selected items impacting comparability." We do not necessarily consider all of our selected items impacting comparability to be non-recurring, infrequent or unusual, but we believe that an understanding of these selected items impacting comparability is material to the evaluation of our operating results and prospects.

Although we present selected items impacting comparability that management considers in evaluating our performance, you should also be aware that the items presented do not represent all items that affect comparability between the periods presented. Variations in our operating results are also caused by changes in volumes, prices, exchange rates, mechanical interruptions, acquisitions, divestitures, investment capital projects and numerous other factors as discussed, as applicable, in "— Analysis of Operating Segments."

The following table sets forth the reconciliation of the non-GAAP financial performance measures Adjusted EBITDA and Implied DCF from Net Income/(Loss) (in millions):

	Year Ended December 31,		Variance	
	2020	2019	$	%
Net income/(loss)	$(2,580)	$ 2,180	$(4,760)	(218)%
Add/(Subtract):				
Interest expense, net	436	425	11	3%
Income tax expense/(benefit)	(19)	66	(85)	(129)%
Depreciation and amortization	653	601	52	9%
(Gains)/losses on asset sales and asset impairments, net	719	28	691	**
Goodwill impairment losses	2,515	—	2,515	N/A
(Gain on)/impairment of investments in unconsolidated entities, net	182	(271)	453	167%
Depreciation and amortization of unconsolidated entities[(1)]	73	62	11	18%
Selected Items Impacting Comparability:				
Losses from derivative activities net of inventory valuation adjustments[(2)]	480	160	320	**
Long-term inventory costing adjustments[(3)]	44	(20)	64	**
Deficiencies under minimum volume commitments, net[(4)]	74	(18)	92	**
Equity-indexed compensation expense[(5)]	19	17	2	**
Net (gain)/loss on foreign currency revaluation[(6)]	(3)	14	(17)	**
Line 901 incident[(7)]	—	10	(10)	**
Significant acquisition-related expenses[(8)]	3	—	3	**
Selected Items Impacting Comparability – Segment Adjusted EBITDA	617	163	454	**
Gains from derivative activities[(2)]	(20)	(2)	(18)	**
Net gain on foreign currency revaluation[(6)]	(13)	(15)	2	**
Net gain on early repayment of senior notes[(9)]	(3)	—	(3)	**
Selected Items Impacting Comparability – Adjusted EBITDA[(10)]	581	146	435	**
Adjusted EBITDA[(10)]	$ 2,560	$ 3,237	$ (677)	(21)%
Interest expense, net of certain non-cash items[(11)]	(415)	(407)	(8)	(2)%
Maintenance capital[(12)]	(216)	(287)	71	25%
Current income tax expense	(51)	(112)	61	54%
Distributions from unconsolidated entities in excess of/(less than) adjusted equity earnings[(13)]	13	(49)	62	**
Distributions to noncontrolling interests[(14)]	(10)	(6)	(4)	(67)%
Implied DCF	$ 1,881	$ 2,376	$ (495)	(21)%
Preferred unit cash distributions[(15)]	(198)	(198)		
Implied DCF Available to Common Unitholders	$ 1,683	$ 2,178		
Common unit cash distributions[(14)]	(655)	(1,004)		
Implied DCF Excess[(16)]	$ 1,028	$ 1,174		

** Indicates that variance as a percentage is not meaningful.

(1) Over the past several years, we have increased our participation in strategic pipeline joint ventures

accounted for under the equity method of accounting. We exclude our proportionate share of the depreciation and amortization expense of such unconsolidated entities when reviewing Adjusted EBITDA, similar to our consolidated assets.

(2) We use derivative instruments for risk management purposes, and our related processes include specific identification of hedging instruments to an underlying hedged transaction. Although we identify an underlying transaction for each derivative instrument we enter into, there may not be an accounting hedge relationship between the instrument and the underlying transaction. In the course of evaluating our results of operations, we identify the earnings that were recognized during the period related to derivative instruments for which the identified underlying transaction does not occur in the current period and exclude the related gains and losses in determining Adjusted EBITDA. In addition, we exclude gains and losses on derivatives that are related to investing activities, such as the purchase of linefill. We also exclude the impact of corresponding inventory valuation adjustments, as applicable. See Note 13 to our Consolidated Financial Statements for a comprehensive discussion regarding our derivatives and risk management activities.

(3) We carry crude oil and NGL inventory that is comprised of minimum working inventory requirements in third-party assets and other working inventory that is needed for our commercial operations. We consider this inventory necessary to conduct our operations and we intend to carry this inventory for the foreseeable future. Therefore, we classify this inventory as long-term on our balance sheet and do not hedge the inventory with derivative instruments (similar to linefill in our own assets). We treat the impact of changes in the average cost of the long-term inventory (that result from fluctuations in market prices) and write-downs of such inventory that result from price declines as a selected item impacting comparability. See Note 5 to our Consolidated Financial Statements for additional inventory disclosures.

(4) We, and certain of our equity method investments, have certain agreements that require counterparties to deliver, transport or throughput a minimum volume over an agreed upon period. Substantially all of such agreements were entered into with counterparties to economically support the return on our capital expenditure necessary to construct the related asset. Some of these agreements include make-up rights if the minimum volume is not met. We record a receivable from the counterparty in the period that services are provided or when the transaction occurs, including amounts for deficiency obligations from counterparties associated with minimum volume commitments. If a counterparty has a make-up right associated with a deficiency, we defer the revenue attributable to the counterparty's make-up right and subsequently recognize the revenue at the earlier of when the deficiency volume is delivered or shipped, when the make-up right expires or when it is determined that the counterparty's ability to utilize the make-up right is remote. We include the impact of amounts billed to counterparties for their deficiency obligation, net of applicable amounts subsequently recognized into revenue, as a selected item impacting comparability. We believe the inclusion of the contractually committed revenues associated with that period is meaningful to investors as the related asset has been constructed, is standing ready to provide the committed service and the fixed operating costs are included in the current period results.

(5) Our total equity-indexed compensation expense includes expense associated with awards that will or may be settled in units and awards that will or may be settled in cash. The awards that will or may be settled in units are included in our diluted net income per unit calculation when the applicable performance criteria have been met. We consider the compensation expense associated with these awards as a selected item impacting comparability as the dilutive impact of the outstanding awards is included in our diluted net income per unit calculation, as applicable, and the majority of the awards are expected to be settled in units. The portion of compensation expense associated with awards that are certain to be settled in cash is not considered a selected item impacting comparability. See Note 18 to our Consolidated Financial Statements for a discussion regarding our equity-indexed compensation plans.

(6) During the periods presented, there were fluctuations in the value of the Canadian dollar ("CAD") to the U.S. dollar ("USD"), resulting in the realization of foreign exchange gains and losses on the settlement of foreign currency transactions as well as the revaluation of monetary assets and liabilities denominated in a foreign currency. These gains and losses are not integral to our core operating performance and were thus classified as a selected item impacting comparability. See Note 13 to our Consolidated Financial Statements for discussion regarding our currency exchange rate risk hedging activities.

(7) Includes costs recognized during the period related to the Line 901 incident that occurred in May 2015, net of amounts we believe are probable of recovery from insurance. See Note 19 to our Consolidated Financial Statements for additional information regarding the Line 901 incident.

(8) Includes acquisition-related expenses associated with the acquisition of Felix Midstream LLC ("Felix Midstream") in February 2020. See Note 7 to our Consolidated Financial Statements for additional information.

(9) Includes net gains recognized in connection with the repurchase of our outstanding senior notes on the open market. See Note 11 to our Consolidated Financial Statements for additional information.

(10) Other income/(expense), net per our Consolidated Statements of Operations, adjusted for selected items impacting comparability ("Adjusted other income/(expense), net") is included in Adjusted EBITDA and excluded from Segment Adjusted EBITDA.

(11) Excludes certain non-cash items impacting interest expense such as amortization of debt issuance costs and terminated interest rate swaps.

(12) Maintenance capital expenditures are defined as capital expenditures for the replacement and/or refurbishment of partially or fully depreciated assets in order to maintain the operating and/or earnings capacity of our existing assets.

(13) Comprised of cash distributions received from unconsolidated entities less equity earnings in unconsolidated entities (adjusted for our proportionate share of depreciation and amortization and selected items impacting comparability of unconsolidated entities).

(14) Cash distributions paid during the period presented.

(15) Cash distributions paid to our preferred unitholders during the period presented. See Note 12 to our Consolidated Financial Statements for additional information regarding our preferred units.

(16) Excess DCF is retained to establish reserves for future distributions, capital expenditures and other partnership purposes.

Analysis of Operating Segments

We manage our operations through three operating segments: Transportation, Facilities and Supply and Logistics. Our CODM (our Chief Executive Officer) evaluates segment performance based on a variety of measures including Segment Adjusted EBITDA, segment volumes, Segment Adjusted EBITDA per barrel and maintenance capital investment.

We define Segment Adjusted EBITDA as revenues and equity earnings in unconsolidated entities less (a) purchases and related costs, (b) field operating costs and (c) segment general and administrative expenses, plus our proportionate share of the depreciation and amortization expense of unconsolidated entities, and further adjusted for certain selected items including (i) the mark-to-market of derivative instruments that are related to underlying activities in another period (or the reversal of such adjustments from a prior period), gains and losses on derivatives that are related to investing activities (such as the purchase of linefill) and inventory valuation adjustments, as applicable, (ii) long-term inventory costing adjustments, (iii) charges for obligations that are expected to be settled with the issuance of equity instruments, (iv) amounts related to deficiencies associated with minimum volume commitments, net of applicable amounts subsequently recognized into revenue and (v) other items that our CODM believes are integral to understanding our core segment operating performance. See Note 21 to our Consolidated Financial Statements for a reconciliation of Segment Adjusted EBITDA to Net income/(loss) attributable to PAA.

Our segment analysis involves an element of judgment relating to the allocations between segments. In connection with its operations, the Supply and Logistics segment secures transportation and facilities services from our other two segments as well as third-party service providers under month-to-month and multi-year arrangements. Intersegment transportation service rates are conducted at posted tariff rates, rates similar to those charged to third parties or rates that we believe approximate market. Facilities segment services are also obtained at rates generally consistent with rates charged to third parties for similar services. Intersegment activities are eliminated in consolidation and we believe that the estimates with respect to these rates are reasonable. Also, our segment operating and general and administrative expenses reflect direct costs attributable to each segment; however, we also allocate certain operating expenses and general and administrative overhead expenses between segments based on management's assessment of the business activities for the period. The proportional allocations by segment require judgment by management and may be adjusted in the future based on the business activities that exist during each period. We believe that the estimates with respect to these allocations are reasonable.

Revenues and expenses from our Canadian based subsidiaries, which use CAD as their functional currency, are translated at the prevailing average exchange rates for the month.

Transportation Segment

Our Transportation segment operations generally consist of fee-based activities associated with transporting crude oil and NGL on pipelines, gathering systems and trucks. The Transportation segment generates revenue through a combination of tariffs, pipeline capacity agreements and other transportation fees. Tariffs and other fees on our pipeline systems vary by receipt point and delivery point. The segment results generated by our tariff and other fee-related activities depend on the volumes transported on the pipeline and the level of the tariff and other fees charged, as well as the fixed and variable field costs of operating the pipeline.

The following tables set forth our operating results from our Transportation segment:

Operating Results[1] (in millions, except per barrel data)	Year Ended December 31,		Variance	
	2020	2019	$	%
Revenues	$2,020	$2,320	$(300)	(13)%
Purchases and related costs	(229)	(244)	15	6%
Field operating costs	(584)	(700)	116	17%
Segment general and administrative expenses[2]	(98)	(104)	6	6%
Equity earnings in unconsolidated entities	350	388	(38)	(10)%
Adjustments[3]:				
Depreciation and amortization of unconsolidated entities	71	61	10	16%
Losses from derivative activities, net of inventory valuation adjustments	1	—	1	**
Deficiencies under minimum volume commitments, net	71	(18)	89	**
Equity-indexed compensation expense	11	9	2	**
Line 901 incident	—	10	(10)	**
Significant acquisition-related expenses	3	—	3	**
Segment Adjusted EBITDA	$1,616	$1,722	$(106)	(6)%
Maintenance capital	$ 136	$ 161	$ (25)	(16)%
Segment Adjusted EBITDA per barrel	$ 0.70	$ 0.68	$0.02	3%

Average Daily Volumes (in thousands of barrels per day)[4]	Year Ended December 31, 2020	2019	Variance Volumes	%
Tariff activities volumes				
Crude oil pipelines (by region):				
Permian Basin[5]	4,427	4,690	(263)	(6)%
South Texas / Eagle Ford[5]	380	446	(66)	(15)%
Central[5]	379	498	(119)	(24)%
Gulf Coast	134	165	(31)	(19)%
Rocky Mountain[5]	245	293	(48)	(16)%
Western	223	198	25	13%
Canada	294	323	(29)	(9)%
Crude oil pipelines	6,082	6,613	(531)	(8)%
NGL pipelines	184	192	(8)	(4)%
Tariff activities total volumes	6,266	6,805	(539)	(8)%
Trucking volumes	74	88	(14)	(16)%
Transportation segment total volumes	6,340	6,893	(553)	(8)%

** Indicates that variance as a percentage is not meaningful.

(1) Revenues and costs and expenses include intersegment amounts.

(2) Segment general and administrative expenses reflect direct costs attributable to each segment and an allocation of other expenses to the segments. The proportional allocations by segment require judgment by management and are based on the business activities that exist during each period.

(3) Represents adjustments included in the performance measure utilized by our CODM in the evaluation of segment results. See Note 21 to our Consolidated Financial Statements for additional discussion of such adjustments.

(4) Average daily volumes are calculated as the total volumes (attributable to our interest) for the year divided by the number of days in the year.

(5) Region includes volumes (attributable to our interest) from pipelines owned by unconsolidated entities.

The following is a discussion of items impacting Transportation segment operating results for the periods indicated.

Revenues, Purchases and Related Costs, Equity Earnings in Unconsolidated Entities and Volumes. The following table presents variances in revenues, purchases and related costs and equity earnings in unconsolidated entities by region:

(in millions)	Favorable/(Unfavorable) Variance 2020-2019 Revenues	Purchases and Related Costs	Equity Earnings
Crude oil pipelines			
Permian Basin region	$(104)	$(17)	$ 31
South Texas / Eagle Ford region	(12)	—	(26)
Central region	(33)	(2)	(21)
Rocky Mountain region	(5)	—	(24)
Canada region	(26)	—	—
Other regions, NGL pipelines, trucking and pipeline loss allowance revenue	(120)	34	2
Total variance	$(300)	$ 15	$(38)

- *COVID-19 Impact.* The destruction of demand for refined products, and therefore crude oil, caused by COVID-19 created a supply and demand imbalance in the crude oil markets for a portion of 2020 in all of our operating regions. This imbalance pushed crude oil prices to historically low levels, including negative values for at least one day in April 2020. In turn, these factors caused U.S. and Canadian producers to respond by quickly curtailing their crude oil production as well as their drilling and completion activities. These actions led to a decline of onshore, lower 48 U.S. oil production by approximately 1.4 million barrels of crude oil per day between February and May of 2020, according to the information provided by the EIA, and adversely impacted transportation volumes on our pipelines.

- *Permian Basin region.* Revenues, net of purchases and related costs, ("net revenues") decreased by $121 million for the year ended December 31, 2020 compared to the year ended December 31, 2019. This decrease was primarily due to lower long-haul pipeline movements to Cushing, Oklahoma and Corpus Christi, Texas due to compressed regional basis differentials, as well as lower volumes on our intra-basin pipelines that feed our long-haul pipelines, partially offset by increased volumes on our gathering pipelines, almost half of which was attributable to the Felix Midstream system we acquired in February 2020. Some shippers on the long-haul pipelines to Cushing and Corpus Christi have under-delivered relative to their minimum volume commitments; however, the earnings related to these volume shortfalls will not be recognized until future periods when either the shortfall is made up or when the shipper's make-up rights expire or it is determined that their ability to utilize the make-up right is remote. Such deficiencies are reflected as an "Adjustment" in the table above as discussed further below under "*— Adjustments: Deficiencies under minimum volume commitments, net.*"

  The increase in equity earnings over the comparative period was primarily from our 65% interest in the Cactus II pipeline, which was placed in service in August 2019, partially offset by lower equity earnings from our 20% interest in the BridgeTex pipeline primarily due to lower volumes.

- *South Texas / Eagle Ford region.* The decrease in revenues for the year ended December 31, 2020 compared to the year ended December 31, 2019 was due to lower volumes, primarily related to lower production.

  Equity earnings from our 50% interest in the Eagle Ford pipeline decreased for the year ended December 31, 2020 compared to the year ended December 31, 2019 due to a combination of lower joint tariff volumes from the Permian Basin via our Cactus I pipeline, and to a lesser extent, lower regional receipts. Similar to some shippers in the Permian Basin region, certain shippers on the Eagle Ford pipeline have under-delivered relative to their minimum volume commitments and the earnings related to these volume shortfalls will not be recognized until future periods. Such deficiencies are reflected as an "Adjustment" in the table above as discussed further below under "*— Adjustments: Deficiencies under minimum volume commitments, net.*"

- *Central region.* The decrease in net revenues for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to a decrease in crude oil production in the region. This is also a region with a meaningful amount of excess pipeline capacity, which exacerbates the impact to our assets in this region.

  The decrease in equity earnings for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to the impact of refinery downtime on certain of the demand pull pipelines out of Cushing, Oklahoma, in which we own a 50% interest.

- *Rocky Mountain region.* Equity earnings decreased for the year ended December 31, 2020 compared to the year ended December 31, 2019 primarily due to a combination of (i) lower crude oil volumes, partially offset by higher NGL volumes, (ii) lower tariff rates due to the expiration of certain long-term contracts and (iii) the sale of 25% of our interest in Saddlehorn in February 2020.

- *Canada region.* The decrease in revenues for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to decreased crude oil production in the areas serviced by our pipelines.

- *Other regions, NGL pipelines, trucking and pipeline loss allowance revenue.* The decrease in other net revenues for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to lower pipeline loss allowance revenue due to a combination of both lower prices and volumes in 2020. To a lesser extent, lower net revenues from our trucking activities due to less favorable market conditions in 2020 contributed to the decrease. Additionally, volumes in our Gulf Coast region were impacted by a decrease in throughput on a lower tariff pipeline, which did not result in a significant impact on revenue.

Adjustments: Deficiencies under minimum volume commitments, net. Many industry infrastructure projects developed and completed over the last several years were underpinned by long-term minimum volume commitment contracts whereby the shipper agreed to either: (i) ship and pay for certain stated volumes or (ii) pay the agreed upon price for a minimum contract quantity. Some of these agreements include make-up rights if the minimum volume is not met. If a counterparty has a make-up right associated with a deficiency, we bill the counterparty and defer the revenue attributable to the counterparty's make-up right but record an adjustment to reflect such amount associated with the current period activity in Segment Adjusted EBITDA. We subsequently recognize the revenue, and record a corresponding reversal of the adjustment, at the earlier of when the deficiency volume is delivered or shipped, when the make-up right expires or when it is determined that the counterparty's ability to utilize the make-up right is remote.

For the year ended December 31, 2020, amounts billed to counterparties exceeded revenue recognized during the period that was previously deferred. For the year ended December 31, 2019, the recognition of previously deferred revenue exceeded amounts billed to counterparties associated with deficiencies under minimum volume commitments.

Field Operating Costs. The decrease in field operating costs for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to (i) a decrease in variable costs due to lower volumes, (ii) a decrease of maintenance activities, primarily due to timing changes, (iii) lower equity-based compensation costs on liability-classified awards (which are not included as an "Adjustment" in the table above) due to a decrease in our common unit price, (iv) reductions in compensation costs, primarily due to the benefit of wage subsidies received by our Canadian subsidiary and (v) additional estimated costs recognized in 2019 associated with the Line 901 incident (which impact field operating costs but are excluded from Segment Adjusted EBITDA and thus are reflected as an "Adjustment" in the table above). Such favorable impacts were partially offset by higher property taxes attributable to assets placed in service in 2020 and increased property valuations.

Segment General and Administrative Expenses. The decrease in segment general and administrative expenses for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to (i) lower equity-based compensation costs on liability-classified awards (which are not included as an "Adjustment" in the table above), due to a decrease in our common unit price, (ii) decreased travel and entertainment costs and (iii) the benefit of wage subsidies received by our Canadian subsidiary. Such items were partially offset by an overall increase in compensation costs related to severance costs associated with our efforts to streamline our organization.

Maintenance Capital. Maintenance capital consists of capital expenditures for the replacement and/or refurbishment of partially or fully depreciated assets in order to maintain the operating and/or earnings capacity of our existing assets. The decrease in maintenance capital for the year ended December 31, 2020 compared to the year ended December 31, 2019 was due to timing changes, the completion of multi-year reliability improvement programs and application of updated regulatory guidance, among other factors.

Facilities Segment

Our Facilities segment operations generally consist of fee-based activities associated with providing storage, terminalling and throughput services primarily for crude oil, NGL and natural gas, as well as NGL fractionation and isomerization services and natural gas and condensate processing services. The Facilities segment generates revenue through a combination of month-to-month and multi-year agreements.

The following tables set forth our operating results from our Facilities segment:

Operating Results[(1)] (in millions, except per barrel data)	Year Ended December 31, 2020	Year Ended December 31, 2019	Variance $	Variance %
Revenues	$1,138	$1,171	$ (33)	(3)%
Purchases and related costs	(15)	(15)	—	—%
Field operating costs	(316)	(360)	44	12%
Segment general and administrative expenses[(2)]	(84)	(83)	(1)	(1)%
Equity earnings in unconsolidated entities	5	—	5	N/A
Adjustments[(3)]:				
Depreciation and amortization of unconsolidated entities	2	1	1	**
Gains from derivative activities	(5)	(13)	8	**
Deficiencies under minimum volume commitments, net	2	—	2	**
Equity-indexed compensation expense	4	4	—	**
Segment Adjusted EBITDA	$ 731	$ 705	$ 26	4%
Maintenance capital	$ 51	$ 97	$ (46)	(47)%
Segment Adjusted EBITDA per barrel	$ 0.49	$ 0.47	$0.02	4%

Volumes[(4)]	Year Ended December 31, 2020	Year Ended December 31, 2019	Variance Volumes	Variance %
Liquids storage (average monthly capacity in millions of barrels)[(5)]	109	110	(1)	(1)%
Natural gas storage (average monthly working capacity in billions of cubic feet)	66	63	3	5%
NGL fractionation (average volumes in thousands of barrels per day)	129	144	(15)	(10)%
Facilities segment total volumes (average monthly volumes in millions of barrels)[(6)]	124	125	(1)	(1)%

** Indicates that variance as a percentage is not meaningful.

(1) Revenues and costs and expenses include intersegment amounts.

(2) Segment general and administrative expenses reflect direct costs attributable to each segment and an allocation of other expenses to the segments. The proportional allocations by segment require judgment by management and are based on the business activities that exist during each period.

(3) Represents adjustments included in the performance measure utilized by our CODM in the evaluation of segment results. See Note 21 to our Consolidated Financial Statements for additional discussion of such adjustments.

(4) Average monthly volumes are calculated as total volumes for the year divided by the number of months in the year.

(5) Includes volumes (attributable to our interest) from facilities owned by unconsolidated entities.

(6) Facilities segment total volumes are calculated as the sum of: (i) liquids storage capacity; (ii) natural gas storage working capacity divided by 6 to account for the 6:1 mcf of natural gas to crude Btu equivalent ratio and further divided by 1,000 to convert to monthly volumes in millions; and (iii) NGL fractionation volumes multiplied by the number of days in the year and divided by the number of months in the year.

The following is a discussion of items impacting Facilities segment operating results.

Revenues, Purchases and Related Costs and Volumes. Variances in revenues, purchases and related costs, and average monthly volumes were primarily driven by the following:

- *Rail Terminals.* Revenues from our rail terminals decreased by $33 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to decreased activity at certain of our rail terminals resulting from less favorable market conditions, as well as lower volumes due to voluntary shut-ins and curtailments of crude oil production by producers.
- *NGL Operations.* Revenues from our NGL operations decreased by $21 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to the sale of certain NGL terminals in the fourth quarter of 2019 and the second quarter of 2020, net unfavorable foreign exchange impacts of approximately $4 million and lower revenues from our NGL processing facilities. Such unfavorable impacts were partially offset by the favorable impact of the receipt of a deficiency payment in 2020 of approximately $20 million upon the expiration of a multi-year contract.
- *Natural Gas and Condensate Processing.* Net revenues from our U.S. natural gas and condensate processing operations decreased by $11 million for the year ended December 31, 2020 compared to the year ended December 31, 2019 primarily due to the unfavorable impact of a $5 million payment to resolve a contractual dispute as well as a decrease in condensate processing volumes and rates.
- *Crude Oil Storage.* Revenues from our crude oil storage operations increased by $33 million for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to the addition of an aggregate of approximately 3 million barrels of storage capacity at our Cushing, Oklahoma, St. James, Louisiana and Midland, Texas terminals and increased activity at certain of our Mid-Continent terminals. Additionally, the unfavorable impact on revenues from the sale of our Los Angeles Basin terminals in October 2020 was largely offset by increased spot activity at certain of these terminals during the first three quarters of 2020.

  The increase in equity earnings over the comparative period was from our 50% interest in Eagle Ford Terminals, which owns a crude oil storage facility in Corpus Christi, Texas that was placed in service in September of 2019.

Field Operating Costs. The decrease in field operating costs for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to (i) lower maintenance activities due to timing changes, (ii) reduced activity at our rail terminals and the divestiture of certain NGL terminals, (iii) reductions in compensation costs including the benefit of wage subsidies received by our Canadian subsidiary and (iv) lower property taxes. Such favorable impacts were partially offset by lower mark-to-market gains in the current period on fuel hedges (which impacts field operating costs but are excluded from Segment Adjusted EBITDA and thus are reflected as an "Adjustment" in the table above).

Maintenance Capital. The decrease in maintenance capital spending for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to timing changes, the impact of asset sales, the completion of multi-year reliability improvement programs and application of updated regulatory guidance, among other factors.

Supply and Logistics Segment

Revenues from our Supply and Logistics segment activities reflect the sale of gathered and bulk-purchased crude oil, as well as sales of NGL volumes. Generally, our segment results are impacted by (i) increases or decreases in our Supply and Logistics segment volumes (which consist of lease gathering crude oil purchases volumes and NGL sales volumes), (ii) the overall strength, weakness and volatility of market conditions, including regional differentials, and (iii) the effects of competition on our lease gathering and NGL margins. In addition, the execution of our risk management strategies in conjunction with our assets can provide upside in certain markets.

The following tables set forth our operating results from our Supply and Logistics segment:

Operating Results[(1)] **(in millions, except per barrel data)**	**Year Ended December 31,**		**Variance**	
	2020	**2019**	**$**	**%**
Revenues	$ 22,059	$ 32,276	$(10,217)	(32)%
Purchases and related costs	(22,099)	(31,276)	9,177	29%
Field operating costs	(191)	(258)	67	26%
Segment general and administrative expenses[(2)]	(89)	(110)	21	19%
Adjustments[(3)]:				
Losses from derivative activities net of inventory valuation adjustments	484	173	311	**
Long-term inventory costing adjustments	44(20)	64	**	
Deficiencies under minimum volume commitments, net	1	—	1	**
Equity-indexed compensation expense	4	4	—	**
Net (gain)/loss on foreign currency revaluation	(3)	14	(17)	**
Segment Adjusted EBITDA	$ 210	$ 803	$ (593)	(74)%
Maintenance capital	$ 29	$ 29	$ —	—%
Segment Adjusted EBITDA per barrel	$ 0.43	$ 1.61	$ (1.18)	(73)%

Average Daily Volumes[(4)] **(in thousands of barrels per day)**	**Year Ended December 31,**		**Variance**	
	2020	**2019**	**Volume**	**%**
Crude oil lease gathering purchases	1,174	1,162	12	1%
NGL sales	144	207	(63)	(30)%
Supply and Logistics segment total volumes	1,318	1,369	(51)	(4)%

** Indicates that variance as a percentage is not meaningful.

(1) Revenues and costs include intersegment amounts.

(2) Segment general and administrative expenses reflect direct costs attributable to each segment and an allocation of other expenses to the segments. The proportional allocations by segment require judgment by management and are based on the business activities that exist during each period.

(3) Represents adjustments included in the performance measure utilized by our CODM in the evaluation of segment results. See Note 21 to our Consolidated Financial Statements for additional discussion of such adjustments.

(4) Average daily volumes are calculated as the total volumes for the period divided by the number of days in the period.

The following table presents the range of the NYMEX West Texas Intermediate ("WTI") benchmark price of crude oil (in dollars per barrel):

	NYMEX WTI Crude Oil Price	
During the Year Ended December 31,	**Low**	**High**
2020	$(38)	$63
2019	$ 46	$66

Our crude oil and NGL supply, logistics and distribution operations are not directly affected by the absolute level of prices. Because the commodities that we buy and sell are generally indexed to the same pricing indices for both sales and purchases, revenues and costs related to purchases will fluctuate with market prices. However, the margins related to those sales and purchases will not necessarily have a corresponding increase or decrease. Additionally, net revenues are impacted by net gains and losses from certain derivative activities during the periods.

Our NGL operations are sensitive to weather-related demand, particularly during the approximate five-month peak heating season of November through March, and temperature differences from period-to-period may have a significant effect on NGL demand and thus our financial performance.

Segment Adjusted EBITDA and Volumes. The following summarizes the significant items impacting our Supply and Logistics Segment Adjusted EBITDA:

- *Crude Oil Operations.* Net revenues from our crude oil operations decreased for year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to a combination of (i) less favorable crude oil differentials, particularly the differential between the value of crude oil in the Permian Basin compared to the Gulf Coast market and (ii) the impact of lower volumes in higher margin areas, partially offset by volume increases in lower margin areas. Such unfavorable impacts were partially offset by the favorable impact of contango market conditions during the last three quarters of 2020.

- *NGL Operations.* Net revenues from our NGL operations decreased for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to (i) warmer weather during the fourth quarter of 2020, (ii) weaker fractionation spreads between the price of natural gas and the extracted NGL, (iii) lower border flows through our straddle plants and (iv) the absence of the favorable impact from certain non-recurring items recorded in the second quarter of 2019.

- *Impact from Certain Derivative Activities, Net of Inventory Valuation Adjustments.* The impact from certain derivative activities on our net revenues includes mark-to-market and other gains and losses resulting from certain derivative instruments that are related to underlying activities in another period (or the reversal of mark-to-market gains and losses from a prior period), losses on derivatives that are related to investing activities (such as the purchase of linefill) and inventory valuation adjustments, as applicable. See Note 13 to our Consolidated Financial Statements for a comprehensive discussion regarding our derivatives and risk management activities. These gains and losses impact our net revenues but are excluded from Segment Adjusted EBITDA and thus are reflected as an "Adjustment" in the table above.

- *Long-Term Inventory Costing Adjustments.* Our net revenues are impacted by changes in the weighted average cost of our crude oil and NGL inventory pools that result from price movements during the periods. These costing adjustments related to long-term inventory necessary to meet our minimum inventory requirements in third-party assets and other working inventory that was needed for our commercial operations. We consider this inventory necessary to conduct our operations and we intend to carry this inventory for the foreseeable future. These costing adjustments impact our net revenues but are excluded from Segment Adjusted EBITDA and thus are reflected as an "Adjustment" in the table above.

- *Foreign Exchange Impacts.* Our net revenues are impacted by fluctuations in the value of CAD to USD, resulting in foreign exchange gains and losses on U.S. denominated net assets within our Canadian operations. These non-cash gains and losses impact our net revenues but are excluded from Segment Adjusted EBITDA and thus are reflected as an "Adjustment" in the table above.

- *Field Operating Costs.* The decrease in field operating costs for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily driven by a decrease in long-haul third-party trucking costs and a decrease in company personnel and truck costs as more of our supply was connected to pipelines and taken off trucks.

- *Segment General and Administrative Expenses.* The decrease in segment general and administrative expenses for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily driven by (i) lower compensation costs including the benefit of wage subsidies received by our Canadian subsidiary, (ii) decreased travel and entertainment costs, (iii) a decrease in equity-based compensation costs on liability-classified awards (which are not included as an "Adjustment" in the table above) due to a decrease in our common unit price and (iv) general cost reductions associated with exiting low margin, high administrative cost businesses.

Other Income and Expenses

Depreciation and Amortization

Depreciation and amortization expense increased for the year ended December 31, 2020 compared to the year ended December 31, 2019 largely driven by additional depreciation expense associated with acquired assets, the completion of various investment capital projects and a reduction in the useful lives of certain assets.

Gains/Losses on Asset Sales and Asset Impairments, Net

The net loss on asset sales and asset impairments for the year ended December 31, 2020 included (i) non-cash impairment losses on held and used assets of approximately $541 million related to the write-down of (a) certain pipeline and other long-lived assets due to the current macroeconomic and geopolitical conditions including the collapse of oil prices driven by both the decrease in demand caused by the COVID-19 pandemic and excess supply, as well as changing market conditions and expected lower crude oil production in certain regions, and (b) idled or underutilized assets for which is it has been determined that it is unlikely that opportunities will exist in the future to recover our investment in these assets and (ii) net losses of approximately $178 million related to the sale of assets, including non-cash impairments recognized upon classification to assets held for sale.

The net loss on asset sales and asset impairments for the year ended December 31, 2019 was largely driven by a loss on the sale of a storage terminal in North Dakota. See Note 6 and Note 7 to our Consolidated Financial Statements for additional information regarding these asset impairments.

Goodwill Impairment Losses

During the first quarter of 2020, we recognized a goodwill impairment charge of $2.5 billion, representing the entire balance of goodwill. See Note 8 to our Consolidated Financial Statements for additional information.

Gain on/(Impairment of) Investments in Unconsolidated Entities, Net

During the year ended December 31, 2020, we recognized losses of $202 million related to the write-down of certain of our investments in unconsolidated entities. Additionally, we recognized a gain of $21 million related to our sale of a 10% interest in Saddlehorn Pipeline Company, LLC.

During the year ended December 31, 2019, we recognized a non-cash gain of $269 million related to a fair value adjustment resulting from the accounting for the contribution of our undivided joint interest in the Capline pipeline system for an equity interest in Capline Pipeline Company LLC. See Note 9 to our Consolidated Financial Statements for additional information regarding our unconsolidated entities.

Interest Expense

Interest expense is primarily impacted by:

- our weighted average debt balances;
- the level and maturity of fixed rate debt and interest rates associated therewith;
- market interest rates and our interest rate hedging activities; and
- interest capitalized on capital projects.

The following table summarizes the components impacting the interest expense variance (in millions, except percentages):

		Average LIBOR	Weighted Average Interest Rate[1]
Interest expense for the year ended December 31, 2019	$425	2.2%	4.4%
Impact of lower capitalized interest	10		
Impact of borrowings under credit facilities and commercial paper program	3		
Impact of issuance and retirement of senior notes	(4)		
Other	2		
Interest expense for the year ended December 31, 2020	$436	0.5%	4.1%

(1) Excludes commitment and other fees.

Interest expense increased for the year ended December 31, 2020 compared to the year ended December 31, 2019 primarily due to (i) a higher weighted average debt balance during 2020 driven by higher commercial paper and credit facility borrowings and (ii) lower capitalized interest in the 2020 period resulting from fewer capital projects under construction, partially offset by (iii) the impact from lower weighted average rates.

See Note 11 to our Consolidated Financial Statements for additional information regarding our debt activities during the periods presented.

Other Income, Net

The following table summarizes the components impacting Other income/(expense), net (in millions):

	Year Ended December 31,	
	2020	2019
Gain related to mark-to-market adjustment of our Preferred Distribution Rate Reset Option[1]	$20	$ 2
Net gain on foreign currency revaluation[2]	13	15
Other	6	7
	$39	$24

(1) See Note 13 to our Consolidated Financial Statements for additional information.

(2) The activity during 2020 was primarily related to the impact from the change in the USD to CAD exchange rate on the portion of our intercompany net investment that is not long-term in nature.

Income Tax (Expense)/Benefit

The decrease in current income tax expense for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to lower taxable earnings from our Canadian operations. The increase in the deferred income tax benefit for the year ended December 31, 2020 compared to the year ended December 31, 2019 was primarily due to lower year-over-year income as impacted by fluctuations in the derivative mark-to-market valuations in our Canadian operations, partially offset by the recognition of a deferred tax benefit of approximately $60 million during the second quarter of 2019 as a result of the reduction of the provincial tax rate in Alberta, Canada.

Liquidity and Capital Resources

General

Our primary sources of liquidity are (i) cash flow from operating activities (ii) borrowings under our credit facilities or commercial paper program and (iii) funds received from sales of equity and debt securities.

In addition, we may supplement these sources of liquidity with proceeds from our divestiture program. Our primary cash requirements include, but are not limited to, (i) ordinary course of business uses, such as the payment of amounts related to the purchase of crude oil, NGL and other products, other expenses and interest payments on outstanding debt, (ii) investment and maintenance capital activities, (iii) acquisitions of assets or businesses, (iv) repayment of principal on our long-term debt and (v) distributions to our unitholders. In addition, we may use cash for repurchases of common equity. We generally expect to fund our short-term cash requirements through cash flow generated from operating activities and/or borrowings under our commercial paper program or credit facilities. In addition, we generally expect to fund our long-term needs, such as those resulting from investment capital activities or acquisitions and refinancing our long-term debt, through a variety of sources (either separately or in combination), which may include the sources mentioned above as funding for short-term needs and/or the issuance of additional equity or debt securities and the sale of assets.

As of December 31, 2020, although we had a working capital deficit of $588 million, we had approximately $2.2 billion of liquidity available to meet our ongoing operating, investing and financing needs, subject to continued covenant compliance, as noted below (in millions):

	As of December 31, 2020
Availability under senior unsecured revolving credit facility(1)(2)	$1,507
Availability under senior secured hedged inventory facility(1)(2)	1,197
Amounts outstanding under commercial paper program	(547)
Subtotal	2,157
Cash and cash equivalents	22
Total	$2,179

(1) Represents availability prior to giving effect to borrowings outstanding under our commercial paper program, which reduce available capacity under the facilities.

(2) Available capacity under our senior unsecured revolving credit facility and senior secured hedged inventory facility was reduced by outstanding letters of credit of $93 million and $36 million, respectively.

Usage of our credit facilities, which provide the financial backstop for our commercial paper program, is subject to ongoing compliance with covenants, as discussed further below. Our borrowing capacity and borrowing costs are also impacted by our credit rating. See Item 1A. "Risk Factors — Risks Related to Our Business — Loss of our investment grade credit rating or the ability to receive open credit could negatively affect our borrowing costs, ability to purchase crude oil, NGL and natural gas supplies or to capitalize on market opportunities."

Current macroeconomic and geopolitical conditions including the collapse of oil prices driven by both the decrease in demand caused by the COVID-19 pandemic and excess supply has caused liquidity issues impacting many energy companies; however, we believe that we have, and will continue to have, the ability to access our commercial paper program and credit facilities, which we use to meet our short-term cash needs. We believe that our financial position remains strong and we have sufficient liquid assets, cash flow from operating activities and borrowing capacity under our credit agreements to meet our financial commitments, debt service obligations, contingencies and anticipated capital expenditures; however, extended disruptions in the financial markets and/or energy price volatility that adversely affect our business may have a materially adverse effect on our financial condition, results of operations or cash flows. See Item 1A. "Risk Factors" for further discussion regarding risks that may impact our liquidity and capital resources.

Credit Agreements, Commercial Paper Program and Indentures

We have three primary credit arrangements, which we use to meet our short-term cash needs. These include our $1.6 billion senior unsecured revolving credit facility maturing in 2024, $1.4 billion senior secured hedged inventory facility maturing in 2022 (excluding aggregate commitments of $45 million, which mature in 2021) and $3.0 billion unsecured commercial paper program that is backstopped by our revolving credit facility and our hedged inventory facility. Additionally, we have two $100 million term loans. The credit agreements for our revolving credit facilities (which impact our ability to access our commercial paper program because they provide the financial backstop that supports our short-term credit ratings) and our term loans and the indentures governing our senior notes contain cross-default provisions. A default under our credit agreements or indentures would permit the lenders to accelerate the maturity of the outstanding debt. As long as we are in compliance with the provisions in our credit agreements, our ability to make distributions of available cash is not restricted. We were in compliance with the covenants contained in our credit agreements and indentures as of December 31, 2020.

Cash Flow from Operating Activities

The primary drivers of cash flow from operating activities are (i) the collection of amounts related to the sale of crude oil, NGL and other products, the transportation of crude oil and other products for a fee, and the provision of storage and terminalling services for a fee and (ii) the payment of amounts related to the purchase of crude oil, NGL and other products and other expenses, principally field operating costs, general and administrative expenses and interest expense.

Cash flow from operating activities can be materially impacted by the storage of crude oil in periods of a contango market, when the price of crude oil for future deliveries is higher than current prices. In the month we pay for the stored crude oil, we borrow under our credit facilities or commercial paper program (or use cash on hand) to pay for the crude oil, which negatively impacts operating cash flow. Conversely, cash flow from operating activities increases during the period in which we collect the cash from the sale of the stored crude oil. Similarly, the level of NGL and other product inventory stored and held for resale at period end affects our cash flow from operating activities.

In periods when the market is not in contango, we typically sell our crude oil during the same month in which we purchase it and we do not rely on borrowings under our credit facilities or commercial paper program to pay for the crude oil. During such market conditions, our accounts payable and accounts receivable generally move in tandem as we make payments and receive payments for the purchase and sale of crude oil in the same month, which is the month following such activity. In periods during which we build inventory, regardless of market structure, we may rely on our credit facilities or commercial paper program to pay for the inventory. In addition, we use derivative instruments to manage the risks associated with the purchase and sale of our commodities. Therefore, our cash flow from operating activities may be impacted by the margin deposit requirements related to our derivative activities. See Note 13 to our Consolidated Financial Statements for a discussion regarding our derivatives and risk management activities.

Net cash provided by operating activities for the years ended December 31, 2020, 2019 and 2018 was approximately $1.5 billion, $2.5 billion and $2.6 billion, respectively, and primarily resulted from earnings from our operations. Additionally, as discussed further below, changes during these periods in our inventory levels and associated margin balances required as part of our hedging activities impacted our cash flow from operating activities.

During 2020, we increased the volume of both our crude oil inventory to be stored during the contango market and our NGL inventory in anticipation of the 2020-2021 heating season as well as the margin balances required as part of our hedging activities, all of which was funded by short-term debt. The cash outflows associated with these activities were partially offset by lower prices for inventory purchased and stored at the end of the current period compared to the end of 2019. Cash provided by operating activities was favorably impacted by cash received for transactions for which the revenue has been deferred pending the completion of future performance obligations. See Note 3 to our Consolidated Financial Statements for additional information.

During 2019, our cash provided by operating activities was positively impacted by the proceeds from the sale of NGL and crude oil inventory that we held and also by the lower weighted average price of NGL inventory compared to prior year amounts.

During 2018, our cash provided by operating activities was favorably impacted by approximately $250 million of cash received for transactions for which the revenue has been deferred pending the completion of future performance obligations. The favorable impact was partially offset by an increase in the volume of crude oil inventory that we held, which was funded from earnings from our operations and proceeds from asset sales.

Investing Activities

In addition to our operating needs discussed above, we also use cash for our investment capital projects, maintenance capital activities and acquisition activities. Historically, we have financed these expenditures primarily with cash generated by operating activities discussed in "— Cash Flow from Operating Activities" above and the financing activities discussed in "— Financing Activities" below. In recent years, we have also used proceeds from our divestiture program, as discussed further below. We have made and will continue to make capital expenditures for investment capital projects, maintenance activities and acquisitions. However, in the near term, we do not plan to issue common equity to fund such activities.

Capital Expenditures

The following table summarizes our expenditures for acquisition capital, investment capital and maintenance capital (in millions):

	Year Ended December 31,		
	2020	2019	2018
Investment capital(1)(2)(3)	$ 921	$1,340	$1,888
Maintenance capital(1)	216	287	252
Acquisition capital(4)	310	50	—
	$1,447	$1,677	$2,140

(1) Capital expenditures made to expand the existing operating and/or earnings capacity of our assets are classified as "Investment capital." Capital expenditures for the replacement and/or refurbishment of partially or fully depreciated assets in order to maintain the operating and/or earnings capacity of our existing assets are classified as "Maintenance capital."

(2) "Investment capital" was previously termed "expansion capital." We consider the term "investment capital" to be more descriptive.

(3) Includes contributions to unconsolidated entities, accounted for under the equity method of accounting, related to investment capital projects by such entities.

(4) Acquisition capital for 2020 primarily includes a crude oil gathering system located in the Delaware Basin.

Investment Capital Projects

Our investment capital programs consist of investments in midstream infrastructure projects that build upon our core assets and operations. For the years presented, substantially all of the investment capital was invested in our fee-based Transportation and Facilities segments. The majority of this investment capital consists of highly-contracted projects that complement our broader system capabilities and support the long-term needs of the upstream and downstream sectors of the industry value chain. The following table summarizes our investment in capital projects (in millions):

Projects	Year Ended December 31, 2020	2019	2018
Permian Basin Takeaway Pipeline Projects[(1)(2)]	$292	$ 440	$ 880
Complementary Permian Basin Projects[(1)]	200	503	671
Long-Haul Pipeline Projects (Non-Permian)[(1)]	195	98	20
Selected Facilities/Downstream Projects[(3)]	115	93	62
Other Projects	119	206	255
Total	$921	$1,340	$1,888

(1) These projects will continue into 2021. See "— 2021 Investment Capital Projects below."

(2) Represents pipeline projects with takeaway capacity out of the Permian Basin, including (i) our 16% interest in Wink to Webster Pipeline and (ii) our 65% interest in the Cactus II Pipeline.

(3) Includes projects at our St. James and Cushing terminals.

2021 Investment Capital Projects. In April 2020, in response to the current dynamic and uncertain market conditions, we announced our plan to significantly reduce and continue to challenge our capital program. The majority of our 2021 investment capital program will be invested in our fee-based Transportation and Facilities segments. We expect that our investments will have minimal contributions to our 2021 results, but will provide growth for 2022 and beyond. Our 2021 capital program includes the following projects as of February 2021 with the estimated cost for the entire year (in millions):

Projects	2021
Permian Basin Takeaway Pipeline Projects	$140
Long-Haul Pipeline Projects (Non-Permian)	115
Complementary Permian Basin Projects	85
Selected Facilities/Downstream Projects	50
Other Projects	35
Total Projected 2021 Investment Capital	$425

Divestitures

We continue to evaluate potential sales of non-core assets and/or sales of partial interests in assets to strategic joint venture partners. The following table summarizes the proceeds received for sales of such assets, which were previously reported in our Transportation and Facilities segments:

	Year Ended December 31, 2020	2019	2018
Proceeds from divestitures[(1)]	$451	$205	$1,334

(1) Includes proceeds from (i) a multi-year supply agreement related to the sale of certain NGL terminals in April 2020 and (ii) our formation of Red River Pipeline Company LLC in May 2019. See Note 7 and Note 12 to our Consolidated Financial Statements for additional information.

Proceeds from asset sales were used to fund our investment capital projects and reduce debt levels. See Note 7 to our Consolidated Financial Statements for additional detail regarding our divestiture transactions.

Ongoing Activities Related to Strategic Transactions

We are continuously engaged in the evaluation of potential transactions that support our current business strategy. While in the past such transactions have included acquisitions and large capital projects, consistent with our current strategic focus on capital discipline, leverage reduction, portfolio optimization and free cash flow generation, we are currently primarily focused on evaluating whether we should (i) sell assets that we regard as non-core or that we believe might be a better fit with the business and/or assets of a third-party buyer or (ii) sell partial interests in assets to strategic joint venture partners, in each case to optimize our asset portfolio and strengthen our balance sheet and leverage metrics. With respect to a potential divestiture, we may also conduct an auction process or may negotiate a transaction with one or a limited number of potential buyers. Such transactions could involve assets that, if sold or put into a joint venture or joint ownership arrangement, could have a material effect on our financial condition and results of operations.

We typically do not announce a transaction until after we have executed a definitive agreement. However, in certain cases in order to protect our business interests or for other reasons, we may defer public announcement of a transaction until closing or a later date. Past experience has demonstrated that discussions and negotiations regarding a potential transaction can advance or terminate in a short period of time. Moreover, the closing of any transaction for which we have entered into a definitive agreement may be subject to customary and other closing conditions, which may not ultimately be satisfied or waived. Accordingly, we can give no assurance that our current or future efforts with respect to any such transactions will be successful, and we can provide no assurance that our financial expectations with respect to such transactions will ultimately be realized. See Item 1A. “Risk Factors — Risks Related to Our Business — Divestitures, joint ventures, joint ownership arrangements and acquisitions involve risks that may adversely affect our business.”

Financing Activities

Our financing activities primarily relate to funding investment capital projects, acquisitions and refinancing of our debt maturities, as well as short-term working capital (including borrowings for NYMEX and ICE margin deposits) and hedged inventory borrowings related to our NGL business and contango market activities.

Borrowings and Repayments Under Credit Arrangements

During the year ended December 31, 2020, we had net borrowings under our credit facilities and commercial paper program of $296 million. The net borrowings resulted primarily from borrowings during the period related to funding needs for inventory purchases and general partnership purposes.

During the year ended December 31, 2019, we had net borrowings under our credit facilities and commercial paper program of $418 million. The net borrowings resulted primarily from borrowings during the period related to funding needs for general partnership purposes.

During the year ended December 31, 2018, we had net repayments on our credit facilities and commercial paper program of $901 million. The net repayments resulted primarily from cash flow from operating activities and proceeds from asset sales, which offset borrowings during the period related to funding needs for capital investments, inventory purchases and other general partnership purposes.

In August 2018, we entered into an agreement for two $100 million term loans from the remarketing of our two $100 million bonds. The purchasers of the two term loans have the right to put, at par, the term loans in July 2023. The bonds mature by their terms in May 2032 and August 2035, respectively. See Note 11 to our Consolidated Financial Statements for additional information.

Senior Notes

Issuances of Senior Notes. During 2020 and 2019, we issued senior unsecured notes as summarized in the table below (in millions):

Year	Description	Maturity	Face Value	Gross Proceeds[(1)]	Net Proceeds[(2)]
2020 . .	3.80% Senior Notes issued at 99.794% of face value	September2030	$ 750	$748	$742[(3)]
2019 . .	3.55% Senior Notes issued at 99.801% of face value	December2029	$1,000	$998	$989[(4)]

(1) Face value of notes less the applicable premium or discount (before deducting for initial purchaser discounts, commissions and offering expenses).

(2) Face value of notes less the applicable premium or discount, initial purchaser discounts, commissions and offering expenses.

(3) We used the net proceeds from the offering to repay the principal amounts of our 5.00% senior notes due February 2021.

(4) We used the net proceeds from the offering to partially repay the principal amounts of our 2.60% senior notes due December 2019 and 5.75% senior notes due January 2020 and for general partnership purposes.

Repayments of Senior Notes. During 2020 and 2019, we repaid the following senior unsecured notes in full (in millions):

Year	Description	Repayment Date
2020	$600 million 5.00% Senior Notes due February 2021	November2020[(1)]
2019	$500 million 2.60% Senior Notes due December 2019	November2019[(2)]
2019	$500 million 5.75% Senior Notes due January 2020	December2019[(2)]

(1) We repaid these senior notes with proceeds from our 3.80% senior notes issued in June 2020 and cash on hand.

(2) We repaid these senior notes with proceeds from our 3.55% senior notes issued in September 2019 and cash on hand.

Additionally, during the year ended December 31, 2020, we repurchased $17 million of our outstanding senior notes on the open market and recognized a gain of $3 million on these transactions.

Registration Statements

We periodically access the capital markets for both equity and debt financing. We have filed with the SEC a universal shelf registration statement that, subject to effectiveness at the time of use, allows us to issue up to an aggregate of $1.1 billion of debt or equity securities ("Traditional Shelf"). We did not conduct any offerings under our Traditional Shelf during the years ended December 31, 2020, 2019 or 2018. At December 31, 2020, we had approximately $1.1 billion of unsold securities available under the Traditional Shelf. We also have access to a universal shelf registration statement ("WKSI Shelf"), which provides us with the ability to offer and sell an unlimited amount of debt and equity securities, subject to market conditions and our capital needs. The offering of our $750 million, 3.80% senior notes in June 2020 was conducted under our WKSI Shelf.

Common Equity Repurchase Program

In November 2020, the board of directors of PAGP GP approved a $500 million common equity repurchase program (the "Program") to be utilized as an additional method of returning capital to investors. The Program authorizes the repurchase from time to time of up to $500 million of our common units and/or PAGP Class A shares via open market purchases or negotiated transactions conducted in accordance with applicable regulatory requirements. Ultimately, the amount, timing and pace of potential repurchase activity will be determined by a number of factors, including market conditions, our financial performance and flexibility, actual and expected Free Cash Flow after distributions, the absolute and relative equity prices of our common units and PAGP Class A shares, and the extent to which we are positioned to achieve and maintain our targeted leverage ratio. No time limit has been set for completion of the Program, and the Program may be suspended or discontinued at any time. The Program does not obligate us or PAGP to acquire a particular number of common units or PAGP Class A shares. Any common units or PAGP Class A shares that are repurchased will be canceled.

We repurchased 6.2 million common units under the Program through open market purchases that settled during the year ended December 31, 2020. The total purchase price of these repurchases was $50 million, including commissions and fees. The remaining available capacity under the Program as of December 31, 2020 was $450 million. Additionally, we repurchased 350,000 common units under the Program for $3 million through open market purchases at the end of December 2020 that settled in January 2021.

Distributions to Our Unitholders

In accordance with our partnership agreement, after making distributions to holders of our outstanding preferred units, we distribute the remainder of our available cash to our common unitholders of record within 45 days following the end of each quarter. Available cash is generally defined as all of our cash and cash equivalents on hand at the end of each quarter less reserves established in the discretion of our general partner for future requirements. Our levels of financial reserves are established by our general partner and include reserves for the proper conduct of our business (including future capital expenditures and anticipated credit needs), compliance with law or contractual obligations and funding of future distributions to our Series A and Series B preferred unitholders. Our available cash also includes cash on hand resulting from borrowings made after the end of the quarter. See Item 5. "Market for Registrant's Common Units, Related Unitholder Matters and Issuer Purchases of Equity Securities — Cash Distribution Policy" for additional discussion regarding distributions.

In response to the challenging near-term market conditions, we took steps to further strengthen our balance sheet, liquidity and long-term financial flexibility. In this regard, beginning with the May 2020 distribution, we reduced our distribution per common unit by 50% versus the distribution per common unit paid in February 2020, which reflects a reduction of $525 million on an annualized basis. See "— Executive Summary — Recent Events and Outlook" for further discussion.

Distributions to our Series A preferred unitholders. Holders of our Series A preferred units are entitled to receive quarterly distributions, subject to customary anti-dilution adjustments, of $0.525 per unit ($2.10 per unit annualized). Subject to certain limitations, following January 28, 2021, the holders of our Series A preferred units may make a one-time election to reset the distribution rate. See Note 12 to our Consolidated Financial Statements for additional information.

Distributions to our Series B preferred unitholders. Holders of our Series B preferred units are entitled to receive, when, as and if declared by our general partner out of legally available funds for such purpose, cumulative cash distributions, as applicable. Through and including November 15, 2022, holders are entitled to a distribution equal to $61.25 per unit per year, payable semiannually in arrears on the 15th day of May and November. See Note 12 to our Consolidated Financial Statements for further discussion of our Series B preferred units, including distribution rates and payment dates after November 15, 2022.

Distributions to our common unitholders. On February 12, 2021, we paid a quarterly distribution of $0.18 per common unit ($0.72 per common unit on an annualized basis). The total distribution of $130 million was paid to common unitholders of record as of January 29, 2021, with respect to the quarter ended December 31, 2020. See Note 12 to our Consolidated Financial Statements for details of distributions paid during the three years ended December 31, 2020.

Liquidity Measures

Management uses the non-GAAP financial measures Free Cash Flow and Free Cash Flow After Distributions to assess the amount of cash that is available for distributions, debt repayments, common equity repurchases and other general partnership purposes. Free Cash Flow is defined as Net Cash Provided by Operating Activities, less Net Cash Used in Investing Activities, which primarily includes acquisition, investment and maintenance capital expenditures, investments in unconsolidated entities and the impact from the purchase and sale of linefill and base gas, net of proceeds from the sales of assets and further impacted by distributions to, contributions from and proceeds from the sale of noncontrolling interests. Free Cash Flow is further reduced by cash distributions paid to our preferred and common unitholders to arrive at Free Cash Flow After Distributions.

The following table sets forth the reconciliation of the non-GAAP financial liquidity measures Free Cash Flow and Free Cash Flow After Distributions from Net Cash Provided by Operating Activities (in millions):

	Year Ended December 31,		
	2020	2019	2018
Net cash provided by operating activities	$ 1,514	$ 2,504	$ 2,608
Adjustments to reconcile net cash provided by operating activities to free cash flow:			
Net cash used in investing activities	(1,093)	(1,765)	(813)
Cash contributions from noncontrolling interests	12	—	—
Cash distributions paid to noncontrolling interests[1]	(10)	(6)	—
Sale of noncontrolling interest in a subsidiary	—	128	—
Free cash flow	$ 423	$ 861	$ 1,795
Cash distributions[2]	(853)	(1,202)	(1,032)
Free cash flow after distributions	$ (430)	$ (341)	$ 763

(1) Cash distributions paid during the period presented.

(2) Cash distributions paid to our preferred and common unitholders during the period presented.

Contingencies

For a discussion of contingencies that may impact us, see Note 19 to our Consolidated Financial Statements.

Commitments

Contractual Obligations. In the ordinary course of doing business, we purchase crude oil and NGL from third parties under contracts, the majority of which range in term from thirty-day evergreen to five years, with a limited number of contracts with remaining terms extending up to 14 years. We establish a margin for these purchases by entering into various types of physical and financial sale and exchange transactions through which we seek to maintain a position that is substantially balanced between purchases on the one hand and sales and future delivery obligations on the other. The table below includes purchase obligations related to these activities. Where applicable, the amounts presented represent the net obligations associated with our counterparties (including giving effect to netting buy/sell contracts and those subject to a net settlement arrangement). We do not expect to use a significant amount of internal capital to meet these obligations, as the obligations will be funded by corresponding sales to entities that we deem creditworthy or who have provided credit support we consider adequate.

The following table includes our best estimate of the amount and timing of these payments as well as other amounts due under the specified contractual obligations as of December 31, 2020 (in millions):

	2021	2022	2023	2024	2025	Thereafter	Total
Long-term debt and related interest payments(1)	$ 406	$ 1,183	$ 1,662	$ 1,083	$1,300	$ 8,337	$13,971
Leases(2)	108	100	77	63	49	304	701
Other obligations(3)	542	368	325	281	254	934	2,704
Subtotal	1,056	1,651	2,064	1,427	1,603	9,575	17,376
Crude oil, NGL and other purchases(4)	11,565	10,353	9,643	9,035	7,507	26,845	74,948
Total	$12,621	$12,004	$11,707	$10,462	$9,110	$36,420	$92,324

(1) Includes debt service payments, interest payments due on senior notes and the commitment fee on assumed available capacity under our credit facilities, as well as long-term borrowings under our credit agreements and commercial paper program, if any. Although there may be short-term borrowings under our credit agreements and commercial paper program, we historically repay and borrow at varying amounts. As such, we have included only the maximum commitment fee (as if no short-term borrowings were outstanding on the credit agreements or commercial paper program) in the amounts above. For additional information regarding our debt obligations, see Note 11 to our Consolidated Financial Statements.

(2) Includes both operating and finance leases as defined by FASB guidance. Leases are primarily for (i) railcars, (ii) land, (iii) office space, (iv) storage tanks, (v) tractor trailers and (vi) vehicles. See Note 14 to our Consolidated Financial Statements for additional information.

(3) Includes (i) other long-term liabilities, (ii) storage, processing and transportation agreements (including certain agreements for which the amount and timing of expected payments is subject to the completion of underlying construction projects), (iii) certain rights-of-way easements and (iv) noncancelable commitments related to our investment capital projects, including projected contributions for our share of the capital spending of our equity method investments. The storage, processing and transportation agreements include approximately $2.0 billion associated with agreements to store crude oil at facilities and transport crude oil on pipelines owned by equity method investees at posted tariff rates or prices that we believe approximate market. A portion of our commitment to transport is supported by crude oil buy/sell or other agreements with third parties with commensurate quantities.

(4) Amounts are primarily based on estimated volumes and market prices based on average activity during December 2020. The actual physical volume purchased and actual settlement prices will vary from the assumptions used in the table. Uncertainties involved in these estimates include levels of production at the wellhead, weather conditions, changes in market prices and other conditions beyond our control.

Letters of Credit. In connection with supply and logistics activities, we provide certain suppliers with irrevocable standby letters of credit to secure our obligation for the purchase and transportation of crude oil, NGL and natural gas. Our liabilities with respect to these purchase obligations are recorded in accounts payable on our balance sheet in the month the product is purchased. Generally, these letters of credit are issued for periods of up to seventy days and are terminated upon completion of each transaction. Additionally, we issue letters of credit to support insurance programs, derivative transactions, including hedging-related margin obligations, and construction activities. At December 31, 2020 and 2019, we had outstanding letters of credit of approximately $129 million and $157 million, respectively.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements as defined by Item 303 of Regulation S-K.

Investments in Unconsolidated Entities

We have invested in entities that are not consolidated in our financial statements. Certain of these entities are borrowers under credit facilities. We are neither a co-borrower nor a guarantor under any facilities of such entities. We may elect at any time to make additional capital contributions to any of these entities. The following table sets forth selected information regarding these entities as of December 31, 2020 (unaudited, dollars in millions):

Entity	Type of Operation	Our Ownership Interest	Total Entity Assets	Total Cash and Restricted Cash	Total Entity Debt
BridgeTex Pipeline Company, LLC	Crude Oil Pipeline	20%	$ 856	$35	$—
Cactus II Pipeline LLC	Crude Oil Pipeline(1)	65%	$1,167	$44	$—
Capline Pipeline Company LLC	Crude Oil Pipeline	54%	$1,217	$16	$—
Diamond Pipeline LLC	Crude Oil Pipeline(1)	50%	$ 951	$ 8	$—
Eagle Ford Pipeline LLC	Crude Oil Pipeline(1)	50%	$ 808	$33	$—
Eagle Ford Terminals Corpus Christi LLC	Crude Oil Terminal and Dock(1)	50%	$ 220	$ 4	$—
Red Oak Pipeline LLC	Crude Oil Pipeline	50%	$ 205	$—	$—
Saddlehorn Pipeline Company, LLC	Crude Oil Pipeline	30%	$ 662	$40	$—
STACK Pipeline LLC	Crude Oil Pipeline(1)	50%	$ 146	$ 1	$—
White Cliffs Pipeline, LLC	Crude Oil Pipeline	36%	$ 518	$24	$—
Wink to Webster Pipeline LLC	Crude Oil Pipeline	16%	$2,068	$68	$—
Other investments			$ 531	$49	$ 3

(1) We serve as operator of the asset.

Item 7A. *Quantitative and Qualitative Disclosures About Market Risk*

We are exposed to various market risks, including (i) commodity price risk, (ii) interest rate risk and (iii) currency exchange rate risk. We use various derivative instruments to manage such risks and, in certain circumstances, to realize incremental margin during volatile market conditions. Our risk management policies and procedures are designed to help ensure that our hedging activities address our risks by monitoring our exchange-cleared and over-the-counter positions, as well as physical volumes, grades, locations, delivery schedules and storage capacity. The board of directors of PAGP GP, acting through the Audit Committee, retains a general oversight role with respect to the management of these risks while management is directly responsible for our risk management activities. The Audit Committee has authorized the formation of a Risk Management Committee composed of senior members of management that oversees and works with our risk management function to ensure that we are in compliance with our risk policies and procedures and that we maintain related controls around commercial activities and certain aspects of corporate risk management. Our Risk Management Committee also approves all new risk management strategies through a formal process. The following discussion addresses each category of risk.

Commodity Price Risk

We use derivative instruments to hedge price risk associated with the following commodities:

- Crude oil

  We utilize crude oil derivatives to hedge commodity price risk inherent in our Supply and Logistics and Transportation segments. Our objectives for these derivatives include hedging anticipated purchases and sales, stored inventory and basis differentials. We manage these exposures with various instruments including futures, forwards, swaps and options.

- Natural gas

  We utilize natural gas derivatives to hedge commodity price risk inherent in our Supply and Logistics and Facilities segments. Our objectives for these derivatives include hedging anticipated purchases of natural gas. We manage these exposures with various instruments including futures, swaps and options.

- *NGL and other*

  We utilize NGL derivatives, primarily propane and butane derivatives, to hedge commodity price risk inherent in our Supply and Logistics segment. Our objectives for these derivatives include hedging anticipated purchases and sales and stored inventory. We manage these exposures with various instruments including futures, forwards, swaps and options.

See Note 13 to our Consolidated Financial Statements for further discussion regarding our hedging strategies and objectives.

The fair value of our commodity derivatives and the change in fair value as of December 31, 2020 that would be expected from a 10% price increase or decrease is shown in the table below (in millions):

	Fair Value	Effect of 10% Price Increase	Effect of 10% Price Decrease
Crude oil	$(158)	$(86)	$88
Natural gas	1	$ 9	$ (9)
NGL and other	(144)	$(47)	$47
Total fair value	$(301)		

The fair values presented in the table above reflect the sensitivity of the derivative instruments only and do not include the effect of the underlying hedged commodity. Price-risk sensitivities were calculated by assuming an across-the-board 10% increase or decrease in price regardless of term or historical relationships between the contractual price of the instruments and the underlying commodity price. In the event of an actual 10% change in near-term commodity prices, the fair value of our derivative portfolio would typically change less than that shown in the table as changes in near-term prices are not typically mirrored in delivery months further out.

Interest Rate Risk

Our use of variable rate debt and any forecasted issuances of fixed rate debt expose us to interest rate risk. Therefore, from time to time, we use interest rate derivatives to hedge interest rate risk associated with anticipated interest payments and, in certain cases, outstanding debt instruments. All of our senior notes are fixed rate notes and thus are not subject to interest rate risk. Our variable rate debt outstanding at December 31, 2020, approximately $914 million, was subject to interest rate re-sets that generally range from one day to approximately one month. The average interest rate on variable rate debt that was outstanding during the year ended December 31, 2020 was 1.4%, based upon rates in effect during the year. The fair value of our interest rate derivatives was an asset of $46 million as of December 31, 2020. A 10% increase in the forward LIBOR curve as of December 31, 2020 would have resulted in an increase of $15 million to the fair value of our interest rate derivatives. A 10% decrease in the forward LIBOR curve as of December 31, 2020 would have resulted in a decrease of $15 million to the fair value of our interest rate derivatives. See Note 13 to our Consolidated Financial Statements for a discussion of our interest rate risk hedging activities.

Currency Exchange Rate Risk

We use foreign currency derivatives to hedge foreign currency exchange rate risk associated with our exposure to fluctuations in the USD-to-CAD exchange rate. Because a significant portion of our Canadian business is conducted in CAD we use certain financial instruments to minimize the risks of unfavorable changes in exchange rates. These instruments include foreign currency exchange contracts, forwards and options. The fair value of our foreign currency derivatives was an asset of $2 million as of December 31, 2020. A 10% increase in the exchange rate (USD-to-CAD) would have resulted in a decrease of $3 million to the fair value of our foreign currency derivatives. A 10% decrease in the exchange rate (USD-to-CAD) would have resulted in an increase of $3 million to the fair value of our foreign currency derivatives. See Note 13 to our Consolidated Financial Statements for a discussion of our currency exchange rate risk hedging.

Preferred Distribution Rate Reset Option

The Preferred Distribution Rate Reset Option of our Series A preferred units is an embedded derivative that must be bifurcated from the related host contract, our partnership agreement, and recorded at fair value in our Consolidated Balance Sheets. The valuation model utilized for this embedded derivative contains inputs including our common unit price, ten-year United States treasury rates, default probabilities and timing estimates to ultimately calculate the fair value of our Series A preferred units with and without the Preferred Distribution Rate Reset Option. The fair value of this embedded derivative was a liability of $14 million as of December 31, 2020. A 10% increase or decrease in the fair value would have an impact of $1 million. See Note 13 to our Consolidated Financial Statements for a discussion of embedded derivatives.

Item 8. ***Financial Statements and Supplementary Data***

See "Index to the Consolidated Financial Statements" on page F-1.

Item 9. ***Changes In and Disagreements With Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

Disclosure Controls and Procedures

We maintain written disclosure controls and procedures, which we refer to as our "DCP." Our DCP is designed to ensure that information required to be disclosed by us in reports that we file under the Securities Exchange Act of 1934 (the "Exchange Act") is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and (ii) accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, to allow for timely decisions regarding required disclosure.

Applicable SEC rules require an evaluation of the effectiveness of our DCP. Management, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our DCP as of December 31, 2020, the end of the period covered by this report, and, based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our DCP is effective.

Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. "Internal control over financial reporting" is a process designed by, or under the supervision of, our Chief Executive Officer and our Chief Financial Officer, and effected by our Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Our management, including our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of our internal control over financial reporting as of December 31, 2020. See "Management's Report on Internal Control Over Financial Reporting" on page F-2 of our Consolidated Financial Statements.

Our independent registered public accounting firm, PricewaterhouseCoopers LLP, assessed the effectiveness of our internal control over financial reporting, as stated in the firm's report. See "Report of Independent Registered Public Accounting Firm" on page F-3 of our Consolidated Financial Statements.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the fourth quarter of 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Certifications

The certifications of our Chief Executive Officer and Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a) are filed with this report as Exhibits 31.1 and 31.2. The certifications of our Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. 1350 are furnished with this report as Exhibits 32.1 and 32.2.

Item 9B. ***Other Information***

There was no information that was required to be disclosed in a report on Form 8-K during the fourth quarter of 2020 that has not previously been reported.