

Section 1: 10-K (10-K)

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

FORM 10-K

(Mark One)

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

For the fiscal year ended **December 31, 2019**

OR

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

For the transition period from _____ to _____

Commission file number **001-35054**

Marathon Petroleum Corporation

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

27-1284632

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

539 South Main Street, Findlay, OH 45840-3229

(Address of principal executive offices) (Zip code)

(419) 422-2121

(Registrant's telephone number, including area code)

Securities Registered pursuant to Section 12(b) of the Act

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, par value \$.01	MPC	New York Stock Exchange

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large Accelerated Filer Accelerated Filer Non-accelerated Filer Smaller reporting company Emerging growth company

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of Common Stock held by non-affiliates as of June 30, 2019 was approximately \$36.7 billion. This amount is based on the closing price of the registrant's Common Stock on the New York Stock Exchange on June 28, 2019. Shares of Common Stock held by executive officers and directors of the registrant are not included in the computation. The registrant, solely for the purpose of this required presentation, has deemed its directors and executive officers to be affiliates.

There were 649,503,967 shares of Marathon Petroleum Corporation Common Stock outstanding as of February 17, 2020.

Documents Incorporated By Reference

Portions of the registrant's proxy statement relating to its 2020 Annual Meeting of Shareholders, to be filed with the Securities and Exchange Commission pursuant to Regulation 14A under the Securities Exchange Act of 1934, are incorporated by reference to the extent set forth in Part III, Items 10-14 of this Report.

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MARATHON PETROLEUM CORPORATION

Unless otherwise stated or the context otherwise indicates, all references in this Annual Report on Form 10-K to “MPC,” “us,” “our,” “we” or “the Company” mean Marathon Petroleum Corporation and its consolidated subsidiaries.

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GLOSSARY OF TERMS

Throughout this report, the following company or industry specific terms and abbreviations are used:

ASC	Accounting Standards Codification
ANS	Alaskan North Slope crude oil, an oil index benchmark price
ASU	Accounting Standards Update
ASR	Accelerated share repurchase
ATB	Articulated tug barges
barrel	One stock tank barrel, or 42 United States gallons liquid volume, used in reference to crude oil or other liquid hydrocarbons.
bcf/d	One billion cubic feet per day
CARB	California Air Resources Board
CARBOB	California Reformulated Gasoline Blendstock for Oxygenate Blending
CBOB	Conventional Blending for Oxygenate Blending
DEI	Designated Environmental Incidents
EBITDA (a non-GAAP financial measure)	Earnings Before Interest, Tax, Depreciation and Amortization
EPA	United States Environmental Protection Agency
FASB	Financial Accounting Standards Board
GAAP	Accounting principles generally accepted in the United States
IDR	Incentive Distribution Right
LCM	Lower of cost or market
LIBOR	London Interbank Offered Rate
LIFO	Last in, first out
LLS	Louisiana Light Sweet crude oil, an oil index benchmark price
mbpd	Thousand barrels per day
mbpcd	Thousand barrels per calendar day
Mcf	One thousand cubic feet of natural gas
mmbpcd	Million barrels per calendar day
MMcf/d	One million cubic feet of natural gas per day
MMBtu	One million British thermal units per day
NYMEX	New York Mercantile Exchange
NYSE	New York Stock Exchange
NGL	Natural gas liquids, such as ethane, propane, butanes and natural gasoline
OSHA	United States Occupational Safety and Health Administration
OTC	Over-the-Counter
ppb	Parts per billion
ppm	Parts per million
RFS2	Revised Renewable Fuel Standard program, as required by the Energy Independence and Security Act of 2007
RIN	Renewable Identification Number
SEC	United States Securities and Exchange Commission
STAR	South Texas Asset Repositioning
TCJA	Tax Cuts and Jobs Act of 2017
ULSD	Ultra-low sulfur diesel
USGC	U.S. Gulf Coast
UST	Underground storage tank
VIE	Variable interest entity
VPP	Voluntary Protection Program
WTI	West Texas Intermediate crude oil, an oil index benchmark price

DISCLOSURES REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, particularly Item 1. Business, Item 1A. Risk Factors, Item 3. Legal Proceedings, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations and Item 7A. Quantitative and Qualitative Disclosures about Market Risk, includes forward-looking statements that are subject to risks, contingencies or uncertainties. You can identify forward-looking statements by words such as “anticipate,” “believe,” “commitment,” “could,” “design,” “estimate,” “expect,” “forecast,” “goal,” “guidance,” “imply,” “intend,” “may,” “objective,” “opportunity,” “outlook,” “plan,” “policy,” “position,” “potential,” “predict,” “priority,” “project,” “proposition,” “prospective,” “pursue,” “seek,” “should,” “strategy,” “target,” “will,” “would” or other similar expressions that convey the uncertainty of future events or outcomes.

Forward-looking statements include, among other things, statements regarding:

- future levels of revenues, refining and marketing margins, operating costs, retail gasoline and distillate margins, merchandise margins, income from operations, net income or earnings per share;
- future levels of capital, environmental or maintenance expenditures, general and administrative and other expenses;
- the success or timing of completion of ongoing or anticipated capital or maintenance projects;
- business strategies, growth opportunities and expected investment;
- consumer demand for refined products, natural gas and NGLs;
- the timing and amount of any future common stock repurchases; and
- the anticipated effects of actions of third parties such as competitors, activist investors or federal, foreign, state or local regulatory authorities or plaintiffs in litigation.

Our forward-looking statements are not guarantees of future performance, and you should not rely unduly on them, as they involve risks, uncertainties and assumptions that we cannot predict. Material differences between actual results and any future performance suggested in our forward-looking statements could result from a variety of factors, including the following:

- our ability to successfully complete the planned Speedway separation within the expected timeframe or at all;
- our ability to achieve the strategic and other objectives related to our Midstream review;
- the risk that the cost savings and any other synergies from the Andeavor transaction may not be fully realized or may take longer to realize than expected;
- risks relating to any unforeseen liabilities of Andeavor;
- further impairments;
- risks related to the acquisition of Andeavor Logistics LP (“ANDX”) by MPLX LP (“MPLX”);
- our ability to complete any divestitures on commercially reasonable terms and within the expected timeframe, and the effects of any such divestitures on the business, financial condition, results of operations and cash flows;
- the effect of restructuring or reorganization of business components;
- the regional, national and worldwide availability and pricing of refined products, crude oil, natural gas, NGLs and other feedstocks;
- our ability to manage disruptions in credit markets or changes to credit ratings;
- the reliability of processing units and other equipment;
- the adequacy of capital resources and liquidity, including the availability of sufficient cash flow to execute business plans and to effect any share repurchases or dividend increases, including within the expected timeframe;
- the potential effects of judicial or other proceedings on the business, financial condition, results of operations and cash flows;
- continued or further volatility in and degradation of general economic, market, industry or business conditions;

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- compliance with federal and state environmental, economic, health and safety, energy and other policies and regulations, including the cost of compliance with the Renewable Fuel Standard, and enforcement actions initiated thereunder;
- adverse market conditions or other similar risks affecting MPLX;
- refining industry overcapacity or under capacity;
- changes in producer customers' drilling plans or in volumes of throughput of crude oil, natural gas, NGLs, refined products or other hydrocarbon-based products;
- changes in the cost or availability of third-party vessels, pipelines, railcars and other means of transportation for crude oil, natural gas, NGLs, feedstocks and refined products;
- the price, availability and acceptance of alternative fuels and alternative-fuel vehicles and laws mandating such fuels or vehicles;
- political and economic conditions in nations that consume refined products, natural gas and NGLs, including the United States and Mexico, and in crude oil producing regions, including the Middle East, Africa, Canada and South America;
- actions taken by our competitors, including pricing adjustments, expansion of retail activities, the expansion and retirement of refining capacity and the expansion and retirement of pipeline capacity, processing, fractionation and treating facilities in response to market conditions;
- completion of pipeline projects within the United States;
- changes in fuel and utility costs for our facilities;
- accidents or other unscheduled shutdowns affecting our refineries, machinery, pipelines, processing, fractionation and treating facilities or equipment, or those of our suppliers or customers;
- acts of war, terrorism or civil unrest that could impair our ability to produce refined products, receive feedstocks or to gather, process, fractionate or transport crude oil, natural gas, NGLs or refined products;
- adverse changes in laws including with respect to tax and regulatory matters;
- political pressure and influence of environmental groups upon policies and decisions related to the production, gathering, refining, processing, fractionation, transportation and marketing of crude oil or other feedstocks, refined products, natural gas, NGLs or other hydrocarbon-based products;
- labor and material shortages;
- the costs, disruption and diversion of management's attention associated with campaigns commenced by activist investors; and
- the other factors described in Item 1A. Risk Factors.

We undertake no obligation to update any forward-looking statements except to the extent required by applicable law.

PART I

ITEM 1. BUSINESS

OVERVIEW

Marathon Petroleum Corporation (“MPC”) has over 130 years of experience in the energy business, and is the largest independent petroleum product refining, marketing, retail and midstream business in the United States. We operate the nation's largest refining system with more than 3 million barrels per day of crude oil refining capacity and believe we are one of the largest wholesale suppliers of gasoline and distillates to resellers in the United States. We believe we operate the second largest chain of company-owned and operated retail gasoline and convenience stores in the United States. We distribute our refined products through one of the largest terminal operations in the United States and one of the largest private domestic fleets of inland petroleum product barges. In addition, our integrated midstream energy asset network links producers of natural gas and NGLs from some of the largest supply basins in the United States to domestic and international markets.

Our operations consist of three reportable operating segments: Refining & Marketing, Retail and Midstream. Each of these segments is organized and managed based upon the nature of the products and services it offers.

- Refining & Marketing – refines crude oil and other feedstocks at our 16 refineries in the Gulf Coast, Mid-Continent and West Coast regions of the United States, purchases refined products and ethanol for resale and distributes refined products through transportation, storage, distribution and marketing services provided largely by our Midstream segment. We sell refined products to wholesale marketing customers domestically and internationally, to buyers on the spot market, to our Retail business segment and to independent entrepreneurs who operate primarily Marathon® branded outlets.
- Retail – sells transportation fuels and convenience products in the retail market across the United States through company-owned and operated convenience stores, primarily under the Speedway® brand, and long-term fuel supply contracts with direct dealers who operate locations mainly under the ARCO® brand.
- Midstream – transports, stores, distributes and markets crude oil and refined products principally for the Refining & Marketing segment via refining logistics assets, pipelines, terminals, towboats and barges; gathers, processes and transports natural gas; and gathers, transports, fractionates, stores and markets NGLs. The Midstream segment primarily reflects the results of MPLX LP (“MPLX”). MPLX is a diversified, large-cap master limited partnership (“MLP”) formed in 2012 that owns and operates midstream energy infrastructure and logistics assets and provides fuels distribution services. As of December 31, 2019, we owned the general partner and approximately 63 percent of the outstanding MPLX common units.

On October 1, 2018, we completed the Andeavor acquisition. Andeavor shareholders received in the aggregate approximately 239.8 million shares of MPC common stock valued at \$19.8 billion and \$3.5 billion in cash.

Andeavor was a highly integrated marketing, logistics and refining company operating primarily in the Western and Mid-Continent United States. Our acquisition of Andeavor in 2018 substantially increased our geographic diversification and the scale of our assets, which provides increased opportunities to optimize our system.

Corporate History and Structure

MPC was incorporated in Delaware on November 9, 2009 in connection with an internal restructuring of Marathon Oil Corporation (“Marathon Oil”). On May 25, 2011, the Marathon Oil board of directors approved the spinoff of its Refining, Marketing & Transportation Business into an independent, publicly traded company, MPC, through the distribution of MPC common stock to the stockholders of Marathon Oil on June 30, 2011. Our common stock trades on the NYSE under the ticker symbol “MPC.”

Recent Developments

Strategic Actions to Enhance Shareholder Value

On October 31, 2019, we announced our intention to separate our retail transportation fuel and convenience store business, which is operated primarily under the Speedway brand, into an independent, publicly traded company through a tax-free distribution to MPC shareholders of publicly traded stock in the new independent retail transportation fuel and convenience store company. This transaction is targeted to be completed in the fourth quarter of 2020, subject to market, regulatory and certain other conditions, including final approval by MPC's board of directors, receipt of customary assurances regarding the intended tax-free nature of the transaction, and the effectiveness of a registration statement to be filed with the SEC. The Speedway business is currently a reporting unit within our Retail segment. MPC will retain its direct dealer business, which is also included in the Retail segment as currently reported.

MPC's board of directors also formed a special committee to evaluate strategies to enhance shareholder value through a review of the Midstream business and to analyze, among other things, the strategic fit of assets with MPC, the ability to realize full valuation credit for midstream earnings and cash flow, balance sheet impacts including liquidity and credit ratings, transaction tax impacts, separation costs, and overall complexity.

MPLX Acquisition of ANDX

On July 30, 2019, MPLX completed its acquisition of Andeavor Logistics LP ("ANDX"), and ANDX survived as a wholly-owned subsidiary of MPLX. At the effective time of the merger, each common unit held by ANDX's public unitholders was converted into the right to receive 1.135 MPLX common units. ANDX common units held by certain affiliates of MPC were converted into the right to receive 1.0328 MPLX common units. Additionally, 600,000 ANDX preferred units were converted into 600,000 preferred units of MPLX (the "Series B preferred units"). Series B preferred unitholders are entitled to receive, when and if declared by the MPLX board, a fixed distribution of \$68.75 per unit, per annum, payable semi-annually in arrears on February 15 and August 15, or the first business day thereafter, up to and including February 15, 2023. After February 15, 2023, the holders of Series B preferred units are entitled to receive cumulative, quarterly distributions payable in arrears on the 15th day of February, May, August and November of each year, or the first business day thereafter, based on a floating annual rate equal to the three month LIBOR plus 4.652 percent.

The transaction simplified our two sponsored MLPs, MPLX and ANDX, into a single listed entity to create a leading, large-scale, diversified midstream company anchored by fee-based cash flows. The combined entity has an expanded geographic footprint that is expected to enhance its long-term growth opportunities and the sustainable cash flow profile of the business.

OUR VISION, VALUES AND BUSINESS STRATEGIES

We are committed to creating a valued, dynamic energy company that enhances life's possibilities. Underpinning this vision are our core values of integrity, respect, inclusion, collaboration, and safety and environmental stewardship.

Our business strategy is based on five strategic pillars designed to define how we create value through competitive advantages: superior execution, integrated value chain, growth through innovation, strong financial discipline and sustainability. These strategic pillars are supported by our commitment to maintaining a high-performing culture and workforce. We continuously strive to enhance our workforce through active recruitment of the best candidates, including those from diverse backgrounds. We develop our high quality workforce through coaching, mentoring and the delivery of robust training programs focused on leadership, commercial skills, safety, environmental stewardship, diversity and inclusion and other professional and technical skills. We describe our strategic pillars more fully below.

Superior Execution

We are committed to superior execution in everything we do across our organization.

Our Refining & Marketing segment focuses on maintaining and enhancing the reliability and availability of our refining assets, while improving our overall cost structure. Actions to improve our refining cost structure include reducing turnaround costs, improving energy efficiency, and driving operational improvements across our 16 refineries.

Our Midstream segment concentrates on achieving operational excellence by operating its assets safely and efficiently, while capturing synergies across our various systems.

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Our Retail segment is expanding existing technology and utilizing data analytics to support and embrace consumer convenience trends, while improving profitability through operational excellence.

Integrated Value Chain

We believe the scale of our operations distinguishes us from our competitors. Our nationwide footprint enables connectivity to key supply sources and demand hubs. We have access to advantaged feedstocks and our logistics system lowers crude acquisition costs, increases optionality, and increases our speed to market. Our broad market presence creates superior product placement options and our nationwide marketing channels create significant optimization opportunities. Our substantial refining capacity and dock infrastructure on the West Coast and Gulf Coast and our marine assets, uniquely position us to provide reliable supply while allowing for international product placement and marine transportation cost optimization.

Growth Through Innovation

We intend to leverage technology to enhance margins system wide and develop new opportunities for industry leading solutions.

In the Refining & Marketing segment, we are focused on increasing upgrading capability at our refineries to provide yield flexibility and conversion capacity. We continue investing in high return capital projects that increase export capacity, resid destruction and diesel production. We also leverage technology and the expertise of our employees and business partners to optimize catalyst formulations and other refining processes to produce higher valued products.

In our Midstream segment, we are alleviating in-basin bottlenecks and connecting supply to global demand markets through investments in our marine fleet, export opportunities and long-haul crude oil, natural gas and NGL pipelines. We continue our efforts to leverage existing assets for incremental third-party business. We also prioritize our growth in strategic basins, such as the Permian and Marcellus.

In our Retail segment, we are focused on high value growth opportunities, utilizing superior technology, capturing key market opportunities, and leveraging our buying power. Our plans include the continued conversion of acquired locations to the Speedway brand and systems, growth in existing and new markets, dealer sites, commercial diesel fueling expansion, food service through store remodels and high quality acquisitions.

Strong Financial Discipline

We are committed to maintaining an investment grade credit profile and providing through business cycle financial flexibility and protection. We employ a disciplined and balanced approach to capital allocation, including a focus on only the highest returning capital projects in our respective business segments. In our midstream segment, MPLX is targeting positive free cash flow, after capital investments and distributions, in 2021. Achieving this would allow MPLX to fund both its distribution and capital program entirely from internally generated cash flow.

Since becoming a stand-alone company in June 2011, our dividend has increased by a 23 percent compound annual growth rate and our board of directors has authorized share repurchases totaling \$18.0 billion. Through open market purchases and two ASR programs, we have repurchased 327 million shares of our common stock for approximately \$15.0 billion, representing approximately 46 percent of our outstanding common shares when we became a stand-alone company in June 2011. We achieved these shareholder returns while meaningfully investing in the business and maintaining an investment-grade credit profile. As of December 31, 2019, \$3.0 billion of authorization remains available for future share repurchases.

Sustainability

We view sustainability as our environmental, social and economic responsibility. We believe that sustainability is a fundamental process of shared value creation, in which strategic investment and innovation help our society achieve economic growth, environmental preservation and resource conservation. This shared value helps ensure the social and economic needs of future generations are met.

Our operations, assets and processes require specialized knowledge, advanced operating procedures and a commitment to excellence to ensure safety and maximize environmental stewardship. Our approach to sustainability is defined by not only the work we do to conform and comply with all laws and regulations, but also by our drive to meet or exceed our own rigorous environmental and safety targets.

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We are committed to investing in sustainable solutions for energy demand by increasing our renewable diesel production and minimizing carbon intensity. We are in the process of converting our Dickinson refinery into an approximately 180 million gallon per year renewable diesel facility by the end of 2020.

In 2019, the EPA recognized Marathon Petroleum Corporation as an ENERGY STAR® Partner of the Year for the second year, the only oil and gas company to receive such honor. This award recognized the significant energy efficiency gains achieved since we established our “Focus on Energy” program at our refineries nearly a decade ago. Through the implementation of this program, we have earned approximately two-thirds of the total ENERGY STAR certifications awarded to the U.S. refining sector since 2006. Overall, we have realized considerable savings in energy costs and our energy efficiency efforts have enabled us to significantly lower our greenhouse gas intensity.

We remain committed to operating our assets in a safe and reliable manner and targeting continual improvement in our safety and environmental record across our operations through the use of a rigorous, independently audited management system, RC14001®:2015. This management system integrates health, environmental stewardship, safety and security to ensure compliance and continual improvement. Six of our 16 refineries and our Marathon Pipe Line, Terminals and Transport and Rail organizations maintain RC14001 certification. Additionally, our Marine organization maintains management system certification through the American Waterways Operators Responsible Carrier Program. We are continuing to align our recently acquired assets with our internal management system requirements.

We proactively address our regulatory requirements and encourage our operations to continually improve their environmental performance through our DEI program, which establishes goals and measures performance. DEI is a metric adopted by MPC to capture several categories simultaneously. It includes three categories of environmental incidents: releases to the environment (air, land or water), environmental permit exceedances and agency enforcement actions. We rank DEIs in terms of their severity, with Tier 4 being the most severe, and Tier 1 being the least. We continually strive for improvements in our environmental performance. In 2019, we fully implemented the DEI program across all of the assets we acquired from Andeavor in October 2018. As a result of implementing the program, we achieved a 37 percent reduction in Tier 3 and Tier 4 DEIs from our 2018 baseline.

OUR OPERATIONS

Our operations consist of three reportable operating segments: Refining & Marketing, Retail and Midstream.

REFINING & MARKETING

Refineries

We currently own and operate 16 refineries in the Gulf Coast, Mid-Continent and West Coast regions of the United States with an aggregate crude oil refining capacity of 3,067 mbpcd. During 2019, our refineries processed 2,902 mbpd of crude oil and 210 mbpd of other charge and blendstocks. During 2018, our refineries processed 2,081 mbpd of crude oil and 193 mbpd of other charge and blendstocks.

Our refineries include crude oil atmospheric and vacuum distillation, fluid catalytic cracking, hydrocracking, catalytic reforming, coking, desulfurization and sulfur recovery units. The refineries process a wide variety of condensate and light and heavy crude oils purchased from various domestic and foreign suppliers. We produce numerous refined products, ranging from transportation fuels, such as reformulated gasolines, blend-grade gasolines intended for blending with ethanol and ULSD fuel, to heavy fuel oil and asphalt. Additionally, we manufacture aromatics, propane, propylene and sulfur. See the Refined Product Marketing section for further information about the products we produce.

Our refineries are integrated with each other via pipelines, terminals and barges to maximize operating efficiency. The transportation links that connect our refineries allow the movement of intermediate products between refineries to optimize operations, produce higher margin products and efficiently utilize our processing capacity. For example, naphtha may be moved from Dickinson to Garyville where excess reforming capacity is available. Also, shipping intermediate products between facilities during partial refinery shutdowns allows us to utilize processing capacity that is not directly affected by the shutdown work.

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Following is a description of each of our refineries and their capacity by region.

Gulf Coast Region (1,163 mbpcd)

Galveston Bay, Texas City, Texas Refinery (585 mbpcd). Our Galveston Bay refinery is a world-class refining complex resulting from the combination of our former Texas City refinery and Galveston Bay refinery. The refinery is located on the Texas Gulf Coast approximately 30 miles southeast of Houston, Texas and can process a wide variety of crude oils into gasoline, feedstocks, distillates, petrochemicals, propane and heavy fuel oil. The refinery has access to the export market and multiple options to sell refined products. Our cogeneration facility, which supplies the Galveston Bay refinery, currently has 1,055 megawatts of electrical production capacity and can produce 4.3 million pounds of steam per hour. Approximately 46 percent of the power generated in 2019 was used at the refinery, with the remaining electricity being sold into the electricity grid.

Garyville, Louisiana Refinery (578 mbpcd). Our Garyville refinery, which is one of the largest refineries in the U.S., is located along the Mississippi River in southeastern Louisiana between New Orleans, Louisiana and Baton Rouge, Louisiana. The Garyville refinery is configured to process a wide variety of crude oils into gasoline, distillates, petrochemicals, feedstocks, asphalt, propane and heavy fuel oil. The refinery has access to the export market and multiple options to sell refined products. Our Garyville refinery has earned designation as an OSHA VPP Star site.

Mid-Continent Region (1,193 mbpcd)

Catlettsburg, Kentucky Refinery (291 mbpcd). Our Catlettsburg refinery is located in northeastern Kentucky on the western bank of the Big Sandy River, near the confluence with the Ohio River. The Catlettsburg refinery processes sweet and sour crude oils, including production from the nearby Utica Shale, into gasoline, distillates, asphalt, petrochemicals, heavy fuel oil, propane and feedstocks. Our Catlettsburg refinery has earned designation as an OSHA VPP Star site.

Robinson, Illinois Refinery (253 mbpcd). Our Robinson refinery is located in southeastern Illinois. The Robinson refinery processes sweet and sour crude oils into gasoline, distillates, feedstocks, petrochemicals, propane and heavy fuel oil. The Robinson refinery has earned designation as an OSHA VPP Star site.

Detroit, Michigan Refinery (140 mbpcd). Our Detroit refinery is located in southwest Detroit. It is the only petroleum refinery currently operating in Michigan. The Detroit refinery processes sweet and heavy sour crude oils, including Canadian crude oils, into gasoline, distillates, asphalt, feedstocks, petrochemicals, propane and heavy fuel oil. Our Detroit refinery has earned designation as an OSHA VPP Star site.

El Paso, Texas Refinery (131 mbpcd). Our El Paso refinery is located approximately three miles east of downtown El Paso, Texas. The El Paso refinery processes sweet and sour crudes into gasoline, distillates, asphalt, heavy fuel oil, propane, feedstocks and petrochemicals.

St. Paul Park, Minnesota Refinery (103 mbpcd). Our St. Paul Park refinery is located along the Mississippi River southeast of St. Paul Park, Minnesota. The St. Paul Park refinery primarily processes sweet crude from the Bakken region in North Dakota as well as various grades of Canadian sweet and heavy sour crude and manufactures gasoline, distillates, asphalt, feedstocks, propane, petrochemicals and heavy fuel oil.

Canton, Ohio Refinery (95 mbpcd). Our Canton refinery is located approximately 60 miles south of Cleveland, Ohio. The Canton refinery processes sweet and sour crude oils, including production from the nearby Utica Shale, into gasoline, distillates, asphalt, feedstocks, propane, petrochemicals and heavy fuel oil. The Canton refinery has earned designation as an OSHA VPP Star site.

Mandan, North Dakota Refinery (71 mbpcd). The Mandan refinery processes primarily sweet domestic crude oil from North Dakota and manufactures gasoline, distillates, propane, heavy fuel oil, feedstocks and petrochemicals.

Salt Lake City, Utah Refinery (63 mbpcd). Our Salt Lake City refinery is now the largest in Utah. The Salt Lake City refinery processes crude oil from Utah, Colorado, Wyoming and Canada to manufacture gasoline, distillates, feedstocks, propane, heavy fuel oil and petrochemicals.

Gallup, New Mexico Refinery (27 mbpcd). Our Gallup refinery is located near Gallup, New Mexico and is the only active refinery in the Four Corners area. The Gallup refinery primarily processes high-quality crude known as Four Corners Sweet into gasoline, distillates, feedstocks, heavy fuel oil and propane.

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Dickinson, North Dakota Refinery (19 mbpcd). Our Dickinson refinery is located four miles west of Dickinson, North Dakota. The Dickinson refinery primarily processes domestic crude oil from North Dakota and manufactures ultra-low sulfur diesel and feedstocks. We are in the process of converting this refinery into an approximately 180 million gallon per year renewable diesel facility by December 2020.

West Coast Region (711 mbpcd)

Los Angeles, California Refinery (363 mbpcd). Our Los Angeles refinery is located in Los Angeles County, near the Los Angeles Harbor. The Los Angeles refinery is the largest refinery on the West Coast and is a major producer of clean fuels. The Los Angeles refinery processes heavy crude from California's San Joaquin Valley and Los Angeles Basin as well as crudes from the Alaska North Slope, South America, West Africa and other international sources and manufactures cleaner-burning CARB gasoline and CARB diesel fuel, as well as conventional gasoline, distillates, feedstocks, petrochemicals, propane and heavy fuel oil.

Martinez, California Refinery (161 mbpcd). Our Martinez refinery is located in Martinez, California. The Martinez refinery processes crude oils from California and other domestic and foreign sources and manufactures cleaner-burning CARB gasoline and CARB diesel fuel, as well as conventional gasoline and distillates, feedstocks, petrochemicals, propane and heavy fuel oil.

Anacortes, Washington Refinery (119 mbpcd). Our Anacortes refinery is located about 70 miles north of Seattle on Puget Sound. The Anacortes refinery processes Canadian crude, domestic crude from North Dakota and Alaska North Slope and international crudes to manufacture gasoline, distillates, heavy fuel oil, feedstocks, propane and petrochemicals.

Kenai, Alaska Refinery (68 mbpcd). Our Kenai refinery is located on the Cook Inlet, 60 miles southwest of Anchorage. The Kenai refinery processes mainly Alaska domestic crude, domestic crude from North Dakota, along with limited international crude and manufactures distillates, gasoline, heavy fuel oil, feedstocks, asphalt, propane and petrochemicals.

Planned maintenance activities, or turnarounds, requiring temporary shutdown of certain refinery operating units, are periodically performed at each refinery. See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations for additional detail.

Refined Product Yields

The following table sets forth our refinery production by product group for each of the last three years including production from the refineries acquired in the Andeavor acquisition from October 1, 2018 forward.

<i>(mbpd)</i>	2019	2018	2017
Gasoline	1,560	1,107	932
Distillates	1,087	773	641
Feedstocks and petrochemicals	315	288	277
Asphalt	87	69	63
Propane	55	41	36
Heavy fuel oil	49	38	37
Total	3,153	2,316	1,986

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Crude Oil Supply

We obtain the crude oil we refine through negotiated term contracts and purchases or exchanges on the spot market. Our term contracts generally have market-related pricing provisions. The following table provides information on our sources of crude oil for each of the last three years. It includes crude sourced for the refineries acquired in the Andeavor acquisition from October 1, 2018 forward. The crude oil sourced outside of North America was acquired from various foreign national oil companies, production companies and trading companies.

<i>(mbpd)</i>	2019	2018	2017
United States	1,962	1,319	999
Canada	541	465	381
Middle East and other international	399	297	385
Total	2,902	2,081	1,765

Our refineries receive crude oil and other feedstocks and distribute our refined products through a variety of channels, including pipelines, trucks, railcars, ships and barges.

Renewable Fuels

We in the process of converting our Dickinson, North Dakota refinery into an approximately 180 million gallon per year renewable diesel facility by December 2020.

We own a biofuel production facility in Cincinnati, Ohio that produces biodiesel, glycerin and other by-products. The capacity of the plant is approximately 80 million gallons per year.

Our wholly-owned subsidiary, Virent, is an advanced biofuels facility in Madison, Wisconsin that is working to commercialize a process for converting biobased feedstocks into renewable fuels and chemicals.

We hold an ownership interest in ethanol production facilities in Albion, Michigan; Logansport, Indiana; Greenville, Ohio and Denison, Iowa. These plants have a combined ethanol production capacity of approximately 475 million gallons per year (31 mbpd) and are managed by our joint venture partner, The Andersons.

Refined Product Marketing

Our refined products are sold to independent retailers, wholesale customers, our brand jobbers and our Retail segment. In addition, we sell refined products for export to international customers. As of December 31, 2019, there were 6,901 branded outlets in 35 states, the District of Columbia and Mexico where independent entrepreneurs primarily maintain Marathon-branded outlets. We believe we are one of the largest wholesale suppliers of gasoline and distillates to resellers and consumers within our 41-state market area.

The following table sets forth our refined product sales volumes by product group for each of the last three years including sales from the refineries acquired in the Andeavor acquisition from October 1, 2018 forward.

<i>(mbpd)</i>	2019	2018	2017
Gasoline	1,967	1,416	1,201
Distillates	1,205	847	691
Feedstocks and petrochemicals	345	289	265
Asphalt	93	70	68
Propane	72	44	37
Heavy fuel oil	53	37	39
Total	3,735	2,703	2,301

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Refined Product Sales Destined for Export

We sell gasoline, distillates and asphalt for export, primarily out of our Garyville, Galveston Bay, Anacortes, Martinez, Los Angeles and Kenai refineries. The following table sets forth our refined product sales destined for export by product group for the past three years including sales from the refineries acquired in the Andeavor acquisition from October 1, 2018 forward.

<i>(mbpd)</i>	2019	2018	2017
Gasoline	131	117	96
Distillates	215	193	192
Asphalt and other	51	24	9
Total	397	334	297

Gasoline and Distillates. We sell gasoline, gasoline blendstocks and distillates (including No. 1 and No. 2 fuel oils, jet fuel, kerosene and diesel fuel) to wholesale customers, Marathon-branded independent entrepreneurs, our Retail segment and on the spot market. In addition, we sell diesel fuel and gasoline for export to international customers. The demand for gasoline and distillates is seasonal in many of our markets, with demand typically at its highest levels during the summer months.

Feedstocks and Petrochemicals. We are a producer and marketer of feedstocks and petrochemicals. Product availability varies by refinery and includes, among others, propylene, naphtha, alkylate, xylene, butane, benzene, raffinate, dry gas, cumene, toluene and platformate. We market these products domestically to customers in the chemical, agricultural and fuel-blending industries. In addition, we produce fuel-grade coke at our Garyville, Detroit, Galveston Bay and Los Angeles refineries, which is used for power generation and in miscellaneous industrial applications, and anode-grade coke at our Los Angeles and Robinson refineries, which is used to make carbon anodes for the aluminum smelting industry.

Asphalt. We have refinery-based asphalt production capacity of up to 136 mbpcd, which includes asphalt cements, polymer-modified asphalt, emulsified asphalt, industrial asphalts and roofing flux. We have a broad customer base, including asphalt-paving contractors, government entities (states, counties, cities and townships) and asphalt roofing shingle manufacturers. We sell asphalt in the domestic and export wholesale markets via rail, barge and vessel.

Propane. We produce propane at all of our refineries except Dickinson. Propane is primarily used for home heating and cooking, as a feedstock within the petrochemical industry, for grain drying and as a fuel for trucks and other vehicles. Our propane sales are split approximately 80 percent and 20 percent between the home heating market and petrochemical consumers, respectively.

Heavy Fuel Oil. We produce and market heavy residual fuel oil or related components, including slurry, at all of our refineries except Dickinson. Heavy residual fuel oil is primarily used in the utility and ship bunkering (fuel) industries, though there are other more specialized uses of the product.

Terminals and Transportation

We transport, store and distribute crude oil, feedstocks and refined products through pipelines, terminals and marine fleets owned by MPLX and third parties in our market areas.

We own a fleet of transport trucks and trailers for the movement of refined products and crude oil. In addition, we maintain a fleet of leased and owned railcars for the movement and storage of refined products.

The locations and detailed information about our Refining & Marketing assets are included under Item 2. Properties and are incorporated herein by reference.

Competition, Market Conditions and Seasonality

The downstream petroleum business is highly competitive, particularly with regard to accessing crude oil and other feedstock supply and the marketing of refined products. We compete with a number of other companies to acquire crude oil for refinery processing and in the distribution and marketing of a full array of refined products. Based upon company data as reported in the “The Oil & Gas Journal 2019 Worldwide Refinery Survey,” we ranked first among U.S. petroleum companies on the basis of U.S. crude oil refining capacity.

We compete in four distinct markets for the sale of refined products—wholesale, including exports, spot, branded and retail distribution. Our marketing operations compete with numerous other independent marketers, integrated oil companies and high-volume retailers. We compete with companies in the sale of refined products to wholesale marketing customers, including private-brand marketers and large commercial and industrial consumers; companies in the sale of refined products in the spot market; and refiners or marketers in the supply of refined products to refiner-branded independent entrepreneurs. In addition, we compete with producers and marketers in other industries that supply alternative forms of energy and fuels to satisfy the requirements of our industrial, commercial and retail consumers.

Market conditions in the oil and gas industry are cyclical and subject to global economic and political events and new and changing governmental regulations. Our operating results are affected by price changes in crude oil, natural gas and refined products, as well as changes in competitive conditions in the markets we serve. Price differentials between sweet and sour crude oils, ANS, WTI and LLS crude oils and other market structure impacts also affect our operating results.

Demand for gasoline, diesel fuel and asphalt is higher during the spring and summer months than during the winter months in most of our markets, primarily due to seasonal increases in highway traffic and construction. As a result, the operating results for our Refining & Marketing segment for the first and fourth quarters may be lower than for those in the second and third quarters of each calendar year.

RETAIL

Our Retail segment sells gasoline, diesel and merchandise through convenience stores that it owns and operates, primarily under the Speedway brand, and gasoline and diesel through direct dealer locations. Our company-owned and operated convenience stores offer a wide variety of merchandise, including prepared foods, beverages and non-food items. Speedway’s Speedy Rewards® loyalty program has been a highly successful loyalty program since its inception in 2004, which averaged approximately 6.3 million active members in 2019. Speedway’s ability to capture and analyze member-specific transactional data enables us to offer Speedy Rewards® members discounts and promotions specific to their buying behavior. We believe Speedy Rewards® is a key reason customers choose Speedway over competitors and it continues to drive significant value for both Speedway and our Speedy Rewards® members.

As of December 31, 2019, our Retail segment had 3,898 company-owned and operated convenience stores across the United States and we have long-term supply contracts for 1,068 direct dealer locations primarily in Southern California, largely under the ARCO® brand.

Speedway also owns a 29 percent interest in PFJ Southeast LLC (“PFJ Southeast”), which is a joint venture between Speedway and Pilot Flying J with 125 travel center locations primarily in the Southeast United States as of December 31, 2019. Additionally, Speedway and Pilot Travel Centers LLC (“PTC”) entered into an agreement effective October 1, 2019 in which PTC will supply, price and sell diesel fuel at certain Speedway and PTC locations with both companies sharing in the diesel fuel margins. At December 31, 2019, this agreement included approximately 330 Speedway and PTC fueling locations across 13 states, including approximately 180 Speedway commercial fueling locations.

The locations and detailed information about our Retail assets are included under Item 2. Properties and are incorporated herein by reference.

Competition, Market Conditions and Seasonality

We face strong competition for sales of retail gasoline, diesel fuel and merchandise. Our competitors include service stations and convenience stores operated by fully integrated major oil companies, independent entrepreneurs and other well-recognized national or regional convenience stores and travel centers, often selling gasoline, diesel fuel and merchandise at competitive prices. Non-traditional transportation fuel retailers, such as supermarkets, club stores and mass merchants, have affected the convenience store industry with their

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entrance into sales of retail gasoline and diesel fuel. Energy Analysts International, Inc. estimated such retailers had approximately 16 percent of the U.S. gasoline market in 2019.

Demand for gasoline and diesel fuel is higher during the spring and summer months than during the winter months in most of our markets, primarily due to seasonal increases in highway traffic. As a result, the operating results for our Retail segment for the first and fourth quarters may be lower than for those in the second and third quarters of each calendar year. Margins from the sale of merchandise tend to be less volatile than margins from the retail sale of gasoline and diesel fuel.

MIDSTREAM

The Midstream segment primarily includes the operations of MPLX, our sponsored MLP, and certain related operations retained by MPC.

MPLX

MPLX owns and operates a network of crude oil, natural gas and refined product pipelines and has joint ownership interests in other crude oil and refined products pipelines. MPLX also owns and operates light products terminals, storage assets and maintains a fleet of owned and leased towboats and barges. MPLX's assets also include natural gas gathering systems and natural gas processing and NGL fractionation complexes.

MPC-Retained Midstream Assets and Investments

We have ownership interests in several crude oil and refined products pipeline systems and pipeline companies and have indirect ownership interests in two ocean vessel joint ventures through our investment in Crowley Coastal Partners.

The locations and detailed information about our Midstream assets are included under Item 2. Properties and are incorporated herein by reference.

Competition, Market Conditions and Seasonality

Our Midstream operations face competition for natural gas gathering, crude oil transportation and in obtaining natural gas supplies for our processing and related services; in obtaining unprocessed NGLs for gathering and fractionation; and in marketing our products and services. Competition for natural gas supplies is based primarily on the location of gas gathering facilities and gas processing plants, operating efficiency and reliability and the ability to obtain a satisfactory price for products recovered. Competitive factors affecting our fractionation services include availability of capacity, proximity to supply and industry marketing centers and cost efficiency and reliability of service. Competition for customers to purchase our natural gas and NGLs is based primarily on price, delivery capabilities, flexibility and maintenance of high-quality customer relationships. In addition, certain of our Midstream operations are highly regulated, which affects the rates that our common carrier pipelines can charge for transportation services and the return we obtain from such pipelines.

Our Midstream segment can be affected by seasonal fluctuations in the demand for natural gas and NGLs and the related fluctuations in commodity prices caused by various factors such as changes in transportation and travel patterns and variations in weather patterns from year to year.

ENVIRONMENTAL MATTERS

Our management is responsible for ensuring that our operating organizations maintain environmental compliance systems that support and foster our compliance with applicable laws and regulations, and for reviewing our overall environmental performance. We also have a Corporate Emergency Response Team that oversees our response to any major environmental or other emergency incident involving us or any of our facilities.

We believe it is likely that the scientific and political attention to greenhouse gas emissions, climate change, and climate adaptation will continue, with the potential for further regulations that could affect our operations. Currently, legislative and regulatory measures to address greenhouse gas emissions are in various phases of review, discussion or implementation. The cost to comply with these laws and regulations cannot be estimated at this time, but could be significant. For additional information, see Item 1A. Risk Factors. We estimate and publicly report greenhouse gas emissions from our operations. Additionally, we continuously strive to improve operational and energy efficiencies through resource and energy conservation where practicable.

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Our operations are subject to numerous laws and regulations relating to the protection of the environment. Such laws and regulations include, among others, the Clean Air Act (“CAA”) with respect to air emissions, the Clean Water Act (“CWA”) with respect to water discharges, the Resource Conservation and Recovery Act (“RCRA”) with respect to solid and hazardous waste treatment, storage and disposal, the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”) with respect to releases and remediation of hazardous substances and the Oil Pollution Act of 1990 (“OPA-90”) with respect to oil pollution and response. In addition, many states where we operate have similar laws. New laws are being enacted and regulations are being adopted on a continuing basis, and the costs of compliance with such new laws and regulations are very difficult to estimate until finalized.

For a discussion of environmental capital expenditures and costs of compliance, see Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations-Environmental Matters and Compliance Costs.

Air

Greenhouse Gas Emissions

We are subject to many requirements in connection with air emissions from our operations. Internationally and domestically, emphasis has been placed on reducing greenhouse gas emissions. In July 2019, the Trump Administration continued its shift in climate-related policy away from the Obama Administration’s policies by repealing the “Clean Power Plan” and replacing it with the Affordable Clean Energy rule, which establishes guidelines for states to develop plans to address greenhouse gas emissions from existing coal-fired power plants. President Trump also announced the United States’ intention to withdraw from the 2015 Paris UN Climate Change Conference Agreement, which aims to hold the increase in the global average temperature to well below two degrees Celsius as compared to pre-industrial levels. Many of the policies and regulations rescinded through Executive Order 13783 had been adopted to meet the United States’ pledge under the Paris Agreement. The U.S. climate change strategy and implementation of that strategy through legislation and regulation may change under future administrations; therefore, the impact to our industry and operations due to greenhouse gas regulation is unknown at this time.

In the absence of federal legislation or regulation of greenhouse gas emissions, states are becoming active in regulating greenhouse gas emissions. These measures may include state actions to develop statewide or regional programs to impose emission reductions. These measures may also include low-carbon fuel standards, such as the California program, or a state carbon tax. These measures could result in increased costs to operate and maintain our facilities, capital expenditures to install new emission controls and costs to administer any carbon trading or tax programs implemented. For example, in 2017, the California state legislature adopted AB 398, which provides direction and parameters on utilizing cap and trade after 2020 to meet the 40% reduction target from 1990 levels by 2030 specified in SB 32. Compliance with the cap and trade program is demonstrated through a market-based credit system. The CARB is now exploring the potential for additional greenhouse gas reductions by 2045 via a yet undefined carbon neutrality standard. Much of the compliance costs associated with these California regulations are ultimately passed on to the consumer in the form of higher fuel costs. We cannot currently predict the impact of these regulations on our liquidity, financial position, or results of operations, but we do not believe such impact will be material.

In sum, requiring reductions in greenhouse gas emissions could result in increased costs to (i) operate and maintain our facilities, (ii) install new emission controls at our facilities and (iii) administer and manage any greenhouse gas emissions programs, including acquiring emission credits or allotments. These requirements may also significantly affect MPC’s refinery operations and may have an indirect effect on our business, financial condition and results of operations. The extent and magnitude of the impact from greenhouse gas regulation or legislation cannot be reasonably estimated due to the uncertainty regarding the additional measures and how they will be implemented.

Regardless of whether legislation or regulation is enacted, given the continuing global demand for oil and gas - even under different hypothetical carbon-constrained scenarios - MPC has taken actions that have resulted in lower greenhouse gas emission intensity and we believe we are positioned to remain a successful company well into the future. We have instituted a program to improve energy efficiency of our refineries and other assets which will continue to pay dividends in reducing our environmental footprint as well as making us more cost-competitive. We believe our mature governance and risk-management processes enable the company to effectively monitor and adjust to any transitional, reputational or physical climate-related risks.

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Other Air Emissions

In 2015, United States Environmental Protection Agency (“EPA”) finalized a revision to the National Ambient Air Quality Standards (“NAAQS”) for ozone. The EPA lowered the primary ozone NAAQS from 75 ppb to 70 ppb. This revision initiated a multi-year process in which nonattainment designations will be made based on more recent ozone measurements that includes data from 2016. On November 6, 2017, the EPA finalized ozone attainment/unclassifiable designations for certain areas under the new standard. In actions dated April 30, 2018 and July 25, 2018, the EPA finalized nonattainment designations for certain areas under the lower primary ozone standard. In some areas, these nonattainment designations could result in increased costs associated with, or result in cancellation or delay of, capital projects at our facilities. For areas designated nonattainment, states will be required to adopt State Implementation Plans (“SIPs”) for nonattainment areas. These SIPs may include NO_x and/or volatile organic compound (“VOC”) reductions that could result in increased costs to our facilities. We cannot predict the effects of the various SIPs requirements at this time.

In California, the Board for the South Coast Air Quality Management District (“SCAQMD”) passed amendments to the Regional Clean Air Incentives Market (“RECLAIM”) that became effective in 2016, requiring a staged reduction of nitrogen oxide emissions through 2022. In 2017, the State of California passed AB 617, which requires each air district that is a nonattainment area for one or more air pollutants to adopt an expedited schedule for implementation of best available retrofit control technology (“BARCT”) on specific facilities. BARCT applies to all facilities subject to RECLAIM. In response to AB 617, the SCAQMD is currently working to “sunset” the existing RECLAIM program and replace it with applicable BARCT regulations. A “sunset” of the RECLAIM program and application of BARCT could result in increased costs to operate and maintain our facilities or install emissions controls at our facilities in the SCAQMD.

Water

We maintain numerous discharge permits as required under the National Pollutant Discharge Elimination System program of the CWA and have implemented systems to oversee our compliance with these permits. In addition, we are regulated under OPA-90, which, among other things, requires the owner or operator of a tank vessel or a facility to maintain an emergency plan to respond to releases of oil or hazardous substances. OPA-90 also requires the responsible company to pay resulting removal costs and damages and provides for civil penalties and criminal sanctions for violations of its provisions. We operate tank vessels and facilities from which spills of oil and hazardous substances could occur. We have implemented emergency oil response plans for all of our components and facilities covered by OPA-90 and we have established Spill Prevention, Control and Countermeasures plans for all facilities subject to such requirements.

Additionally, OPA-90 requires that new tank vessels entering or operating in U.S. waters be double-hulled and that existing tank vessels that are not double-hulled be retrofitted or removed from U.S. service. All barges used for river transport of our raw materials and refined products meet the double-hulled requirements of OPA-90. Some coastal states in which we operate have passed state laws similar to OPA-90, but with expanded liability provisions, that include provisions for cargo owner responsibility as well as ship owner and operator responsibility.

On October 22, 2019, the EPA and the United States Army Corps of Engineers (“Army Corps”) published a final rule to repeal the 2015 “Clean Water Rule: Definition of Waters of the United States” (“2015 Rule”), which amended portions of the Code of Federal Regulations (“CFR”) to restore the regulatory text that existed prior to the 2015 Rule, effective December 23, 2019. The rule repealing the 2015 Clean Water Rule has been challenged in multiple federal courts. On January 23, 2020, the EPA and the Army Corps finalized the Navigable Waters Protection Rule (“2020 Rule”) to define “waters of the United States.” This rule will become effective 60 days after publication in the Federal Register and will replace the pre-2015 regulatory text that had been restored by the October 2019 Rule. The 2020 Rule will likely be challenged in court. A broader definition of “waters of the United States,” such as that included in the 2015 Rule, could result in increased cost of compliance or increased capital costs for construction of new facilities or expansion of existing facilities.

In 2015, the EPA issued its intent to review the CWA categorical effluent limitation guidelines (“ELG”) for the petroleum refining sector. During 2017, the EPA prepared and issued an information request (“ICR”) requesting significant wastewater and treatment process details from select refineries, seven of which were ours. Responses to the ICR were submitted to the EPA in early 2018. In September 2019, the EPA issued its “Detailed Study of the Petroleum Refining Category - 2019 Report” which concluded the EPA’s review. In October 2019, the EPA published its “Preliminary Effluent Guidelines Program Plan 14” (“Plan 14”) and requested comments. Plan 14 indicated that the EPA was proposing to conclude the study of the Petroleum

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Refinery Category and not take further action at this time, however, it also indicated that it intended a future review or study of the category but did not elaborate on scope or timing of such review or study. Changes in the ELG could result in increased costs of compliance, including capital improvement projects at our facilities.

As part of our emergency response activities, we have used aqueous film forming foam (“AFFF”) containing per- and polyfluoroalkyl substances (“PFAS”) chemicals as a fire suppressant. At this time, AFFFs containing PFAS are the only proven foams that can prevent and control most flammable petroleum-based liquid fires.

In May 2016, the EPA issued lifetime health advisories (“HAs”) and health effects support documents for two PFAS substances - Perfluorooctanoic Acid (“PFOA”) and Perfluorooctane Sulfonate (“PFOS”). The EPA’s HAs, which identify the concentration of PFOA and PFOS in drinking water at or below which adverse health effects are not anticipated to occur over a lifetime of exposure, are 0.07 parts per billion (70 parts per trillion) for PFOA and PFOS. HAs are non-regulatory and reflect the EPA’s assessment of the best available peer-reviewed science.

In February 2019, EPA issued a PFAS Action Plan identifying actions the EPA is planning to take to study and regulate various PFAS chemicals. The EPA identified that it would evaluate, among other actions, (1) proposing national drinking water standards for PFOA and PFOS, (2) develop cleanup recommendations for PFOA and PFOS, (3) evaluate listing PFOA and PFOS as hazardous substances under CERCLA, and (4) conduct toxicity assessments for other PFAS chemicals. In February 2020, the EPA announced its preliminary determinations to regulate PFOS and PFOA in drinking water and is taking public comment on such preliminary determinations. If the preliminary determinations become final, the EPA will set drinking water limits for PFOS and PFOA.

Congress has introduced multiple bills in the House and Senate proposing to regulate PFAS. To date, only one such Bill has been signed into law. The National Defense Authorization Act includes provisions that added certain PFAS to the Toxics Release Inventory under the Emergency Planning and Community Right-to-Know Act. Facilities that manufacture, process or produce listed PFAS in quantities of more than 100 pounds per year will be required to report their releases of PFAS. We expect further congressional action or EPA action in the future, however, it is unknown at this time what future legislation and/or regulation will entail.

In addition, many states are actively proposing and adopting legislation and regulations relating to the use of AFFF. Additionally, some states are adopting and proposing state-specific drinking water and cleanup standards for various PFAS. We cannot currently predict the impact of these regulations on our liquidity, financial position, or results of operations.

Solid Waste

We continue to seek methods to minimize the generation of hazardous wastes in our operations. RCRA establishes standards for the management of solid and hazardous wastes. Besides affecting waste disposal practices, RCRA also addresses the environmental effects of certain past waste disposal operations, the recycling of wastes and the regulation of USTs containing regulated substances.

Remediation

We own or operate, or have owned or operated, certain convenience stores and other locations where, during the normal course of operations, releases of refined products from USTs have occurred. Federal and state laws require that contamination caused by such releases at these sites be assessed and remediated to meet applicable standards. Penalties or other sanctions may be imposed for noncompliance. The enforcement of the UST regulations under RCRA has been delegated to the states, which administer their own UST programs. Our obligation to remediate such contamination varies, depending on the extent of the releases and the applicable state laws and regulations. A portion of these remediation costs may be recoverable from the appropriate state UST reimbursement funds once the applicable deductibles have been satisfied. We also have ongoing remediation projects at a number of our current and former refinery, terminal and pipeline locations.

Claims under CERCLA and similar state acts have been raised with respect to the clean-up of various waste disposal and other sites. CERCLA is intended to facilitate the clean-up of hazardous substances without regard to fault. Potentially responsible parties for each site include present and former owners and operators of, transporters to and generators of the hazardous substances at the site. Liability is strict and can be joint and several. Because of various factors including the difficulty of identifying the responsible parties for any particular site, the complexity of determining the relative liability among them, the uncertainty as to the most desirable remediation techniques and the amount of damages and clean-up costs and the time period during

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which such costs may be incurred, we are unable to reasonably estimate our ultimate cost of compliance with CERCLA; however, we do not believe such costs will be material to our business, financial condition, results of operations or cash flows.

Renewable Fuels and Other Fuels Requirements

The U.S. Congress passed the Energy Independence and Security Act of 2007 (“EISA”), which, among other things, set a target of 35 miles per gallon for the combined fleet of cars and light trucks in the United States by model year 2020. In August 2012, the EPA and the National Highway Traffic Safety Administration (“NHTSA”) jointly adopted regulations that increased the mile per gallon standards for passenger cars and light trucks through model year 2025. In 2018, the EPA and the NHTSA jointly proposed the Safer Affordable Fuel-Efficient Vehicles Rules for Model Years 2021-2026, which would propose new Corporate Average Fuel Economy (“CAFE”) standards for model years 2022 through 2026, amend the 2021 model year CAFE standards, amend the EPA’s carbon dioxide emission standards for model years 2021 through 2025, and establish new carbon dioxide emission standards for model year 2026. The EPA’s preferred alternative is to retain the model year 2020 standards for both programs through model year 2026. The standards established by the final regulation may differ. Higher CAFE standards for cars and light trucks have the potential to reduce demand for our transportation fuels.

In addition, the NHTSA and the EPA issued rules providing that the Energy Policy and Conservation Act (“EPCA”) preempts state regulations of tailpipe carbon dioxide emissions, withdrew the waiver granted to California for its Advanced Clean Car program and determined that the Clean Air Act permits other states to adopt only those California standards that are designed to control traditional “criteria pollutants.” California may establish per its Clean Air Act waiver authority different standards that could apply in multiple states. New or alternative transportation fuels such as compressed natural gas could also pose a competitive threat to our operations.

Pursuant to the Energy Policy Act of 2005 and the EISA, the EPA has promulgated a Renewable Fuel Standard (“RFS”) program that requires certain volumes of renewable fuel be blended with our products. EISA requires the total volume of renewable transportation fuels sold or introduced annually in the U.S. to reach 36.0 billion gallons by 2022. Within the total volume of renewable fuel, EISA established nested categories of renewable fuel: advanced biofuel; biomass-based diesel; and cellulosic biofuel.

By November 30 of each year, the EPA is required to promulgate the annual renewable fuel standards for the following compliance year. In a legal challenge to the 2014-2016 volumes, the D.C. Circuit Court of Appeals vacated the total renewable volume for 2016 and remanded to the EPA for reconsideration consistent with the court’s opinion. A rule that increases the total renewable volume for any compliance year to make up for the 2016 shortfall could increase our cost of compliance with the RFS program, require us to use carryover RINs and be detrimental to the RIN market.

The EPA has finalized the annual renewable fuel standards for the year 2020. For the first time, the EPA has proposed to reallocate to non-exempt obligated parties the renewable volume obligations of the refiners that were granted a small refinery exemption. Also, the Tenth Circuit Court of Appeals recently held that a small refinery is eligible for an exemption from the RFS only if it is applying for an extension of its original exemption. According to the EPA’s data, seven refineries were granted the small refinery exemption in 2015. The EPA granted 19 small refinery exemptions in 2016, 35 exemptions in 2017, and 31 exemptions in 2018. A lawsuit challenging the 2018 small refinery exemption letter is currently pending in the D.C. Circuit Court of Appeals, and similar additional lawsuits may be filed in the future. The reallocation of volumes under the 2020 rule or the invalidation of past small refinery exemptions granted to us or other refiners could result in a decrease in the RIN bank, an increase in the price of RINs or an increase in the amount of renewable fuel we are required to blend, any of which could increase MPC’s RFS cost of compliance.

The RFS is satisfied primarily with ethanol blended into gasoline. Vehicle, regulatory and infrastructure constraints limit the blending of significantly more than 10 percent ethanol into gasoline (“E10”). Since 2016, the volume requirements have resulted in the ethanol content of gasoline exceeding the E10 blendwall, which will require obligated parties to either sell E15 or ethanol flex fuel at levels that exceed historical levels or retire carryover RINs.

There is currently no regulatory method for verifying the validity of the RINs sold on the open market. We have developed a RIN integrity program to vet the RINs that we purchase, and we incur costs to audit RIN

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generators. Nevertheless, if any of the RINs that we purchase and use for compliance are found to be invalid, we could incur costs and penalties for replacing the invalid RINs.

In addition to the federal Renewable Fuel Standards, certain states have, or are considering, promulgation of state renewable or low carbon fuel standards. For example, California began implementing its Low Carbon Fuel Standard (“LCFS”) in January 2011. In September 2015, the CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. The LCFS was amended again in 2018 with the current version targeting a 20 percent reduction in fuel carbon intensity from a 2010 baseline by 2030. The CARB is now exploring the imposition of a 50% renewable fuel requirement for diesel (Low Emission Diesel) sold in California by 2030. We incur costs to comply with the California LCFS, and these costs may increase if the cost of LCFS credits increases.

In sum, the RFS has required, and may in the future continue to require, additional capital expenditures or expenses by us to accommodate increased renewable fuels use. We may experience a decrease in demand for refined products due to an increase in combined fleet mileage or due to refined products being replaced by renewable fuels. Demand for our refined products also may decrease as a result of low carbon fuel standard programs or electric vehicle mandates.

Tribal Lands

Various federal agencies, including the EPA and the Department of the Interior, along with certain Native American tribes, promulgate and enforce regulations pertaining to oil and gas operations on Native American tribal lands where we operate. These regulations include such matters as lease provisions, drilling and production requirements, and standards to protect environmental quality and cultural resources. For example, the EPA has established a preconstruction permitting program for new and modified minor sources throughout Native American tribal lands, and new and modified major sources in nonattainment areas in those areas. In addition, each Native American tribe is a sovereign nation having the right to enforce certain laws and regulations and to grant approvals independent from federal, state and local statutes and regulations. These laws and regulations may increase our costs of doing business on Native American tribal lands and impact the viability of, or prevent or delay our ability to conduct, our operations on such lands.

TRADEMARKS, PATENTS AND LICENSES

Our Marathon trademark is material to the conduct of our refining and marketing operations, and our Speedway and ARCO trademarks are material to the conduct of our retail operations. Additionally, the retail and marketing businesses we acquired in the Andeavor acquisition primarily use the Shell® and Mobil® brands for fuel sales and ampm® and Giant® brands for convenience store merchandise. We currently hold a number of U.S. and foreign patents and have various pending patent applications. Although in the aggregate our patents and licenses are important to us, we do not regard any single patent or license or group of related patents or licenses as critical or essential to our business as a whole. In general, we depend on our technological capabilities and the application of know-how rather than patents and licenses in the conduct of our operations.

EMPLOYEES

We had approximately 60,910 regular full-time and part-time employees as of December 31, 2019, which includes approximately 40,390 employees of our Retail segment.

Approximately 4,650 of our employees are covered by collective bargaining agreements. Of these employees, approximately 190 employees at our St. Paul Park refinery are covered by a collective bargaining agreement scheduled to expire on December 31, 2020. Approximately 280 employees at our El Paso refinery are covered by a collective bargaining agreement scheduled to expire in April 2021. Approximately 3,425 employees at our Anacortes, Canton, Catlettsburg, Galveston Bay, Los Angeles, Mandan, Martinez and Salt Lake City refineries are covered by collective bargaining agreements that are due to expire in early 2022. The remaining 750 hourly represented employees are covered by collective bargaining agreements with expiration dates ranging from 2021 to 2024.

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Information about our Executive and Corporate Officers

The executive and corporate officers of MPC are as follows:

Name	Age as of February 1, 2020	Position with MPC
Gary R. Heminger	66	Chairman and Chief Executive Officer
Donald C. Templin	56	Executive Vice President and Chief Financial Officer
Timothy T. Griffith	50	President, Speedway LLC
Michael J. Hennigan	60	MPLX President and Chief Executive Officer
Raymond L. Brooks	59	Executive Vice President, Refining
Glenn M. Plumby*	60	Executive Vice President and Chief Operating Officer, Speedway LLC
Suzanne Gagle	54	General Counsel
Fiona C. Laird*	58	Chief Human Resources Officer
C. Tracy Case*	59	Senior Vice President, Western Refining Operations
Richard A. Hernandez*	60	Senior Vice President, Eastern Refining Operations
Rick D. Hessling*	53	Senior Vice President, Crude Oil Supply and Logistics
Brian K. Partee*	46	Senior Vice President, Marketing
David R. Sauber*	56	Senior Vice President, Labor Relations, Operations, Health and Administrative Services
David L. Whikehart*	60	Senior Vice President, Light Products, Supply and Logistics
Molly R. Benson*	53	Vice President, Chief Securities, Governance & Compliance Officer and Corporate Secretary
David R. Heppner*	53	Vice President, Commercial and Business Development
Thomas Kaczynski	58	Vice President, Finance and Treasurer
Kristina A. Kazarian*	37	Vice President, Investor Relations
D. Rick Linhardt*	61	Vice President, Tax
John J. Quaid	48	Vice President and Controller, Principal Accounting Officer
Karma M. Thomson*	52	Vice President, Corporate Affairs
Donald W. Wehrly*	60	Vice President and Chief Information Officer
James R. Wilkins*	53	Vice President, Environment, Safety and Security

* Corporate officer.

Mr. Heminger is Chairman of the Board and Chief Executive Officer. He has served as the Chairman of the Board since April 2016 and as Chief Executive Officer since June 2011. Mr. Heminger also served as President from July 2011 until June 2017. He has served as MPLX's Chairman of the Board since June 2012 and as Chief Executive Officer from June 2012 through October 2019. Mr. Heminger began his career with Marathon in 1975 and has served in roles in finance and administration, auditing, marketing and commercial, and business development, including as President of Marathon Pipe Line Company; Manager, Business Development and Joint Interest of Marathon Oil Company; and Vice President and Senior Vice President, Business Development, Marathon Ashland Petroleum LLC. In 2001, he was named Executive Vice President, Supply, Transportation and Marketing, and was appointed President of Marathon Petroleum Company LLC and Executive Vice President-Downstream of Marathon Oil Corporation later that year. Mr. Heminger has announced his plans to retire as Chairman of the Board and Chief Executive Officer effective April 29, 2020. He will also retire from MPLX's board of directors on that date.

Mr. Templin was appointed Executive Vice President and Chief Financial Officer effective July 2019. Prior to this appointment, he served as President, Refining, Marketing and Supply beginning in October 2018, President beginning in July 2017, Executive Vice President of MPC and President of MPLX beginning in January 2016, Executive Vice President, Supply, Transportation and Marketing beginning in March 2015, Vice President and Chief Financial Officer of MPLX beginning in 2012, and Senior Vice President and Chief Financial Officer of MPC beginning in June 2011.

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Mr. Griffith was appointed President of Speedway LLC effective July 2019. Prior to this appointment, he served as Senior Vice President and Chief Financial Officer beginning in March 2015, Vice President, Finance and Investor Relations, and Treasurer beginning in January 2014, and Vice President of Finance and Treasurer beginning in August 2011.

Mr. Hennigan was appointed Chief Executive Officer of MPLX effective November 2019 and has served as President since June 2017. Before joining MPLX, Mr. Hennigan was President, Crude, NGL and Refined Products of the general partner of Energy Transfer Partners L.P., an energy service provider. He was President and Chief Executive Officer of Sunoco Logistics Partners L.P., an oil and gas transportation, terminalling and storage company, from 2012 to 2017, President and Chief Operating Officer beginning in 2010, and Vice President, Business Development beginning in 2009.

Mr. Brooks was appointed Executive Vice President, Refining effective October 2018. Prior to this appointment, he served as Senior Vice President, Refining beginning in March 2016, General Manager of the Galveston Bay refinery beginning in February 2013, General Manager of the Robinson refinery beginning in 2010, and General Manager of the St. Paul Park, Minnesota refinery beginning in 2006.

Mr. Plummy was appointed Executive Vice President and Chief Operating Officer, Speedway LLC effective August 2019. Prior to this appointment, he served as Senior Vice President and Chief Operating Officer, Speedway LLC beginning in January 2018, Senior Vice President of Operations, Speedway LLC beginning in September 2013, and Vice President of Operations, Speedway LLC beginning in December 2010.

Ms. Gagle was appointed General Counsel effective March 2016. Prior to this appointment, she served as Assistant General Counsel, Litigation and Human Resources beginning in April 2011, Senior Group Counsel, Downstream Operations beginning in 2010, and Group Counsel, Litigation beginning in 2003.

Ms. Laird was appointed Chief Human Resources Officer effective October 2018. Prior to this appointment, she was Chief Human Resources Officer at Andeavor beginning in February 2018. Before joining Andeavor, Ms. Laird was Chief Human Resources and Communications Officer for Newell Brands, a global consumer goods company, beginning in May 2016 and Executive Vice President, Human Resources for Unilever, a global consumer goods company, beginning in July 2011.

Mr. Case was appointed Senior Vice President, Western Refining Operations effective October 2018. Prior to this appointment, he served as General Manager of the Garyville refinery beginning in December 2014, and General Manager of the Detroit refinery beginning in June 2010.

Mr. Hernandez was appointed Senior Vice President, Eastern Refining Operations effective October 2018. Prior to this appointment, he served as General Manager of the Galveston Bay refinery beginning in February 2016, and General Manager of the Catlettsburg refinery beginning in June 2013.

Mr. Hessling was appointed Senior Vice President, Crude Oil Supply and Logistics effective October 2018. Prior to this appointment, he served as Manager, Crude Oil & Natural Gas Supply and Trading beginning in September 2014, and Crude Oil Logistics & Analysis Manager beginning in July 2011.

Mr. Partee was appointed Senior Vice President, Marketing effective October 2018. Prior to this appointment, he served as Vice President, Business Development beginning in February 2018, Director of Business Development beginning in January 2017, Manager of Crude Oil Logistics beginning in September 2014, and Vice President, Business Development and Franchise at Speedway beginning in November 2012.

Mr. Sauber was appointed Senior Vice President, Labor Relations, Operations, Health and Administrative Services effective October 2018. Prior to this appointment, he served as Senior Vice President, Human Resources, Health and Administrative Services beginning in January 2018, and Vice President, Human Resources and Labor Relations beginning in February 2017. Before joining MPC, Mr. Sauber was Vice President, Human Resources Policy, Benefits and Services of Shell Oil Company, a global energy and petrochemical company, beginning in 2013.

Mr. Whikehart was appointed Senior Vice President, Light Products, Supply and Logistics effective October 2018. Prior to this appointment, he served as Vice President, Environment, Safety and Corporate Affairs beginning in February 2016, Vice President, Corporate Planning, Government & Public Affairs beginning in January 2016, and Director, Product Supply and Optimization beginning in March 2011.

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Ms. Benson was appointed Vice President, Chief Compliance Officer and Corporate Secretary effective March 2016 and as Chief Securities and Governance Officer effective June 2018. Prior to her 2016 appointment, she served as Assistant General Counsel, Corporate and Finance beginning in April 2012.

Mr. Heppner was appointed Vice President, Commercial and Business Development effective October 2018. Prior to this appointment, he served as Senior Vice President of Engineering Services and Corporate Support of Speedway LLC beginning in September 2014, and Director, Wholesale Marketing beginning in January 2010.

Mr. Kaczynski was appointed Vice President, Finance and Treasurer effective August 2015. Prior to this appointment, he was Vice President and Treasurer of Goodyear Tire and Rubber Company, one of the world's largest tire manufacturers, beginning in 2014, and Vice President, Investor Relations beginning in 2013.

Ms. Kazarian was appointed Vice President, Investor Relations effective April 2018. Prior to this appointment, she was Managing Director and head of the MLP, Midstream and Refining Equity Research teams at Credit Suisse, a global investment bank and financial services company, beginning in September 2017. Previously, Ms. Kazarian was Managing Director of MLP, Midstream and Natural Gas Equity Research at Deutsche Bank, a global investment bank and financial services company, beginning in September 2014, and an analyst specializing on various energy industry subsectors with Fidelity Management & Research Company, a privately held investment manager, beginning in 2005.

Mr. Linhardt was appointed Vice President, Tax effective February 2018. Prior to this appointment, he served as Director of Tax beginning in June 2017, and Manager of Tax Compliance beginning in May 2013.

Mr. Quaid was appointed Vice President and Controller effective June 2014. Prior to this appointment, he was Vice President of Iron Ore at United States Steel Corporation, an integrated steel producer, beginning in January 2014, and Vice President and Treasurer beginning in August 2011.

Ms. Thomson was appointed Vice President, Corporate Affairs effective October 2018. Prior to this appointment, she was Vice President of Andeavor Logistics beginning in June 2017, and Andeavor's Vice President, Salt Lake City refinery beginning in October 2012.

Mr. Wehrly was appointed Vice President and Chief Information Officer effective June 2011.

Mr. Wilkins was appointed Vice President, Environment, Safety and Security effective October 2018. Prior to this appointment, he served as Director, Environment, Safety, Security and Product Quality beginning in February 2016, and Director, Refining Environmental, Safety, Security and Process Safety Management beginning in June 2013.

Available Information

General information about MPC, including Corporate Governance Principles and Charters for the Audit Committee, Compensation Committee, Corporate Governance and Nominating Committee and Sustainability Committee, can be found at www.marathonpetroleum.com by selecting "Investors" under "Corporate Governance" and "Board of Directors". In addition, our Code of Business Conduct and Code of Ethics for Senior Financial Officers are also available in this same location. We will post on our website any amendments to, or waivers from, either of our codes requiring disclosure under applicable rules within four business days of the amendment or waiver.

MPC uses its website, www.marathonpetroleum.com, as a channel for routine distribution of important information, including news releases, analyst presentations, financial information and market data. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as any amendments and exhibits to those reports, are available free of charge through our website as soon as reasonably practicable after the reports are filed or furnished with the SEC. These documents are also available in hard copy, free of charge, by contacting our Investor Relations office. In addition, our website allows investors and other interested persons to sign up to automatically receive email alerts when we post news releases and financial information on our website. Information contained on our website is not incorporated into this Annual Report on Form 10-K or other securities filings.

ITEM 1A. RISK FACTORS

You should carefully consider each of the following risks and all the other information contained in this Annual Report on Form 10-K in evaluating us and our common stock. Some of these risks relate principally to our business and the industry in which we operate, while others relate to the ownership of our common stock.

Our business, financial condition, results of operations and cash flows could be materially and adversely affected by these risks, and, as a result, the trading price of our common stock could decline.

RISKS RELATING TO OUR BUSINESS

Our financial results are affected by volatile refining margins, which are dependent on factors beyond our control.

Our operating results, cash flows, future rate of growth, the carrying value of our assets and our ability to execute share repurchases and continue the payment of our base dividend are highly dependent on the margins we realize on our refined products. Historically, refining and marketing margins have been volatile, and we believe they will continue to be volatile. Our margins from the sale of gasoline and other refined products are influenced by a number of conditions, including the price of crude oil. The price of crude oil and the price at which we can sell our refined products may fluctuate independently due to a variety of regional and global market factors that are beyond our control, including:

- worldwide and domestic supplies of and demand for crude oil and refined products;
- transportation infrastructure availability, local market conditions and operation levels of other refineries in our markets;
- natural gas and electricity supply costs incurred by refineries;
- political instability, threatened or actual terrorist incidents, armed conflict or other global political conditions;
- local weather conditions;
- seasonality of demand in our marketing areas due to increased highway traffic in the spring and summer months;
- natural disasters such as hurricanes and tornadoes;
- domestic and foreign governmental regulations and taxes; and
- local, regional, national and worldwide economic conditions.

Some of these factors can vary by region and may change quickly, adding to market volatility, while others may have longer-term effects. The longer-term effects of these and other factors on refining and marketing margins are uncertain. We purchase our crude oil and other refinery feedstocks weeks before we refine them and sell the refined products. Price level changes during the period between purchasing feedstocks and selling the refined products from these feedstocks can have a significant effect on our financial results. We also purchase refined products manufactured by others for resale to our customers. Price changes during the periods between purchasing and reselling those refined products can have a material and adverse effect on our business, financial condition, results of operations and cash flows.

Lower refining and marketing margins may lead us to reduce the amount of refined products we produce, which may reduce our revenues, income from operations and cash flows. Significant reductions in refining and marketing margins could require us to reduce our capital expenditures, impair the carrying value of our assets (such as property, plant and equipment, inventory or goodwill), and decrease or eliminate our share repurchase activity and our base dividend.

Legal, technological, political and scientific developments regarding emissions and fuel efficiency may decrease demand for transportation fuels.

Developments aimed at reducing greenhouse gas emissions may decrease the demand or increase the cost for our transportation fuels. Attitudes toward these products and their relationship to the environment may significantly affect our effectiveness in marketing our products. Government efforts to steer the public toward non-petroleum-based fuel dependent modes of transportation may foster a negative perception toward transportation fuels or increase costs for our products, thus affecting the public's attitude toward our major product. Advanced technology and increased use of vehicles that do not use petroleum-based transportation

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fuels or that are powered by hybrid engines would reduce demand for motor fuel. We may also incur increased costs for our products, which we may not be able to pass along to our customers. These developments could potentially have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our operations are subject to business interruptions and casualty losses. Failure to manage risks associated with business interruptions could adversely impact our operations, financial condition, results of operations and cash flows.

Our operations are subject to business interruptions such as scheduled refinery turnarounds, unplanned maintenance or unplanned events such as explosions, fires, refinery or pipeline releases or other incidents, power outages, severe weather, labor disputes, or other natural or man-made disasters, such as acts of terrorism.

Explosions, fires, refinery or pipeline releases or other incidents involving our assets or operations may result in serious personal injury or loss of human life, significant damage to property and equipment, environmental pollution, impairment of operations and substantial losses to us. Damages resulting from an incident involving any of our assets or operations may result in our being named as a defendant in one or more lawsuits asserting potentially substantial claims or in our being assessed potentially substantial fines by governmental authorities.

In addition, we operate in and adjacent to environmentally sensitive waters where tanker, pipeline, rail car and refined product transportation and storage operations are closely regulated by federal, state and local agencies and monitored by environmental interest groups. Certain of our refineries receive crude oil and other feedstocks by tanker or barge. Transportation and storage of crude oil, other feedstocks and refined products over and adjacent to water involves inherent risk and subjects us to the provisions of the OPA-90 and state laws in U.S. coastal and Great Lakes states and states bordering inland waterways on which we operate, as well as international laws in the jurisdictions in which we operate. If we are unable to promptly and adequately contain any accident or discharge involving tankers, pipelines, rail cars or above ground storage tanks transporting or storing crude oil, other feedstocks or refined products, we may be subject to substantial liability. In addition, the service providers we have contracted to aid us in a discharge response may be unavailable due to weather conditions, governmental regulations or other local or global events. International, federal or state rulings could divert our response resources to other global events.

We do not insure against all potential losses, and, therefore, our business, financial condition, results of operations and cash flows could be adversely affected by unexpected liabilities and increased costs.

We maintain insurance coverage in amounts we believe to be prudent against many, but not all, potential liabilities arising from operating hazards. Uninsured liabilities arising from operating hazards, including explosions, fires, refinery or pipeline releases, cybersecurity breaches or other incidents involving our assets or operations, could reduce the funds available to us for capital and investment spending and could have a material adverse effect on our business, financial condition, results of operations and cash flows. Marine vessel charter agreements may not provide complete indemnity for oil spills, and any marine charterer's liability insurance we carry may not cover all losses. Historically, we also have maintained insurance coverage for physical damage and resulting business interruption to our major facilities, with significant self-insured retentions. In the future, we may not be able to maintain insurance of the types and amounts we desire at reasonable rates.

We rely on the performance of our information technology systems, and the interruption or failure of any information technology system, including an interruption or failure due to a cybersecurity breach, could have an adverse effect on our business, financial condition, results of operations and cash flows.

We are heavily dependent on our information technology systems, including our network infrastructure and cloud applications, for the safe and effective operation of our business. We rely on such systems to process, transmit and store electronic information, including financial records and personally identifiable information such as employee, customer, investor and payroll data, and to manage or support a variety of business processes, including our supply chain, pipeline operations, gathering and processing operations, retail sales, credit card payments and authorizations at our retail outlets, financial transactions, banking and numerous other processes and transactions. Our systems and infrastructure are subject to damage or interruption from a number of potential sources including natural disasters, malware, power failures, cyber-attacks and other events. We also face various other cybersecurity threats from criminal hackers, state-sponsored intrusion, industrial espionage and employee malfeasance, including threats to gain unauthorized access to sensitive information or to render data or systems unusable. Certain vendors have access to sensitive information, including personally

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identifiable customer, investor and employee data and a breakdown of their technology systems or infrastructure as a result of a cyber-attack or otherwise could result in unauthorized disclosure of such information.

Our cybersecurity protections, infrastructure protection technologies, disaster recovery plans and employee training may not be sufficient to defend us against all unauthorized attempts to access our information. We have been and may in the future be subject to attempts to gain unauthorized access to our computer network and systems. To date, the impacts of prior events have not had a material adverse effect on us.

Any cybersecurity incident could result in theft, destruction, loss, misappropriation or release of confidential financial and other data, intellectual property, customer awards or loyalty points; give rise to remediation or other expenses; expose us to liability under federal and state laws; reduce our customers' willingness to do business with us; disrupt the services we provide to customers; and subject us to litigation and legal liability under federal and state laws. Any of such results could have an adverse effect on our reputation, business, financial condition, results of operations and cash flows.

Competition in our industry is intense, and very aggressive competition could adversely impact our business.

We compete with a broad range of refining and marketing companies, including certain multinational oil companies. Competitors with integrated operations with exploration and production resources and broader access to resources may be better able to withstand volatile market conditions and to bear the risks inherent in the refining industry. For example, competitors that engage in exploration and production of crude oil may be better positioned to withstand periods of depressed refining margins or feedstock shortages.

We also face strong competition in the market for the retail sale of transportation fuels and merchandise. Our competitors include outlets owned or operated by fully integrated major oil companies or their dealers or jobbers, and other well-recognized national or regional retail outlets, often selling transportation fuels and merchandise at very competitive prices. Several non-traditional transportation fuel retailers such as supermarkets, club stores and mass merchants are in the retail transportation fuels business. These non-traditional transportation fuels retailers have obtained a significant share of the transportation fuels market and we expect their market share to grow. Because of their diversity, integration of operations, experienced management and significant financial resources, these companies may be better able to withstand volatile market conditions or levels of low or no profitability in the retail segment of the market. In addition, these retailers may use promotional pricing or discounts, both at the pump and in the store, to encourage in-store merchandise sales. These activities by our competitors could pressure us to offer similar discounts, adversely affecting our profit margins. Additionally, the loss of market share by our convenience stores to these and other retailers relating to either transportation fuels or merchandise could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We are subject to interruptions of supply and increased costs as a result of our reliance on third-party transportation of crude oil and refined products.

We utilize the services of third parties to transport crude oil and refined products to and from our refineries. In addition to our own operational risks, we could experience interruptions of supply or increases in costs to deliver refined products to market if the ability of the pipelines, railways or vessels to transport crude oil or refined products is disrupted because of weather events, accidents, governmental regulations or third-party actions. In particular, pipelines or railroads provide a nearly exclusive form of transportation of crude oil to, or refined products from, some of our refineries. A prolonged interruption, material reduction or cessation of service of such a pipeline or railway, whether due to private party or governmental action or other reason, or any other prolonged disruption of the ability of the trucks, pipelines, railways or vessels to transport crude oil or refined products to or from one or more of our refineries, could have a material adverse effect on our business, financial condition, results of operations and cash flows.

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

We conduct some of our operations through joint ventures in which we share control over certain economic and business interests with our joint venture partners. Our joint venture partners may have economic, business or legal interests or goals that are inconsistent with our goals and interests or may be unable to meet their obligations. Failure by us, or an entity in which we have an interest, to adequately manage the risks associated with any acquisitions or joint ventures could have a material adverse effect on the financial condition or results of operations of our joint ventures and adversely affect our business, financial condition, results of operations and cash flows.

Our inventory risk management activities may result in substantial derivative variability or losses.

We enter into derivative transactions to manage the risks from changes in the prices of crude oil, refined products, natural gas and other feedstocks associated with our physical inventories and future production, and these transactions may result in substantial derivatives variability or losses, which could increase the volatility of our earnings. We manage price risk on inventories above or below our target levels to minimize the impact commodity price fluctuations have on our earnings and cash flows. Consequently, our results may fluctuate significantly from one reporting period to the next depending on commodity price fluctuations and our relative physical inventory positions. These transactions may also expose us to the risk of financial loss. For example, if our production is less than we anticipated at the time we entered into a hedge agreement or if a counterparty to our hedge agreement fails to perform its obligations under its agreement, we may suffer a financial loss.

We have significant debt obligations; therefore, our business, financial condition, results of operations and cash flows could be harmed by a deterioration of our credit profile, a decrease in debt capacity or unsecured commercial credit available to us, or by factors adversely affecting credit markets generally.

At December 31, 2019, our total debt obligations for borrowed money and finance lease obligations were \$29.28 billion, including \$20.12 billion of obligations of MPLX and its subsidiaries. We may incur substantial additional debt obligations in the future.

Our indebtedness may impose various restrictions and covenants on us that could have material adverse consequences, including:

- increasing our vulnerability to changing economic, regulatory and industry conditions;
- limiting our ability to compete and our flexibility in planning for, or reacting to, changes in our business and the industry;
- limiting our ability to pay dividends to our stockholders;
- limiting our ability to borrow additional funds; and
- requiring us to dedicate a substantial portion of our cash flow from operations to payments on our debt, thereby reducing funds available for working capital, capital expenditures, acquisitions, share repurchases, dividends and other purposes.

A decrease in our debt or commercial credit capacity, including unsecured credit extended by third-party suppliers, or a deterioration in our credit profile could increase our costs of borrowing money and limit our access to the capital markets and commercial credit. Our credit rating is determined by independent credit rating agencies. We cannot provide assurance that any of our credit ratings will remain in effect for any given period of time or that a rating will not be lowered or withdrawn entirely by a rating agency if, in its judgment, circumstances so warrant. On November 1, 2019, Moody's announced it had changed its outlook for MPC's and MPLX's credit ratings from stable to negative following the announcement of the planned Speedway spinoff and Midstream review. The planned Speedway spinoff and Midstream review could be factors causing or contributing to a future determination by one or more of the rating agencies to lower MPC's or MPLX's credit rating. Any changes in our credit capacity or credit profile could materially and adversely affect our business, financial condition, results of operations and cash flows.

We have a trade receivables securitization facility that provides liquidity of up to \$750 million depending on the amount of eligible domestic trade accounts receivables. In periods of lower prices, we may not have sufficient eligible accounts receivables to support full availability of this facility.

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Uncertainty relating to the calculation of LIBOR and other reference rates and their potential discontinuance may adversely affect interest expense related to our outstanding debt.

National and international regulators and law enforcement agencies have conducted investigations into a number of rates or indices, which are deemed to be “reference rates.” Actions by such regulators and law enforcement agencies may result in changes to the manner in which certain reference rates are determined, their discontinuance or the establishment of alternative reference rates. In particular, it appears highly likely that LIBOR will be discontinued or modified by the end of 2021.

At this time, it is not possible to predict the effect that these developments, any discontinuance, modification or other reforms to LIBOR or any other reference rate, or the establishment of alternative reference rates, may have on LIBOR, other benchmarks or floating rate indebtedness. Uncertainty as to the nature of such potential discontinuance, modification, alternative reference rates or other reforms may materially adversely affect the trading market for securities linked to such benchmarks. Furthermore, the use of alternative reference rates or other reforms could cause the market value of, the applicable interest rate on and the amount of interest paid on our floating rate indebtedness to be materially different than expected and could materially adversely impact our ability to refinance such floating rate indebtedness or raise future indebtedness on a cost effective basis.

Historic or current operations could subject us to significant legal liability or restrict our ability to operate.

We currently are defending litigation and anticipate we will be required to defend new litigation in the future. Our operations, including those of MPLX, and those of our predecessors could expose us to litigation and civil claims by private plaintiffs for alleged damages related to contamination of the environment or personal injuries caused by releases of hazardous substances from our facilities, products liability, consumer credit or privacy laws, product pricing or antitrust laws or any other laws or regulations that apply to our operations. While an adverse outcome in most litigation matters would not be expected to be material to us, in class-action litigation, large classes of plaintiffs may allege damages relating to extended periods of time or other alleged facts and circumstances that could increase the amount of potential damages. Attorneys general and other government officials may pursue litigation in which they seek to recover civil damages from companies on behalf of a state or its citizens for a variety of claims, including violation of consumer protection and product pricing laws or natural resources damages. We are defending litigation of that type and anticipate that we will be required to defend new litigation of that type in the future. If we are not able to successfully defend such litigation, it may result in liability to our company that could materially and adversely affect our business, financial condition, results of operations and cash flows. In addition to substantial liability, plaintiffs in litigation may also seek injunctive relief which, if imposed, could have a material adverse effect on our future business, financial condition, results of operations and cash flows.

A portion of our workforce is unionized, and we may face labor disruptions that could materially and adversely affect our business, financial condition, results of operations and cash flows.

Approximately 4,650 of our employees are covered by collective bargaining agreements. Of these employees, approximately 190 employees at our St. Paul Park refinery are covered by a collective bargaining agreement scheduled to expire on December 31, 2020. Approximately 280 employees at our El Paso refinery are covered by a collective bargaining agreement scheduled to expire in April 2021. Approximately 3,425 employees at our Anacortes, Canton, Catlettsburg, Galveston Bay, Los Angeles, Mandan, Martinez and Salt Lake City refineries are covered by collective bargaining agreements that are due to expire in early 2022. The remaining 750 hourly represented employees are covered by collective bargaining agreements with expiration dates ranging from 2021 to 2024. These contracts may be renewed at an increased cost to us. In addition, we have experienced in the past, and may experience in the future, work stoppages as a result of labor disagreements. Any prolonged work stoppages disrupting operations could have a material adverse effect on our business, financial condition, results of operations and cash flows.

In addition, California requires refinery owners to pay prevailing wages to contract craft workers and restricts refiners’ ability to hire qualified employees to a limited pool of applicants. Legislation or changes in regulations could result in labor shortages, higher labor costs, and an increased risk that contract employees become joint employees, which could trigger bargaining issues, employment discrimination liability issues as well as wage and benefit consequences, especially during critical maintenance and construction periods.

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One of our subsidiaries acts as the general partner of a master limited partnership, which may involve a greater exposure to certain legal liabilities than existed under our historic business operations.

One of our subsidiaries acts as the general partner of MPLX, a master limited partnership. Our control of the general partner of MPLX may increase the possibility of claims of breach of fiduciary duties, including claims of conflicts of interest. Any liability resulting from such claims could have a material adverse effect on our future business, financial condition, results of operations and cash flows.

If foreign investment in us or MPLX exceeds certain levels, MPLX could be prohibited from operating inland river vessels, which could materially and adversely affect our business, financial condition, results of operations and cash flows.

The Shipping Act of 1916 and Merchant Marine Act of 1920 (collectively, the “Maritime Laws”), generally require that vessels engaged in U.S. coastwise trade be owned by U.S. citizens. Among other requirements to establish citizenship, entities that own such vessels must be owned at least 75 percent by U.S. citizens. If we fail to maintain compliance with the Maritime Laws, MPLX would be prohibited from operating vessels in the U.S. inland waters. Such a prohibition could materially and adversely affect our business, financial condition, results of operations and cash flows.

We are subject to certain continuing contingent liabilities of Marathon Oil pursuant to agreements we entered into in connection with our spinoff from Marathon Oil, which could materially and adversely affect our business, financial condition, results of operations and cash flows.

Although our spinoff from Marathon Oil occurred in mid-2011, certain liabilities of Marathon Oil could become our obligations. For example, we entered into a separation and distribution agreement with Marathon Oil that includes provisions governing the relationship between our company and Marathon Oil following our spinoff. Among other things, the separation and distribution agreement provides for indemnification obligations designed to make us financially responsible for substantially all liabilities that may exist relating to our downstream business activities, whether incurred prior to or after our spinoff, as well as certain obligations of Marathon Oil assumed by us. Our obligations to indemnify Marathon Oil under the circumstances set forth in the separation and distribution agreement could subject us to substantial liabilities. Marathon Oil also agreed to indemnify us for certain liabilities. However, third parties could seek to hold us responsible for any of the liabilities retained by Marathon Oil, and there can be no assurance that the indemnity from Marathon Oil will be sufficient to protect us against the full amount of such liabilities, that Marathon Oil will be able to fully satisfy its indemnification obligations or that Marathon Oil’s insurers will cover us for liabilities associated with occurrences prior to our spinoff. Moreover, even if we ultimately succeed in recovering from Marathon Oil or its insurers any amounts for which we are held liable, we may be temporarily required to bear these losses ourselves. Such liabilities could have a material adverse effect on our business, financial condition, results of operation and cash flows.

A significant decrease in oil and natural gas production in MPLX’s areas of operation, whether due to sustained declines in oil, natural gas and NGL prices, natural declines in well production, or otherwise, may adversely affect MPLX’s business, results of operations and financial condition, and could reduce its ability to make distributions to us.

A significant portion of MPLX’s operations are dependent on the continued availability of natural gas and crude oil production. The production from oil and natural gas reserves and wells owned by its producer customers will naturally decline over time, which means that MPLX’s cash flows associated with these wells will also decline over time. To maintain or increase throughput levels and the utilization rate of MPLX’s facilities, MPLX must continually obtain new oil, natural gas, NGL and refined product supplies, which depend in part on the level of successful drilling activity near its facilities, its ability to compete for volumes from successful new wells and its ability to expand its system capacity as needed.

We have no control over the level of drilling activity in the areas of MPLX’s operations, the amount of reserves associated with the wells or the rate at which production from a well will decline. In addition, we have no control over producers or their production decisions, which are affected by, among other things, prevailing and projected energy prices, drilling costs per Mcf or barrel, demand for hydrocarbons, operational challenges, access to downstream markets, the level of reserves, geological considerations, governmental regulations and the availability and cost of capital. Because of these factors, even if oil or natural gas reserves are known to exist in areas served by MPLX assets, producers may choose not to develop those reserves. Reductions in

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exploration or production activity in MPLX's areas of operations could lead to reduced throughput on its pipelines and utilization rates of its facilities.

Decreases in energy prices can decrease drilling activity, production rates and investments by third parties in the development of new oil and natural gas reserves. The prices for oil, natural gas and NGLs depend upon factors beyond our control, including global and local demand, production levels, changes in interstate pipeline gas quality specifications, imports and exports, seasonality and weather conditions, economic and political conditions domestically and internationally and governmental regulations. Sustained periods of low prices could result in producers also significantly curtailing or limiting their oil and gas drilling operations which could substantially delay the production and delivery of volumes of oil, natural gas and NGLs to MPLX's facilities and adversely affect their revenues and cash available for distribution to us. This impact may also be exacerbated due to the extent of MPLX's commodity-based contracts, which are more directly impacted by changes in natural gas and NGL prices than its fee-based contracts due to frac spread exposure and may result in operating losses when natural gas becomes more expensive on a Btu equivalent basis than NGL products. In addition, the purchase and resale of natural gas and NGLs in the ordinary course exposes our Midstream operations to volatility in natural gas or NGL prices due to the potential difference in the time of the purchases and sales and the potential difference in the price associated with each transaction, and direct exposure may also occur naturally as a result of production processes. Also, the significant volatility in natural gas, NGL and oil prices could adversely impact MPLX's unit price, thereby increasing its distribution yield and cost of capital. Such impacts could adversely impact MPLX's ability to execute its long-term organic growth projects, satisfy obligations to its customers and make distributions to unitholders at intended levels, and may also result in non-cash impairments of long-lived assets or goodwill or other-than-temporary non-cash impairments of our equity method investments.

Significant stockholders may attempt to effect changes at our company or acquire control over our company, which could impact the pursuit of business strategies and adversely affect our results of operations and financial condition.

Our stockholders may from time to time engage in proxy solicitations, advance stockholder proposals or otherwise attempt to effect changes or acquire control over our company. Campaigns by stockholders to effect changes at publicly traded companies are sometimes led by investors seeking to increase short-term stockholder value through actions such as financial restructuring, increased debt, special dividends, stock repurchases or sales of assets or the entire company. Responding to proxy contests and other actions by activist stockholders can be costly and time-consuming and could divert the attention of our board of directors and senior management from the management of our operations and the pursuit of our business strategies. As a result, stockholder campaigns could adversely affect our results of operations and financial condition.

Our operations could be disrupted if we are unable to maintain or obtain real property rights required for our business.

We do not own all of the land on which certain of our assets are located, particularly our midstream assets, but rather obtain the rights to construct and operate such assets on land owned by third parties and governmental agencies for a specific period of time. Therefore, we are subject to the possibility of more burdensome terms and increased costs to retain necessary land use if our leases, rights-of-way or other property rights lapse, terminate or are reduced or it is determined that we do not have valid leases, rights-of-way or other property rights. Any loss of or reduction in these rights, including loss or reduction due to legal, governmental or other actions or difficulty renewing leases, right-of-way agreements or permits on satisfactory terms or at all, could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Certain of our facilities are located on Native American tribal lands and are subject to various federal and tribal approvals and regulations, which may increase our costs and delay or prevent our efforts to conduct planned operations.

Various federal agencies within the U.S. Department of the Interior, particularly the Bureau of Indian Affairs, Bureau of Land Management, and the Office of Natural Resources Revenue, along with each Native American tribe, regulate natural gas and oil operations on Native American tribal lands, including drilling and production requirements and environmental standards. In addition, each Native American tribe is a sovereign nation having the right to enforce laws and regulations and to grant approvals independent from federal, state and local statutes and regulations. These tribal laws and regulations include various taxes, fees, requirements to employ Native American tribal members and other conditions that apply to operators and contractors

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conducting operations on Native American tribal lands. Persons conducting operations on tribal lands are generally subject to the Native American tribal court system. In addition, if our relationships with any of the relevant Native American tribes were to deteriorate, we could face significant risks to our ability to continue operations on Native American tribal lands. One or more of these factors may increase our cost of doing business on Native American tribal lands and impact the viability of, or prevent or delay our ability to conduct operations on such lands.

RISKS RELATING TO STRATEGIC TRANSACTIONS

Our proposed spinoff of Speedway may not be completed on the currently contemplated timeline or at all and may not achieve the intended benefits.

On October 31, 2019, we announced our intention to separate Speedway into an independent, publicly traded company by the end of 2020. This transaction is subject to certain conditions, including final approval by our board of directors, receipt of customary assurances regarding the intended tax-free nature of the transaction and the filing and effectiveness of a registration statement with the SEC. Unanticipated developments, including possible delays in obtaining various regulatory approvals or clearances, uncertainty of the financial markets and challenges in establishing infrastructure or processes, could delay or prevent the proposed spinoff or cause the proposed spinoff to occur on terms or conditions that are less favorable or different than expected. Even if the spinoff is completed, we may not realize some or all of the anticipated benefits from the spinoff. Expenses incurred to accomplish the proposed spinoff may be significantly higher than what we currently anticipate. Executing the proposed spinoff also requires significant time and attention from management, which could distract them from other tasks in operating our business. Following the proposed spinoff, the combined value of the common stock of the two publicly traded companies may not be equal to or greater than what the value of our common stock would have been had the proposed spinoff not occurred. If the proposed Speedway spinoff is completed, our diversification of revenue sources will diminish due to the separation of the Speedway business, and our business, financial condition, results of operations and cash flows may be subject to increased volatility as a result.

If the proposed spinoff of Speedway were to fail to qualify as a transaction that is generally tax-free for U.S. federal income tax purposes, MPC and MPC shareholders could be subject to significant tax liabilities.

The Speedway spinoff is subject to the receipt of customary assurances regarding the intended tax-free nature of the transactions for U.S. federal income tax purposes. Notwithstanding receipt of an Internal Revenue Service (“IRS”) private letter ruling and/or the opinion(s) of tax advisors, the IRS could determine that the distribution and/or certain related transactions should be treated as taxable transactions for U.S. federal income tax purposes if it determines that any of the representations, assumptions, or undertakings upon which the IRS private letter ruling or the opinion(s) of tax advisors were based are inaccurate or have not been complied with. In addition, an IRS private letter ruling would not address all of the issues that are relevant to determining whether the distribution, together with certain related transactions, qualifies as a transaction that is generally tax-free for U.S. federal income tax purposes. The opinion(s) of tax advisors represent the judgment of such tax advisors and are not binding on the IRS or any court, and the IRS or a court may disagree with the conclusions in the opinion(s) of tax advisors. Accordingly, notwithstanding receipt by MPC of an IRS private letter ruling and/or the opinion(s) of tax advisors, there can be no assurance that the IRS will not assert that the distribution and/or certain related transactions do not qualify for tax-free treatment for U.S. federal income tax purposes or that a court would not sustain such a challenge. In the event the IRS were to prevail with such challenge, Speedway, as well as MPC and MPC shareholders, could be subject to significant U.S. federal income tax liability.

If the distribution were to fail to qualify as a transaction that is generally tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Internal Revenue Code (the “Code”), in general, for U.S. federal income tax purposes, MPC would recognize taxable gain as if it had sold the Speedway common stock in a taxable sale for its fair market value, and MPC shareholders who receive Speedway common stock in the distribution would be subject to tax as if they had received a taxable distribution equal to the fair market value of such shares. Even if the distribution were to otherwise qualify as a tax-free transaction under Sections 355 and 368(a)(1)(D) of the Code, it may result in taxable gain to MPC (but not its shareholders) under Section 355(e) of the Code if the distribution were deemed to be part of a plan (or series of related transactions) pursuant to which one or more persons acquire, directly or indirectly, shares representing a 50 percent or greater interest (by vote or value) in MPC or Speedway. For this purpose, any acquisitions of MPC or Speedway

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shares within the period beginning two years before the distribution and ending two years after the distribution are presumed to be part of such a plan, although MPC or Speedway may be able to rebut that presumption (including by qualifying for one or more safe harbors under applicable Treasury Regulations). If the IRS were to determine that acquisitions of MPC or Speedway stock, either before or after the distribution, were part of a plan or series of related transactions that included the distribution, such determination could result in significant tax liabilities to MPC.

Our ongoing review of other strategic alternatives for our Midstream business may pose additional risks to our business.

Our board of directors has formed a special committee to evaluate strategies to enhance shareholder value through a review of our Midstream business, which we primarily conduct through MPLX. Our exploration of strategic alternatives, including any uncertainty created by this process, involves a number of risks: significant fluctuations in our stock price could occur in response to developments relating to the strategic review process or market speculation regarding any such developments; we may encounter difficulties in hiring, retaining and motivating key personnel during this process or as a result of uncertainties generated by this process or any developments or actions relating to it; we may incur substantial increases in general and administrative expense associated with increased legal fees and the need to retain and compensate third-party advisors; and we may experience difficulties in preserving the commercially sensitive information that may need to be disclosed to third parties during this process or in connection with an assessment of our strategic alternatives. The strategic review process also requires significant time and attention from management, which could distract them from other tasks in operating our business. There can be no assurance that this process will result in the pursuit or consummation of any strategic transaction. The occurrence of any one or more of the above risks could have a material adverse impact on our business, financial condition, results of operations and cash flows.

Significant acquisitions, if any, in the future will involve the integration of new assets or businesses and present substantial risks that could adversely affect our business, financial conditions, results of operations and cash flows.

Any significant future transactions involving the addition of new assets or businesses will present potential risks, which may include, among others:

- inaccurate assumptions about future synergies, revenues, capital expenditures and operating costs;
- an inability to successfully integrate assets or businesses we acquire;
- a decrease in our liquidity resulting from using a portion of our available cash or borrowing capacity under our revolving credit agreement to finance transactions;
- a significant increase in our interest expense or financial leverage if we incur additional debt to finance transactions;
- the assumption of unknown environmental and other liabilities, losses or costs for which we are not indemnified or for which our indemnity is inadequate;
- the diversion of management's attention from other business concerns; and
- the incurrence of other significant charges, such as impairment of goodwill or other intangible assets, asset devaluation or restructuring charges.

RISKS RELATING TO THE ANDEAVOR ACQUISITION

The Andeavor acquisition may not be accretive, and may be dilutive, to MPC's earnings per share and cash flow from operations per share, which may negatively affect the market price of shares of MPC common stock.

The Andeavor acquisition may not be accretive, and may be dilutive, to MPC's earnings per share and cash flow from operations per share. Earnings per share and cash flow from operations per share in the future are based on preliminary estimates that may materially change. In addition, future events and conditions could decrease or delay any accretion, result in dilution or cause greater dilution than is currently expected.

Any dilution of, or decrease or delay of any accretion to, MPC's earnings per share or cash flow from operations per share could cause the price of MPC's common stock to decline.

MPC has incurred and will continue to incur significant costs in connection with the Andeavor acquisition, which may be in excess of those anticipated by MPC.

MPC has incurred substantial expenses in connection with the Andeavor acquisition. MPC expects to continue to incur a number of non-recurring costs associated with combining the operations of the two companies and achieving desired synergies. These fees and costs have been, and may continue to be, substantial.

Additional unanticipated costs may be incurred in the integration of the two companies' businesses. The elimination of duplicative costs, as well as the realization of other efficiencies related to the integration of the businesses, may not be sufficient to allow MPC to offset integration-related costs over time. These integration costs, as well as other unanticipated costs and expenses, could materially and adversely affect MPC's results of operations, financial position and cash flows.

MPC's results may suffer if it does not effectively manage its expanded operations following the Andeavor acquisition.

MPC's success depends, in part, on its ability to manage its expansion following the Andeavor acquisition, which poses numerous risks and uncertainties, including the need to integrate the operations and business of Andeavor into its existing business in an efficient and timely manner, to combine systems and management controls and to integrate relationships with customers, vendors and business partners.

MPC may fail to realize all of the anticipated benefits of the Andeavor acquisition.

The success of the Andeavor acquisition depends, in part, on MPC's ability to realize the anticipated benefits and cost savings from combining MPC's and Andeavor's businesses, including the annual gross, run-rate, commercial and corporate synergies that MPC expects to realize within the first three years after the combination. The anticipated benefits and cost savings of the Andeavor acquisition may not be realized fully or at all, may take longer to realize than expected, may require more non-recurring costs and expenditures to realize than expected or could have other adverse effects. There could be potential unknown liabilities and unforeseen expenses associated with the Andeavor acquisition that were not discovered in the course of performing due diligence.

We have recorded goodwill and other intangible assets that could become further impaired and result in material non-cash charges to our results of operations.

We accounted for the Andeavor and other acquisitions using the acquisition method of accounting, which requires that the assets and liabilities of the acquired business be recorded to our balance sheet at their respective fair values as of the acquisition date. Any excess of the purchase consideration over the fair value of the acquired net assets is recognized as goodwill.

As of December 31, 2019, our balance sheet reflected \$20.0 billion and \$3.0 billion of goodwill and other intangible assets, respectively. These amounts include goodwill and other intangible assets of \$17.3 billion and \$2.8 billion, respectively, recognized in connection with the Andeavor acquisition. As a part of our annual impairment review for goodwill, MPLX recorded approximately \$1.2 billion of impairment expense in the fourth quarter of 2019. To the extent the value of goodwill or intangible assets becomes further impaired, we may be required to incur additional material non-cash charges relating to such impairment. Our operating results may be significantly impacted from both the impairment and the underlying trends in the business that triggered the impairment.

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RISKS RELATING TO OUR INDUSTRY

Meeting the requirements of evolving environmental or other laws or regulations may reduce our refining and marketing margin and may result in substantial capital expenditures and operating costs that could materially and adversely affect our business, financial condition, results of operations and cash flows.

Various laws and regulations are expected to impose increasingly stringent and costly requirements on our operations, which may reduce our refining and marketing margin. Laws and regulations expected to become more stringent relate to the following:

- the emission or discharge of materials into the environment,
- solid and hazardous waste management,
- the regulatory classification of materials presently used in our business,
- pollution prevention,
- greenhouse gas emissions,
- climate change,
- characteristics and composition of transportation fuels, including the quantity of renewable fuels that must be blended into transportation fuels,
- public and employee safety and health,
- inherently safer technology, and
- facility security.

The specific impact of laws and regulations on us and our competitors may vary depending on a number of factors, including the age and location of operating facilities, marketing areas, crude oil and feedstock sources, production processes and subsequent judicial interpretation of such laws and regulations. As a result of these laws and regulations, we have incurred and will continue to incur substantial capital, operating and maintenance, and remediation expenditures to modify operations, install pollution control equipment, perform site cleanups or curtail operations. Such expenditures could materially and adversely affect our business, financial condition, results of operations and cash flows. For additional information on environmental laws and regulations that may affect us, see Item 1. Business - Environmental Matters above.

Federal, state and local legislation and regulatory initiatives relating to hydraulic fracturing could delay or impede producer's gas production or result in reduced volumes available for our midstream assets to gather, process and fractionate. While we do not conduct hydraulic fracturing operations, we do provide gathering, processing and fractionation services with respect to natural gas and natural gas liquids produced by our customers as a result of such operations. If federal, state or local laws or regulations that significantly restrict hydraulic fracturing are adopted, such legal requirements could make it more difficult to complete natural gas wells in shale formations and increase producers' costs of compliance.

Climate change and greenhouse gas emission regulation could affect our operations, energy consumption patterns and regulatory obligations, any of which could affect our results of operations and financial condition.

Currently, multiple legislative and regulatory measures to address greenhouse gas (including carbon dioxide, methane and nitrous oxides) and other emissions are in various phases of consideration, promulgation or implementation. These include actions to develop international, federal, regional or statewide programs, which could require reductions in our greenhouse gas or other emissions, establish a carbon tax and decrease the demand for our refined products. Requiring reductions in these emissions could result in increased costs to (i) operate and maintain our facilities, (ii) install new emission controls at our facilities and (iii) administer and manage any emissions programs, including acquiring emission credits or allotments.

For example, in 2017, the California state legislature adopted AB 398, which provides direction and parameters on utilizing cap and trade after 2020 to meet the 40% reduction target from 1990 levels by 2030 specified in SB 32. Compliance with the cap and trade program is demonstrated through a market-based credit system. Additionally, the CARB is now exploring the potential for additional greenhouse gas reductions by 2045 via a yet undefined carbon neutrality standard. Other states are proposing, or have already promulgated, low

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carbon fuel standards or similar initiatives to reduce emissions from the transportation sector. If we are unable to pass the costs of compliance on to our customers, sufficient credits are unavailable for purchase, we have to pay a significantly higher price for credits, or if we are otherwise unable to meet our compliance obligation, our financial condition and results of operations could be adversely affected.

Regional and state climate change and air emissions goals and regulatory programs are complex, subject to change and considerable uncertainty due to a number of factors including technological feasibility, legal challenges and potential changes in federal policy. Increasing concerns about climate change and carbon intensity have also resulted in societal concerns and a number of international and national measures to limit greenhouse gas emissions. Additional stricter measures and investor pressure can be expected in the future and any of these changes may have a material adverse impact on our business or financial condition.

International climate change-related efforts, such as the 2015 United Nations Conference on Climate Change, which led to the creation of the Paris Agreement, may impact the regulatory framework of states whose policies directly influence our present and future operations. Though the United States has announced its intention to withdraw from the Paris Agreement, U.S. climate change strategy and implementation of that strategy through legislation and regulation may change under future administrations; therefore, the impact to our industry and operations due to greenhouse gas regulation is unknown at this time.

We could also face increased climate-related litigation with respect to our operations or products. Governmental and other entities in California, New York, Maryland and Rhode Island have filed lawsuits against coal, gas, oil and petroleum companies, including the Company. The lawsuits allege damages as a result of climate change and the plaintiffs are seeking unspecified damages and abatement under various tort theories. Similar lawsuits may be filed in other jurisdictions. There remains a high degree of uncertainty regarding the ultimate outcome of these lawsuits, as well as their potential effect on the Company's business, financial condition, results of operation and cash flows.

Regulatory and other requirements concerning the transportation of crude oil and other commodities by rail may cause increases in transportation costs or limit the amount of crude oil that we can transport by rail.

We rely on a variety of systems to transport crude oil, including rail. Rail transportation is regulated by federal, state and local authorities. New regulations or changes in existing regulations could result in increased compliance expenditures. For example, in 2015, the U.S. Department of Transportation issued new standards and regulations applicable to crude-by-rail transportation (Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains). These or other regulations that require the reduction of volatile or flammable constituents in crude oil that is transported by rail, change the design or standards for rail cars used to transport the crude oil we purchase, change the routing or scheduling of trains carrying crude oil, or require any other changes that detrimentally affect the economics of delivering North American crude oil by rail could increase the time required to move crude oil from production areas to our refineries, increase the cost of rail transportation and decrease the efficiency of shipments of crude oil by rail within our operations. Any of these outcomes could have a material adverse effect on our business and results of operations.

Severe weather events and other climate conditions may adversely affect our facilities and ongoing operations.

We have mature systems in place to manage potential acute physical risks, such as floods, hurricane-force winds, wildfires and snowstorms, and potential chronic physical risks, such as higher ocean levels. If any such events were to occur, they could have an adverse effect on our assets and operations. Specifically, where appropriate, we are hardening and modernizing assets against weather damage and ensuring we have resiliency measures in place, such as storm-specific readiness plans. We have incurred and will continue to incur additional costs to protect our assets and operations from such physical risks and employ the evolving technologies and processes available to mitigate such risks. To the extent such severe weather events or other climate conditions increase in frequency and severity, we may be required to modify operations and incur costs that could materially and adversely affect our business, financial condition, results of operations and cash flows.

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Plans we may have to expand existing assets or construct new assets are subject to risks associated with societal and political pressures and other forms of opposition to the future development, transportation and use of carbon-based fuels. Such risks could adversely impact our business and ability to realize certain growth strategies.

Our anticipated growth and planned expenditures are based upon the assumption that societal sentiment will continue to enable and existing regulations will remain intact to allow for the future development, transportation and use of carbon-based fuels. A portion of our growth strategy is dependent on our ability to expand existing assets and to construct additional assets. However, policy decisions relating to the production, refining, transportation and marketing of carbon-based fuels are subject to political pressures and the influence and protests of environmental and other special interest groups. One of the ways we may grow our business is through the construction of new pipelines or the expansion of existing ones. The construction of a new pipeline or the expansion of an existing pipeline, by adding horsepower or pump stations or by adding additional pipelines along existing pipelines, involves numerous regulatory, environmental, political, and legal uncertainties, most of which are beyond our control. The approval process for storage and transportation projects has become increasingly challenging, due in part to state and local concerns related to pipelines, negative public perception regarding the oil and gas industry, and concerns regarding greenhouse gas emissions downstream of pipeline operations. In addition, government disruptions, such as a U.S. federal government shutdown, may delay or halt the granting and renewal of permits, licenses and other items required by us and our customers to conduct our business. Our expansion or construction projects may not be completed on schedule (or at all) or at the budgeted cost. In addition, our revenues may not increase immediately upon the expenditure of funds on a particular project. For instance, if we build a new pipeline, the construction will occur over an extended period of time and we will not receive any material increases in revenues until after completion of the project. Delays or cost increases related to capital spending programs involving engineering, procurement and construction of facilities (including improvements and repairs to our existing facilities) could adversely affect our ability to achieve forecasted internal rates of return and operating results, thereby limiting our ability to grow and generate cash flows.

Large capital projects can take many years to complete, and market conditions could deteriorate significantly between the project approval date and the project startup date, negatively impacting project returns. If we are unable to complete capital projects at their expected costs and in a timely manner, or if the market conditions assumed in our project economics deteriorate, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

Delays or cost increases related to capital spending programs involving engineering, procurement and construction of facilities could materially adversely affect our ability to achieve forecasted internal rates of return and operating results. Delays in making required changes or upgrades to our facilities could subject us to fines or penalties as well as affect our ability to supply certain products we produce. Such delays or cost increases may arise as a result of unpredictable factors, many of which are beyond our control, including:

- denial of or delay in receiving requisite regulatory approvals or permits;
- unplanned increases in the cost of construction materials or labor;
- disruptions in transportation of components or construction materials;
- adverse weather conditions, natural disasters or other events (such as equipment malfunctions, explosions, fires or spills) affecting our facilities, or those of vendors or suppliers;
- shortages of sufficiently skilled labor, or labor disagreements resulting in unplanned work stoppages;
- market-related increases in a project's debt or equity financing costs; and
- nonperformance by, or disputes with, vendors, suppliers, contractors or subcontractors.

Any one or more of these factors could have a significant impact on our ongoing capital projects. If we were unable to make up the delays associated with such factors or to recover the related costs, or if market conditions change, it could materially and adversely affect our business, financial condition, results of operations and cash flows.

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The availability of crude oil and increases in crude oil prices may reduce profitability and refining and marketing margins.

The profitability of our operations depends largely on the difference between the cost of crude oil and other feedstocks we refine and the selling prices we obtain for refined products. A portion of our crude oil is purchased from various foreign national oil companies, production companies and trading companies, including suppliers from Canada, the Middle East and various other international locations. The market for crude oil and other feedstocks is largely a world market. We are, therefore, subject to the attendant political, geographic and economic risks of such a market. If one or more major supply sources were temporarily or permanently eliminated, we believe adequate alternative supplies of crude oil would be available, but it is possible we would be unable to find alternative sources of supply. If we are unable to obtain adequate crude oil volumes or are able to obtain such volumes only at unfavorable prices, our operations, sales of refined products and refining and marketing margins could be adversely affected, materially and adversely impacting our business, financial condition, results of operations and cash flows.

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

We operate and sell some of our products in non-U.S. jurisdictions, particularly in Mexico, South America and Asia. Our business, financial condition, results of operations and cash flows could be negatively impacted by disruptions in any of these markets, including economic instability, restrictions on the transfer of funds, duties and tariffs, transportation delays, difficulty in enforcing contractual provisions, import and export controls, changes in governmental policies, labor unrest, security issues involving key personnel and changing regulatory and political environments. Global outbreaks of infectious diseases, such as the coronavirus first detected in Wuhan, China, could affect demand for refined products and economic conditions generally. In addition, if trade relationships deteriorate with these countries, if existing trade agreements are modified or terminated, new economic sanctions relevant to such jurisdictions are passed or if taxes, border adjustments or tariffs make trading with these countries more costly, it could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We are required to comply with U.S. and international laws and regulations, including those involving anti-bribery, anti-corruption and anti-money laundering. For example, the Foreign Corrupt Practices Act and similar laws and regulations prohibit improper payments to foreign officials for the purpose of obtaining or retaining business or gaining any business advantage. Our compliance policies and programs mandate compliance with all applicable anti-corruption laws but may not be completely effective in ensuring our compliance. Our training and compliance program and our internal control policies and procedures may not always protect us from violations committed by our employees or agents. Actual or alleged violations of these laws could disrupt our business and cause us to incur significant legal expenses, and could result in a material adverse effect on our reputation, business, financial condition, results of operations and cash flows.

More broadly, political and economic factors in global markets could impact crude oil and other feedstock supplies and could have a material adverse effect on us in other ways. Hostilities in the Middle East or the occurrence or threat of future terrorist attacks could adversely affect the economies of the U.S. and other developed countries. A lower level of economic activity could result in a decline in energy consumption, which could cause our revenues and margins to decline and limit our future growth prospects. These risks could lead to increased volatility in prices for refined products, NGLs and natural gas. Additionally, these risks could increase instability in the financial and insurance markets and make it more difficult or costly for us to access capital and to obtain the insurance coverage that we consider adequate. Additionally, tax policy, legislative or regulatory action and commercial restrictions could reduce our operating profitability. For example, the U.S. government could prevent or restrict exports of refined products, NGLs, natural gas or the conduct of business in or with certain foreign countries. In addition, foreign countries could restrict imports, investments or commercial transactions.

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Compliance with and changes in tax laws could materially and adversely impact our financial condition, results of operations and cash flows.

We are subject to extensive tax liabilities, including federal and state income taxes and transactional taxes such as excise, sales and use, payroll, franchise, withholding and property taxes. New tax laws and regulations and changes in existing tax laws and regulations could result in increased expenditures by us for tax liabilities in the future and could materially and adversely impact our financial condition, results of operations and cash flows.

Additionally, many tax liabilities are subject to periodic audits by taxing authorities, and such audits could subject us to interest and penalties.

Terrorist attacks aimed at our facilities or that impact our customers or the markets we serve could adversely affect our business.

The U.S. government has issued warnings that energy assets in general, including the nation's refining, pipeline and terminal infrastructure, may be future targets of terrorist organizations. The threat of terrorist attacks has subjected our operations to increased risks. Any future terrorist attacks on our facilities, those of our customers and, in some cases, those of other pipelines, could have a material adverse effect on our business. Similarly, any future terrorist attacks that severely disrupt the markets we serve could materially and adversely affect our results of operations, financial position and cash flows.

RISKS RELATING TO OWNERSHIP OF OUR COMMON STOCK

Provisions in our corporate governance documents could operate to delay or prevent a change in control of our company, dilute the voting power or reduce the value of our capital stock or affect its liquidity.

The existence of some provisions within our restated certificate of incorporation and amended and restated bylaws could discourage, delay or prevent a change in control of us that a stockholder may consider favorable. These include provisions:

- providing that our board of directors fixes the number of members of the board;
- providing for the division of our board of directors into three classes with staggered terms;
- providing that only our board of directors may fill board vacancies;
- limiting who may call special meetings of stockholders;
- prohibiting stockholder action by written consent, thereby requiring stockholder action to be taken at a meeting of the stockholders;
- establishing advance notice requirements for nominations of candidates for election to our board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings;
- establishing supermajority vote requirements for certain amendments to our restated certificate of incorporation;
- providing that our directors may only be removed for cause;
- authorizing a large number of shares of common stock that are not yet issued, which would allow our board of directors to issue shares to persons friendly to current management, thereby protecting the continuity of our management, or which could be used to dilute the stock ownership of persons seeking to obtain control of us; and
- authorizing the issuance of "blank check" preferred stock, which could be issued by our board of directors to increase the number of outstanding shares and thwart a takeover attempt.

We believe certain of these provisions protect our stockholders from coercive or otherwise unfair takeover tactics by requiring potential acquirers to negotiate with our board of directors and by providing our board of directors time to assess any acquisition proposal, and are not intended to make us immune from takeovers. However, these provisions apply even if the offer may be considered beneficial by some stockholders and could delay or prevent an acquisition.

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Our restated certificate of incorporation also authorizes us to issue, without the approval of our stockholders, one or more classes or series of preferred stock having such designation, powers, preferences and relative, participating, optional and other special rights, including preferences over our common stock respecting dividends and distributions, as our board of directors generally may determine. The terms of one or more classes or series of preferred stock could dilute the voting power or reduce the value of our common stock. For example, we could grant holders of preferred stock the right to elect some number of our board of directors in all events or on the happening of specified events or the right to veto specified transactions. Similarly, the repurchase or redemption rights or liquidation preferences we could assign to holders of preferred stock could affect the residual value of our common stock.

Finally, to facilitate compliance with the Maritime Laws, our restated certificate of incorporation limits the aggregate percentage ownership by non-U.S. citizens of our common stock or any other class of our capital stock to 23 percent of the outstanding shares. We may prohibit transfers that would cause ownership of our common stock or any other class of our capital stock by non-U.S. citizens to exceed 23 percent. Our restated certificate of incorporation also authorizes us to effect any and all measures necessary or desirable to monitor and limit foreign ownership of our common stock or any other class of our capital stock. These limitations could have an adverse impact on the liquidity of the market for our common stock if holders are unable to transfer shares to non-U.S. citizens due to the limitations on ownership by non-U.S. citizens. Any such limitation on the liquidity of the market for our common stock could adversely impact the market price of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

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We believe that our properties and facilities are adequate for our operations and that our facilities are adequately maintained. See the following sections for details of our assets by segment.

REFINING & MARKETING

The table below sets forth the location and crude oil refining capacity for each of our refineries as of December 31, 2019. Refining throughput can exceed crude oil refining capacity due to the processing of other charge and blendstocks in addition to crude oil and the timing of planned turnaround and major maintenance activity.

Refinery	Crude Oil Refining Capacity (mbpcd)
<i>Gulf Coast Region</i>	
Galveston Bay, Texas City, Texas	585
Garyville, Louisiana	578
Subtotal Gulf Coast region	1,163
<i>Mid-Continent Region</i>	
Catlettsburg, Kentucky	291
Robinson, Illinois	253
Detroit, Michigan	140
El Paso, Texas	131
St. Paul Park, Minnesota	103
Canton, Ohio	95
Mandan, North Dakota	71
Salt Lake City, Utah	63
Gallup, New Mexico	27
Dickinson, North Dakota	19
Subtotal Mid-Continent region	1,193
<i>West Coast Region</i>	
Los Angeles, California	363
Martinez, California	161
Anacortes, Washington	119
Kenai, Alaska	68
Subtotal West Coast region	711
	3,067

The following table sets forth the location and capacity of our biofuel production facility as of December 31, 2019.

Location	Capacity (gallons per year)
Cincinnati, Ohio	80 million

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The following table sets forth the approximate number of locations where independent entrepreneurs maintain branded outlets, marketed under Marathon, Shell, Mobil and other brands, as of December 31, 2019.

Location	Number of Branded Outlets
Alabama	380
Alaska	44
Arizona	94
California	88
Colorado	12
District of Columbia	2
Florida	644
Georgia	346
Idaho	98
Illinois	213
Indiana	651
Iowa	4
Kentucky	521
Louisiana	27
Maryland	44
Mexico	186
Michigan	792
Minnesota	292
Mississippi	100
Nevada	12
New Mexico	46
New York	43
North Carolina	204
North Dakota	104
Ohio	812
Oregon	44
Pennsylvania	69
South Carolina	116
South Dakota	29
Tennessee	403
Texas	6
Utah	96
Virginia	154
Washington	63
West Virginia	106
Wisconsin	52
Wyoming	4
Total	6,901

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The following table sets forth details about our Refining & Marketing owned and operated terminals as of December 31, 2019. See the Midstream - MPLX section for information with respect to MPLX owned and operated terminals.

Owned and Operated Terminals	Number of Terminals	Tank Storage Capacity (thousand barrels)
Light Products Terminals:		
New York	1	316
Ohio	1	67
Subtotal light products terminals	2	383
Asphalt Terminals:		
Florida	1	263
Illinois	2	82
Indiana	2	423
Kentucky	4	547
Louisiana	1	54
Michigan	1	12
New York	1	365
Ohio	4	1,305
Pennsylvania	1	451
Tennessee	2	482
Subtotal asphalt terminals	19	3,984
Total owned and operated terminals	21	4,367

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RETAIL

Our Retail segment sells transportation fuels and merchandise through convenience stores it owns and operates, primarily under the Speedway brand, and sells transportation fuels through long-term fuel supply contracts to direct dealer locations, primarily under the ARCO brand. The following table sets forth the number of company-owned convenience stores by state as of December 31, 2019.

Location	Number of Convenience Stores
Alabama	1
Alaska	31
Arizona	91
California	491
Colorado	12
Connecticut	1
Delaware	4
Florida	212
Georgia	9
Idaho	7
Illinois	129
Indiana	305
Kentucky	147
Massachusetts	108
Michigan	306
Minnesota	203
Nevada	9
New Hampshire	12
New Jersey	66
New Mexico	120
New York	330
North Carolina	275
Ohio	488
Oregon	13
Pennsylvania	121
Rhode Island	19
South Carolina	52
South Dakota	1
Tennessee	52
Texas	31
Utah	30
Virginia	62
Washington	32
West Virginia	56
Wisconsin	69
Wyoming	3
Total	3,898

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The following table sets forth the number of direct dealer locations by state as of December 31, 2019.

Location	Number of Locations
Alaska	1
Arizona	69
California	935
Nevada	62
Washington	1
Total	1,068

MIDSTREAM - MPLX

The following tables set forth certain information relating to MPLX's crude oil, refined products and water pipeline systems and storage assets as of December 31, 2019.

Pipeline System or Storage Asset	Diameter (inches)	Length (miles)	Capacity ^(a)
Total crude oil pipeline systems ^{(b)(c)(d)}	2" - 48"	7,917	Various
Total refined products pipeline systems ^{(b)(c)(f)}	4" - 36"	5,672	Various
Water pipeline systems:			
Belfield water system	4" - 8"	103	20 mbpd
Green River water system	3" - 4"	12	15 mbpd
Total		115	
Barge Docks (thousand barrels)			2,910
Storage assets (thousand barrels):			
Refinery Logistics - tank storage ^(g)			100,670
Mt. Airy Terminal			4,099
Tank Farms			26,264
Caverns			4,709

^(a) All capacities reflect 100 percent of the pipeline systems' and barge docks' average capacity in thousands of barrels per day and 100 percent of the available storage capacity of our caverns and tank farms in thousands of barrels.

^(b) Includes pipelines leased from third parties.

^(c) Includes approximately 1,921 miles of pipeline in which MPLX has a 9.2 percent ownership interest, 168 miles of pipeline in which MPLX has a 35.0 percent ownership interest, 48 miles of pipeline in which MPLX has a 40.7 percent ownership interest, 57 miles of pipeline in which MPLX has a 58.5 percent ownership interest, 118 miles of pipeline in which MPLX has a 67.0 percent ownership interest and 975 miles of pipeline in which MPLX has a 17.0 percent ownership interest. Also includes approximately 1,830 miles of refined product pipeline in which we have a 24.5 percent ownership interest and 87 miles of refined product pipeline in which we have a 65.16 percent ownership interest.

^(d) Includes approximately 399 miles of inactive pipeline.

^(e) Includes approximately 1,830 miles of pipeline in which MPLX has a 24.5 percent ownership interest and 87 miles of pipeline in which MPLX has a 65.16 percent ownership interest.

^(f) Includes approximately 232 miles of inactive pipeline.

^(g) Refining logistics assets also include rail racks, truck racks and docks.

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The following table sets forth details about MPLX owned and operated terminals as of December 31, 2019. Additionally, MPLX operates one leased terminal and has partial ownership interest in one terminal.

Owned and Operated Terminals	Number of Terminals	Tank Storage Capacity (thousand barrels)
Refined Products Terminals:		
Alabama	2	443
Alaska	3	1,310
California	9	5,367
Florida	4	3,407
Georgia	4	998
Idaho	3	988
Illinois	4	1,221
Indiana	6	3,229
Kentucky	6	2,587
Louisiana	1	97
Michigan	8	2,440
Minnesota	1	12
New Mexico	4	551
North Carolina	4	1,509
North Dakota	1	2
Ohio	12	3,218
Pennsylvania	1	390
South Carolina	1	371
Tennessee	4	1,149
Utah	1	44
Washington	4	825
West Virginia	2	1,587
Subtotal light products terminals	85	31,745
Asphalt Terminals		
Arizona	3	536
California	3	755
Minnesota	1	489
Nevada ^(a)	1	252
New Mexico	1	6
Texas	1	178
Subtotal asphalt terminals	10	2,216
Total owned and operated terminals	95	33,961

^(a) MPLX accounts for as an equity method investment.

The following table sets forth details about MPLX barges and towboats as of December 31, 2019.

Class of Equipment	Number in Class	Capacity (thousand barrels)
Inland tank barges ^(a)	286	7,523
Inland towboats	23	N/A

^(a) All of our barges are double-hulled.

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The following tables set forth certain information relating to MPLX's consolidated and operated joint venture gas processing facilities, fractionation facilities, natural gas gathering systems, NGL pipelines and natural gas pipelines as of December 31, 2019. All throughputs and utilizations included are weighted-averages for days in operation.

Gas Processing Complexes	Design Throughput Capacity (MMcf/d)	Natural Gas Throughput (MMcf/d)^(a)	Utilization of Design Capacity^(a)
Marcellus Shale	6,120	5,248	91%
Utica Shale	1,325	810	61%
Southern Appalachia	620	244	39%
Southwest ^(b)	1,887	1,364	79%
Bakken	190	151	83%
Rockies	1,472	572	39%
Total	11,614	8,389	76%

^(a) Natural gas throughput is a weighted average for days in operation. The utilization of design capacity has been calculated using the weighted average design throughput capacity.

^(b) Centrahoma Processing LLC's processing capacity of 550 MMcf/d and actual throughput of 272 MMcf/d, that exceeded MPLX's 40 percent share of the capacity of 220 MMcf/d, are not included in this table as MPLX owns a non-operating interest.

Fractionation & Condensate Stabilization Complexes	Design Throughput Capacity (mbpd)	NGL Throughput (mbpd)^(a)	Utilization of Design Capacity^(a)
Marcellus Shale	347	290	84%
Utica Shale	23	9	39%
Southern Appalachia	24	12	50%
Southwest	11	6	55%
Bakken	34	24	83%
Rockies	61	4	7%
Total	500	345	70%

^(a) NGL throughput is a weighted average for days in operation. The utilization of design capacity has been calculated using the weighted average design throughput capacity.

De-ethanization Complexes	Design Throughput Capacity (mbpd)	NGL Throughput (mbpd)^(a)	Utilization of Design Capacity^(a)
Marcellus Shale	273	179	72%
Utica Shale	40	10	25%
Southwest	18	9	50%
Total	331	198	64%

^(a) NGL throughput is a weighted average for days in operation. The utilization of design capacity has been calculated using the weighted average design throughput capacity.

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Natural Gas Gathering Systems	Design Throughput Capacity (MMcf/d)	Natural Gas Throughput (a) (MMcf/d)	Utilization of Design Capacity (a)
Marcellus Shale	1,547	1,287	84%
Utica Shale	3,183	2,200	70%
Southwest	2,570	1,628	72%
Bakken	194	151	78%
Rockies	1,486	701	47%
Total	8,980	5,967	69%

(a) Natural gas throughput is a weighted average for days in operation. The utilization of design capacity has been calculated using the weighted average design throughput capacity.

The following tables set forth certain information relating to MPLX's NGL pipelines as of December 31, 2019.

NGL Pipelines	Diameter	Length (miles)	Design Throughput Capacity (mbpd)
Marcellus Shale	4" - 20"	399	Various
Utica Shale	4" - 12"	119	Various
Southern Appalachia	6" - 8"	138	35
Southwest ^(a)	6"	50	39
Bakken	8" - 12"	84	80
Rockies	8"	10	15

(a) Includes 38 miles of inactive pipeline.

MIDSTREAM - MPC-RETAINED ASSETS AND INVESTMENTS

The following tables set forth certain information related to our crude oil and refined products pipeline systems not owned by MPLX.

As of December 31, 2019, we had partial ownership interests in the following pipeline companies.

Pipeline Company	Diameter (inches)	Length (miles)	Ownership Interest	Operated by MPL
Crude oil pipeline companies:				
Capline LLC	40"	644	33%	Yes
Gray Oak Pipeline, LLC	30"	850	25%	No
LOOP ^(a)	48"	48	10%	No
Total		1,494		
Refined products pipeline companies:				
Ascension Pipeline Company LLC	16"	32	50%	No
Centennial Pipeline LLC ^(b)	24"-26"	796	50%	Yes
Muskegon Pipeline LLC	10"	170	60%	Yes
Wolverine Pipe Line Company	6"-16"	796	6%	No
Total		1,794		

(a) Represents interest retained by MPC and excludes MPLX's 41 percent ownership interest in LOOP. Pipeline mileage is excluded from total as it is included with MPLX assets.

(b) All system pipeline miles are inactive.

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The following table provides information on private crude oil pipelines and private refined products pipelines that we own as of December 31, 2019.

Private Pipeline Systems	Diameter (inches)	Length (miles)	Capacity (mbpd)
Crude oil pipeline systems:			
Middle Ground Shoals Pipeline	12"	4	11
Inactive pipelines		9	N/A
Total		13	11
Refined products pipeline systems:			
Illinois and Indiana pipeline systems	4"	59	11
Texas pipeline systems	8"	103	45
Inactive pipelines		62	N/A
Total		224	56

As of December 31, 2019, we had a partial ownership interest in the following crude oil terminal.

Terminal	Ownership Interest	Tank Storage Capacity (thousand barrels)
South Texas Gateway Terminal LLC ^(a)	25%	TBD

^(a) The tank storage capacity for this company will be determined when the terminal project is placed into service.

The following table sets forth details about the assets held by two ocean vessel joint ventures in which we hold a 50% interest as of December 31, 2019.

Class of Equipment	Number in Class	Capacity (thousand barrels)
Jones Act product tankers ^(a)	4	1,320
750 Series ATB vessels ^(b)	3	990

^(a) Represents ownership through our indirect noncontrolling interest in Crowley Ocean Partners.

^(b) Represents ownership through our indirect noncontrolling interest in Crowley Blue Water Partners.

ITEM 3. LEGAL PROCEEDINGS

We are the subject of, or a party to, a number of pending or threatened legal actions, contingencies and commitments involving a variety of matters, including laws and regulations relating to the environment. Some of these matters are discussed below. While it is possible that an adverse result in one or more of the lawsuits or proceedings in which we are a defendant could be material to us, based upon current information and our experience as a defendant in other matters, we believe that these lawsuits and proceedings, individually or in the aggregate, will not have a material adverse effect on our consolidated results of operations, financial position or cash flows.

SEC Matter

We have been cooperating with the staff of the SEC in connection with a formal investigation regarding Andeavor's historical share repurchase activity and an informal investigation regarding MPC's share repurchase activity. The staff of the SEC has indicated that it intends to recommend an action with respect to Andeavor's historical share repurchase activity. We will continue to fully cooperate with the SEC staff in connection with these matters. We are unable to predict the outcome or impact of these investigations on our consolidated results of operations, financial position or cash flow.

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Litigation

In May 2015, the Kentucky attorney general filed a lawsuit against our wholly-owned subsidiary, Marathon Petroleum Company LP (“MPC LP”), in the United States District Court for the Western District of Kentucky asserting claims under federal and state antitrust statutes, the Kentucky Consumer Protection Act, and state common law. The complaint, as amended in July 2015, alleges that MPC LP used deed restrictions, supply agreements with customers and exchange agreements with competitors to unreasonably restrain trade in areas within Kentucky and seeks declaratory relief, unspecified damages, civil penalties, restitution and disgorgement of profits. At this stage, the ultimate outcome of this litigation remains uncertain, and neither the likelihood of an unfavorable outcome nor the ultimate liability, if any, can be determined, and we are unable to estimate a reasonably possible loss (or range of loss) for this matter. We intend to vigorously defend ourselves in this matter.

Environmental Proceedings

Governmental and other entities in California, New York, Maryland and Rhode Island have filed lawsuits against coal, gas, oil and petroleum companies, including the Company. The lawsuits allege damages as a result of climate change and the plaintiffs are seeking unspecified damages and abatement under various tort theories. Similar lawsuits may be filed in other jurisdictions. At this early stage, the ultimate outcome of these matters remain uncertain, and neither the likelihood of an unfavorable outcome nor the ultimate liability, if any, can be determined.

Anacortes Refinery

The naphtha hydrotreater unit at the Anacortes refinery was involved in a fire in April 2010, which fatally injured seven employees and rendered the unit inoperable. The Washington State Department of Labor & Industries (“L&I”) investigated the incident and issued a citation in October 2010 with an assessed fine of approximately \$2 million. Andeavor appealed the citation in January 2011 as it disagreed with L&I’s characterizations of operations at the refinery and believed that many of the agency’s conclusions were mistaken. In separate September 2013, November 2013 and February 2015 orders, the Board of Industrial Insurance Appeals (“BIIA”) granted partial summary judgment in Andeavor’s favor rejecting 33 of the original 44 allegations in the citation as lacking legal or evidentiary support. The hearing on the remaining 11 allegations concluded in July 2016. On June 8, 2017, the BIIA Judge issued a proposed decision and order vacating the entire citation, which L&I and the United Steel Workers (“USW”) appealed. On September 18, 2017, the BIIA granted L&I and USW’s petitions for review of the BIIA judge’s June 8, 2017 proposed decision and order. On January 25, 2018, the BIIA issued an order remanding 12 of the allegations for further proceedings. Proceedings regarding the 12 remanded citations are ongoing.

Detroit Refinery

In June 2019, we received an offer from the Michigan Department of Environment, Great Lakes, and Energy (“EGLE”) to settle violations alleged in five NOVs issued to the refinery between September 2017 and February 2019. In December 2019, the settlement discussions were expanded to include two additional NOVs issued to the refinery during October and December 2019. The NOVs allege violations of emissions limitations and other requirements of the refinery’s air permit and Michigan air pollution control laws. We are negotiating a settlement of the allegations with EGLE and cannot currently estimate the timing of the resolution of this matter.

El Paso Refinery

On February 19, 2020, we reached an agreement with the EPA regarding alleged violations at our El Paso refinery. The agreement requires payment of \$359,000 for stipulated penalties associated with an EPA review relating to the existing Consent Decree in U.S. v. Western Refining Co. LP, W.D. Texas No. 3:11-CV-00276-FM (entered August 31, 2011).

Galveston Bay Refinery

In August 2019, we received an offer from the Texas Commission on Environmental Quality to settle violations alleged in enforcement notices issued to the refinery in March 2019. The notices allege violations of emissions limitations and other requirements of the refinery’s air permit. We are negotiating a settlement of the allegations and cannot currently estimate the timing of the resolution of this matter.

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Los Angeles Refinery

In February 2020, we received an offer from the South Coast Air Quality Management District to settle an NOV issued to the refinery in September 2018 for 13 self-reported Title V deviations. The deviations involve flaring, opacity, fugitive emissions, and carbon canisters, among others. We are negotiating a settlement and cannot currently estimate the timing of the resolution of this matter.

Martinez Refinery

On February 12, 2016, TRMC received an offer to settle 35 NOVs received from the Bay Area Air Quality Management District (“BAAQMD”). The NOVs were issued from May 2011 to November 2015 and allege violations of air quality regulations for ground level monitors located at our Martinez refinery. In November 2019, the settlement discussions were expanded to include 47 additional NOVs issued to the refinery between 2015 and 2018. While we are negotiating a settlement of the allegations with the BAAQMD, we cannot currently estimate the timing of the resolution of this matter.

On July 18, 2016, the U.S. Department of Justice (“DOJ”) lodged a complaint on behalf of the EPA and a Consent Decree in the U.S. Court for the Western District of Texas. Among other things, the Consent Decree required that the Martinez refinery meet certain annual emission limits for NOx by July 1, 2018. In February 2018, TRMC informed the EPA that it would need additional time to satisfy requirements of the Consent Decree. In the fourth quarter for 2019, TRMC and the United States entered into an agreement to amend the Consent Decree to resolve these issues. The Consent Decree amendment will include a civil penalty of approximately \$6.5 million and a schedule for installation of a Selective Catalytic Reduction system to control NOx emissions from the FCCU.

On January 23, 2020, TRMC received an offer to settle 59 NOVs received from the BAAQMD. The NOVs were issued between April 2015 and March 2019 and allege violations of air quality regulations and the Martinez refinery’s air permit. While we are negotiating a settlement of the allegations with the BAAQMD, we cannot currently estimate the timing of the resolution of this matter.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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

Our common stock is listed on the NYSE and traded under the symbol "MPC." As of February 17, 2020, there were 31,293 registered holders of our common stock.

Issuer Purchases of Equity Securities

The following table sets forth a summary of our purchases during the quarter ended December 31, 2019, of equity securities that are registered by MPC pursuant to Section 12 of the Securities Exchange Act of 1934, as amended:

<u>Period</u>	<u>Total Number of Shares Purchased^(a)</u>	<u>Average Price Paid per Share^(b)</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs</u>	<u>Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs^(c)</u>
10/01/2019-10/31/2019	1,038,235	\$ 62.86	1,033,027	\$ 2,954,604,016
11/01/2019-11/30/2019	68	65.78	—	2,954,604,016
12/01/2019-12/31/2019	12,862	60.70	—	2,954,604,016
Total	1,051,165	62.83	1,033,027	

^(a) The amounts in this column include 5,208, 68 and 12,862 shares of our common stock delivered by employees to MPC, upon vesting of restricted stock, to satisfy tax withholding requirements in October, November and December, respectively.

^(b) Amounts in this column reflect the weighted average price paid for shares purchased under our share repurchase authorizations and for shares tendered to us in satisfaction of employee tax withholding obligations upon the vesting of restricted stock granted under our stock plans. The weighted average price includes commissions paid to brokers on shares purchased under our share repurchase authorizations.

^(c) On April 30, 2018, we announced that our board of directors had approved a \$5 billion share repurchase authorization in addition to the remaining authorization pursuant to the May 31, 2017 announcement. These share purchase authorizations have no expiration date. The share repurchase authorization announced on April 30, 2018, together with prior authorizations, result in a total of \$18 billion of share repurchase authorizations since January 1, 2012.

ITEM 6. SELECTED FINANCIAL DATA

The following table should be read in conjunction with Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations and Item 8. Financial Statements and Supplementary Data.

<i>(In millions, except per share data)</i>	Year Ended December 31,				
	2019	2018 ^(a)	2017 ^(b)	2016	2015 ^(c)
Statements of Income Data					
Sales and other operating revenue ^(d)	\$ 123,949	\$ 96,504	\$ 74,733	\$ 63,339	\$ 72,051
Income from operations	5,576	5,571	4,018	2,386	4,708
Net income	3,255	3,606	3,804	1,213	2,868
Net income attributable to MPC	2,637	2,780	3,432	1,174	2,852
Net income attributable to MPC per share:					
Basic	\$ 4.00	\$ 5.36	\$ 6.76	\$ 2.22	\$ 5.29
Diluted	\$ 3.97	\$ 5.28	\$ 6.70	\$ 2.21	\$ 5.26
Dividends per share	\$ 2.12	\$ 1.84	\$ 1.52	\$ 1.36	\$ 1.14

Statements of Cash Flows Data					
Net cash provided by operating activities	\$ 9,441	\$ 6,158	\$ 6,612	\$ 4,017	\$ 4,076
Acquisitions, net of cash acquired ^{(a)(c)}	129	3,822	249	—	1,218
Common stock repurchased	1,950	3,287	2,372	197	965
Dividends paid	1,398	954	773	719	613

<i>(In millions)</i>	December 31,				
	2019	2018 ^(a)	2017	2016	2015 ^(c)
Balance Sheet Data					
Total assets	\$ 98,556	\$ 92,940	\$ 49,047	\$ 44,413	\$ 43,115
Long-term debt ^(e)	28,838	27,524	12,946	10,572	11,925

^(a) On October 1, 2018, we acquired Andeavor. The financial results for these operations are included in our consolidated results from the date of acquisition.

^(b) Earnings for 2017 include a tax benefit of approximately \$1.5 billion, or \$2.93 per diluted share, as a result of re-measuring certain net deferred tax liabilities using the lower corporate tax rate enacted in the fourth quarter of 2017.

^(c) On December 4, 2015, MPLX, our consolidated subsidiary, merged with MarkWest. The financial results for these operations are included in our consolidated results from the date of acquisition.

^(d) Includes sales to related parties. The 2019 and 2018 periods reflect an election to present certain taxes on a net basis concurrent with our adoption of ASU 2014-09, Revenue - Revenue from Contracts with Customers (“ASC 606”).

^(e) Includes amounts due within one year.

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

All statements in this section, other than statements of historical fact, are forward-looking statements that are inherently uncertain. See "Disclosures Regarding Forward-Looking Statements" and "Risk Factors" for a discussion of the factors that could cause actual results to differ materially from those projected in these statements. The following information concerning our business, results of operations and financial condition should also be read in conjunction with the information included under Item 1. Business, Item 1A. Risk Factors, Item 6. Selected Financial Data and Item 8. Financial Statements and Supplementary Data.

CORPORATE OVERVIEW

We are an independent petroleum refining and marketing, retail and midstream company. We own and operate the nation's largest refining system through 16 refineries, located in the Gulf Coast, Mid-Continent and West Coast regions of the United States, with an aggregate crude oil refining capacity of approximately 3.1 mmbpcd. Our refineries supply refined products to resellers and consumers across the United States. We distribute refined products to our customers through transportation, storage, distribution and marketing services provided largely by our Midstream segment. We believe we are one of the largest wholesale suppliers of gasoline and distillates to resellers in the United States.

We have three strong brands: Marathon®, Speedway® and ARCO®. The branded outlets, which primarily include the Marathon brand, are established motor fuel brands across the United States available through approximately 6,900 branded outlets operated by independent entrepreneurs in 35 states, the District of Columbia and Mexico. We believe our Retail segment operates the second largest chain of company-owned and operated retail gasoline and convenience stores in the United States, with approximately 3,900 convenience stores, primarily under the Speedway brand, and 1,070 direct dealer locations, primarily under the ARCO brand, across the United States.

We primarily conduct our midstream operations through our ownership interests in MPLX, which owns and operates crude oil and refined product transportation and logistics infrastructure and natural gas and NGL gathering, processing, and fractionation assets. As of December 31, 2019, we owned, leased or had ownership interests in approximately 17,200 miles of crude oil and refined product pipelines to deliver crude oil to our refineries and other locations and refined products to wholesale and retail market areas. We distribute our refined products through one of the largest terminal operations in the United States and one of the largest private domestic fleets of inland petroleum product barges. Our integrated midstream energy asset network links producers of natural gas and NGLs from some of the largest supply basins in the United States to domestic and international markets. As of December 31, 2019, our midstream gathering and processing assets include approximately 9.0 bcf/d of gathering capacity, 11.6 bcf/d of natural gas processing capacity and 831 mbpd of fractionation capacity.

Our operations consist of three reportable operating segments: Refining & Marketing, Retail and Midstream. Each of these segments is organized and managed based upon the nature of the products and services they offer. See Item 1. Business for additional information on our segments.

- Refining & Marketing – refines crude oil and other feedstocks at our 16 refineries in the Gulf Coast, Mid-Continent and West Coast regions of the United States, purchases refined products and ethanol for resale and distributes refined products through transportation, storage, distribution and marketing services provided largely by our Midstream segment. We sell refined products to wholesale marketing customers domestically and internationally, to buyers on the spot market, to our Retail business segment and to independent entrepreneurs who operate primarily Marathon® branded outlets.
- Retail – sells transportation fuels and convenience products in the retail market across the United States through company-owned and operated convenience stores, primarily under the Speedway® brand, and long-term fuel supply contracts with direct dealers who operate locations mainly under the ARCO® brand.
- Midstream – transports, stores, distributes and markets crude oil and refined products principally for the Refining & Marketing segment via refining logistics assets, pipelines, terminals, towboats and barges; gathers, processes and transports natural gas; and gathers, transports, fractionates, stores and markets NGLs. The Midstream segment primarily reflects the results of MPLX.

Recent Developments

Strategic Actions to Enhance Shareholder Value

On October 31, 2019, we announced our intention to separate our retail transportation fuel and convenience store business, which is operated primarily under the Speedway brand, into an independent, publicly traded company through a tax-free distribution to MPC shareholders of publicly traded stock in the new independent retail transportation fuel and convenience store company. This transaction is targeted to be completed in the fourth quarter of 2020, subject to market, regulatory and certain other conditions, including final approval by MPC's board of directors, receipt of customary assurances regarding the intended tax-free nature of the transaction, and the effectiveness of a registration statement to be filed with the SEC. The Speedway business is currently a reporting unit within our Retail segment. MPC will retain its direct dealer business, which is also included in the Retail segment as currently reported.

MPC's board of directors also formed a special committee to evaluate strategies to enhance shareholder value through a review of the Midstream business and to analyze, among other things, the strategic fit of assets with MPC, the ability to realize full valuation credit for midstream earnings and cash flow, balance sheet impacts including liquidity and credit ratings, transaction tax impacts, separation costs, and overall complexity.

MPLX Acquisition of ANDX

On July 30, 2019, MPLX completed its acquisition of ANDX, and ANDX survived as a wholly-owned subsidiary of MPLX. At the effective time of the merger, each common unit held by ANDX's public unitholders was converted into the right to receive 1.135 MPLX common units. ANDX common units held by certain affiliates of MPC were converted into the right to receive 1.0328 MPLX common units. Additionally, 600,000 ANDX preferred units were converted into 600,000 preferred units of MPLX (the "Series B preferred units"). Series B preferred unitholders are entitled to receive, when and if declared by the MPLX board, a fixed distribution of \$68.75 per unit, per annum, payable semi-annually in arrears on February 15 and August 15, or the first business day thereafter, up to and including February 15, 2023. After February 15, 2023, the holders of Series B preferred units are entitled to receive cumulative, quarterly distributions payable in arrears on the 15th day of February, May, August and November of each year, or the first business day thereafter, based on a floating annual rate equal to the three month LIBOR plus 4.652 percent.

The transaction simplified our two sponsored MLPs, MPLX and ANDX, into a single listed entity to create a leading, large-scale, diversified midstream company anchored by fee-based cash flows. The combined entity has an expanded geographic footprint that is expected to enhance its long-term growth opportunities and the sustainable cash flow profile of the business.

As described in Item 8. Financial Statements and Supplementary Data – Notes 5 and 6, we have consolidated ANDX since October 1, 2018 in accordance with ASC Topic 810, Consolidation ("ASC 810") and previously recorded ANDX's assets and liabilities to our balance sheet at preliminary fair values as of the Andeavor acquisition date of October 1, 2018.

EXECUTIVE SUMMARY

Results

Select results for 2019 and 2018 are reflected in the following table. The 2018 amounts include the results of Andeavor from the October 1, 2018 acquisition date forward.

<i>(In millions, except per share data)</i>	2019	2018
Income from operations by segment		
Refining & Marketing	\$ 2,367	\$ 2,481
Retail	1,582	1,028
Midstream	3,594	2,752
Items not allocated to segments	(1,967)	(690)
Income from operations	\$ 5,576	\$ 5,571
Provision for income taxes	\$ 1,074	\$ 962
Net income attributable to MPC	\$ 2,637	\$ 2,780
Net income attributable to MPC per diluted share	\$ 3.97	\$ 5.28

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Net income attributable to MPC decreased \$143 million in 2019 compared to 2018 primarily due to increases in net interest and other financial costs and provision for income taxes, partially offset by a decrease in net income attributable to noncontrolling interests in 2019. Income from operations was essentially flat in 2019 compared to 2018 as increases in Retail and Midstream segment income from operations were largely offset by MPLX goodwill impairment charges, which are reported in Items not allocated to segments. Refer to the Results of Operations section for a discussion of financial results by segment for the three years ended December 31, 2019.

MPLX

We received limited partner distributions of \$1.82 billion and \$1.24 billion from MPLX and ANDX during 2019 and 2018, respectively.

We owned approximately 666 million MPLX common units at December 31, 2019 with a market value of \$16.96 billion based on the December 31, 2019 closing unit price of \$25.46. On January 23, 2020, MPLX declared a quarterly cash distribution of \$0.6875 per common unit, which was paid February 14, 2020. As a result, MPLX made distributions totaling \$715 million to its common unitholders. MPC's portion of this distribution was approximately \$445 million.

See Item 8. Financial Statements and Supplementary Data – Note 4 for additional information on MPLX.

Share Repurchases

During the year ended December 31, 2019, we returned \$1.95 billion to our shareholders through repurchases of 34 million shares of common stock at an average price per share of \$58.87.

Since January 1, 2012, our board of directors has approved \$18.0 billion in total share repurchase authorizations and we have repurchased a total of approximately \$15.0 billion of our common stock, leaving approximately \$3.0 billion available for repurchases as of December 31, 2019. Under these authorizations, we have acquired 327 million shares, representing approximately 46 percent of our outstanding common shares when we became a stand-alone company in June 2011, at an average cost per share of \$46.05.

Liquidity

Our liquidity, excluding MPLX, totaled \$8.3 billion at December 31, 2019. As of December 31, 2019, we had cash and cash equivalents of \$1.51 billion, excluding MPLX's cash and cash equivalents of \$15 million. We had no borrowings and \$1 million of letters of credit outstanding under our \$6.0 billion bank revolving credit facilities and no borrowings or letters of credit outstanding under our \$750 million trade receivables securitization facility ("trade receivables facility"). As of December 31, 2019, eligible trade receivables supported borrowings of \$750 million under the trade receivable facility.

MPLX's liquidity totaled \$4.42 billion at December 31, 2019. As of December 31, 2019, MPLX had cash and cash equivalents of \$15 million, \$3.5 billion available under its \$3.5 billion revolving credit agreement and \$906 million available through its intercompany loan agreement with MPC.

See Item 8. Financial Statements and Supplementary Data – Note 19 for information on our new bank revolving credit facilities.

OVERVIEW OF SEGMENTS

Refining & Marketing

Refining & Marketing segment income from operations depends largely on our Refining & Marketing margin, refining operating costs, refining planned turnaround and refinery throughputs. Our total refining capacity was 3,067 mbpcd, 3,021 mbpcd and 1,881 mbpcd as of December 31, 2019, 2018 and 2017, respectively. The increase in 2018 was primarily due to the acquisition of Andeavor on October 1, 2018, which added 10 refineries with approximately 1,117 mbpcd of total refining capacity.

Our Refining & Marketing margin is the difference between the prices of refined products sold and the costs of crude oil and other charge and blendstocks refined, including the costs to transport these inputs to our refineries and the costs of products purchased for resale. The crack spread is a measure of the difference between market prices for refined products and crude oil, commonly used by the industry as a proxy for the refining margin. Crack spreads can fluctuate significantly, particularly when prices of refined products do not move in the same relationship as the cost of crude oil. As a performance benchmark and a comparison with

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other industry participants, we calculate Gulf Coast, Mid-Continent and West Coast crack spreads that we believe most closely track our operations and slate of products. The following will be used for these crack-spread calculations:

- The Gulf Coast crack spread uses three barrels of LLS crude producing two barrels of USGC CBOB gasoline and one barrel of USGC ULSD;
- The Mid-Continent crack spread uses three barrels of WTI crude producing two barrels of Chicago CBOB gasoline and one barrel of Chicago ULSD; and
- The West Coast crack spread uses three barrels of ANS crude producing two barrels of LA CARBOB and one barrel of LA CARB Diesel.

Our refineries process a variety of sweet and sour grades of crude oil, which typically can be purchased at a discount to the crude oils referenced in our Gulf Coast, Mid-Continent and West Coast crack spreads. The amount of these discounts, which we refer to as the sweet differential and the sour differential, can vary significantly, causing our Refining & Marketing margin to differ from blended crack spreads. In general, larger sweet and sour differentials will enhance our Refining & Marketing margin.

Future crude oil differentials will be dependent on a variety of market and economic factors, as well as U.S. energy policy.

The following table provides sensitivities showing an estimated change in annual net income due to potential changes in market conditions.

(In millions, after-tax)

Blended crack spread sensitivity ^(a) (per \$1.00/barrel change)	\$	910
Sour differential sensitivity ^(b) (per \$1.00/barrel change)		420
Sweet differential sensitivity ^(c) (per \$1.00/barrel change)		420
Natural gas price sensitivity ^(d) (per \$1.00/MMBtu)		325

^(a) Crack spread based on 38 percent LLS, 38 percent WTI and 24 percent ANS with Gulf Coast, Mid-Continent and West Coast product pricing, respectively, and assumes all other differentials and pricing relationships remain unchanged.

^(b) Sour crude oil basket consists of the following crudes: ANS, Argus Sour Crude Index, Maya and Western Canadian Select. We expect approximately 50 percent of the crude processed at our refineries in 2020 will be sour crude.

^(c) Sweet crude oil basket consists of the following crudes: Bakken, Brent, LLS, WTI-Cushing and WTI-Midland. We expect approximately 50 percent of the crude processed at our refineries in 2020 will be sweet crude.

^(d) This is consumption based exposure for our Refining & Marketing segment and does not include the sales exposure for our Midstream segment.

In addition to the market changes indicated by the crack spreads, the sour differential and the sweet differential, our Refining & Marketing margin is impacted by factors such as:

- the selling prices realized for refined products;
- the types of crude oil and other charge and blendstocks processed;
- our refinery yields;
- the cost of products purchased for resale;
- the impact of commodity derivative instruments used to hedge price risk; and
- the potential impact of LCM adjustments to inventories in periods of declining prices.

Inventories are stated at the lower of cost or market. Costs of crude oil, refinery feedstocks and refined products are stated under the LIFO inventory costing method and aggregated on a consolidated basis for purposes of assessing if the cost basis of these inventories may have to be written down to market values. At December 31, 2019, market values for refined products exceed their cost basis and, therefore, there is no LCM inventory market valuation reserve at the end of the year. Based on movements of refined product prices, future inventory valuation adjustments could have a negative effect to earnings. Such losses are subject to reversal in subsequent periods if prices recover.

Refining & Marketing segment income from operations is also affected by changes in refining operating costs and refining planned turnaround costs. Changes in operating costs are primarily driven by the cost of energy used by our refineries, including purchased natural gas, and the level of maintenance costs. Refining planned turnarounds, requiring temporary shutdown of certain refinery operating units, are periodically performed at

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each refinery. The following table lists the refineries that had significant planned turnaround and major maintenance activities for each of the last three years and only reflects the activity for the acquired refineries after October 1, 2018.

<u>Year</u>	<u>Refinery</u>
2019	Catlettsburg, Gallup, Galveston Bay, Garyville, Los Angeles, Martinez, Robinson and St. Paul Park
2018	Canton, Detroit, Galveston Bay and Martinez
2017	Catlettsburg, Galveston Bay and Garyville

We have various long-term, fee-based commercial agreements with MPLX. Under these agreements, MPLX, which is reported in our Midstream segment, provides transportation, storage, distribution and marketing services to our Refining & Marketing segment. Certain of these agreements include commitments for minimum quarterly throughput and distribution volumes of crude oil and refined products and minimum storage volumes of crude oil, refined products and other products. Certain other agreements include commitments to pay for 100 percent of available capacity for certain marine transportation and refining logistics assets.

Retail

Our Retail fuel margin for gasoline and distillate, which is the price paid by consumers or direct dealers less the cost of refined products, including transportation, consumer excise taxes and bankcard processing fees (where applicable), impacts the Retail segment profitability. Gasoline and distillate prices are volatile and are impacted by changes in supply and demand in the regions where we operate. Numerous factors impact gasoline and distillate demand throughout the year, including local competition, seasonal demand fluctuations, the available wholesale supply, the level of economic activity in our marketing areas and weather conditions. As fleet fuel efficiency gains have taken hold, gasoline demand fell for the first time since 2012 by 0.4 percent from 2018 despite average annual gasoline prices falling four percent, record level of light trucks' share of auto sales (72 percent), and continuing economic growth in 2019. According to current estimates, 2019 gasoline demand fell less than 0.1 million barrels per day, remaining at approximately 9.3 million barrels per day for the fourth consecutive year. Meanwhile, distillate demand fell for the first time in three years as weather impacted agricultural uses, and trade tensions weighed on port traffic in 2019. Distillate demand was down 1.6 percent from 2018, but remained near 4.1 million barrels per day, the fourth highest U.S. demand level ever. Truck tonnage growth slowed in 2019, rising 3.4 percent year over year in 2019-about half of the prior year's growth, while port container traffic (at the 10 largest U.S. ports), was flat year over year in 2019 (through November).

The margin on merchandise sold at our convenience stores historically has been less volatile and has contributed substantially to our Retail segment margin. Approximately 40 percent of our Retail margin was derived from merchandise sales in 2019. This percentage decreased from 2018 due to the addition of long-term fuel supply contracts with direct dealers and fuel only locations as part of the Andeavor acquisition. Our Retail convenience stores offer a wide variety of merchandise, including prepared foods, beverages and non-food items.

Inventories are carried at the lower of cost or market value. Costs of refined products and merchandise are stated under the LIFO inventory costing method and aggregated on a consolidated basis for purposes of assessing if the cost basis of these inventories may have to be written down to market values. As of December 31, 2019, market values for refined products exceed their cost basis and, therefore, there is no LCM inventory market valuation reserve at the end of the year. Based on movements of refined product prices, future inventory valuation adjustments could have a negative effect to earnings. Such losses are subject to reversal in subsequent periods if prices recover.

Midstream

Our Midstream segment transports, stores, distributes and markets crude oil and refined products, principally for our Refining & Marketing segment. The profitability of our pipeline transportation operations primarily depends on tariff rates and the volumes shipped through the pipelines. The profitability of our marine operations primarily depends on the quantity and availability of our vessels and barges. The profitability of our light product terminal operations primarily depends on the throughput volumes at these terminals. The profitability of our fuels distribution services primarily depends on the sales volumes of certain refined products. The profitability of our refining logistics operations depends on the quantity and availability of our refining logistics assets. A majority of the crude oil and refined product shipments on our pipelines and marine vessels and the

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refined product throughput at our terminals serve our Refining & Marketing segment and our refining logistics assets and fuels distribution services are used solely by our Refining & Marketing segment.

As discussed above in the Refining & Marketing section, MPLX, which is reported in our Midstream segment, has various long-term, fee-based commercial agreements related to services provided to our Refining & Marketing segment. Under these agreements, MPLX has received various commitments of minimum throughput, storage and distribution volumes as well as commitments to pay for all available capacity of certain assets. The volume of crude oil that we transport is directly affected by the supply of, and refiner demand for, crude oil in the markets served directly by our crude oil pipelines, terminals and marine operations. Key factors in this supply and demand balance are the production levels of crude oil by producers in various regions or fields, the availability and cost of alternative modes of transportation, the volumes of crude oil processed at refineries and refinery and transportation system maintenance levels. The volume of refined products that we transport, store, distribute and market is directly affected by the production levels of, and user demand for, refined products in the markets served by our refined product pipelines and marine operations. In most of our markets, demand for gasoline and distillate peaks during the summer driving season, which extends from May through September of each year, and declines during the fall and winter months. As with crude oil, other transportation alternatives and system maintenance levels influence refined product movements.

NGL and natural gas prices are volatile and are impacted by changes in fundamental supply and demand, as well as market uncertainty, availability of NGL transportation and fractionation capacity and a variety of additional factors that are beyond our control. Our Midstream segment profitability is affected by prevailing commodity prices primarily as a result of processing or conditioning at our own or third-party processing plants, purchasing and selling or gathering and transporting volumes of natural gas at index-related prices and the cost of third-party transportation and fractionation services. Commodity prices are a significant influence on the level of natural gas drilling by our producer customers, such prices also affect profitability.

RESULTS OF OPERATIONS

The following discussion includes comments and analysis relating to our results of operations for the years ended December 31, 2019, 2018 and 2017. These amounts include the results of Andeavor from the October 1, 2018 acquisition date forward. This discussion should be read in conjunction with Item 8. Financial Statements and Supplementary Data and is intended to provide investors with a reasonable basis for assessing our historical operations, but should not serve as the only criteria for predicting our future performance.

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Consolidated Results of Operations

<i>(In millions)</i>	2019	2018	2019 vs. 2018 Variance	2017	2018 vs. 2017 Variance
Revenues and other income:					
Sales and other operating revenues ^(a)	\$ 123,949	\$ 96,504	\$ 27,445	\$ 74,733	\$ 21,771
Income from equity method investments	394	373	21	306	67
Net gain on disposal of assets	307	23	284	10	13
Other income	163	202	(39)	320	(118)
Total revenues and other income	124,813	97,102	27,711	75,369	21,733
Costs and expenses:					
Cost of revenues (excludes items below)	110,243	86,066	24,177	67,089	18,977
Impairment expense	1,197	—	1,197	—	—
Depreciation and amortization	3,638	2,490	1,148	2,114	376
Selling, general and administrative expenses	3,408	2,418	990	1,694	724
Other taxes	751	557	194	454	103
Total costs and expenses	119,237	91,531	27,706	71,351	20,180
Income from operations	5,576	5,571	5	4,018	1,553
Net interest and other financial costs	1,247	1,003	244	674	329
Income before income taxes	4,329	4,568	(239)	3,344	1,224
Provision (benefit) for income taxes	1,074	962	112	(460)	1,422
Net income	3,255	3,606	(351)	3,804	(198)
Less net income attributable to:					
Redeemable noncontrolling interest	81	75	6	65	10
Noncontrolling interests	537	751	(214)	307	444
Net income attributable to MPC	<u>\$ 2,637</u>	<u>\$ 2,780</u>	<u>\$ (143)</u>	<u>\$ 3,432</u>	<u>\$ (652)</u>

^(a) We adopted ASU 2014-09, Revenue - Revenue from Contracts with Customers (“ASC 606”), as of January 1, 2018, and elected to report certain taxes on a net basis. We adopted the standard using the modified retrospective method, and, therefore, comparative 2017 information continues to reflect certain taxes on a gross basis. See Item 8. Financial Statements and Supplementary Data - Note 2 for further information.

2019 Compared to 2018

Net income attributable to MPC decreased \$143 million primarily due to increases in net interest and other financial costs and provision for income taxes, partially offset by a decrease in net income attributable to noncontrolling interests in 2019. See Segment Results for additional information.

Total revenues and other income increased \$27.71 billion in 2019 compared to 2018 primarily due to:

- increased sales and other operating revenues of \$27.45 billion mainly due to an increase in our Refining & Marketing segment refined product sales volumes, which increased 1,032 mbpd largely due to the Andeavor acquisition on October 1, 2018, partially offset by lower averaged refined product sales prices, which decreased \$0.10 per gallon; and
- increased net gain on disposal of assets of \$284 million mainly due to a \$207 million gain recognized in connection with MPC’s exchange of its undivided interest in the Capline pipeline system for an equity ownership in Capline LLC. We also recognized a \$52 million gain due to the formation of a new joint venture with The Andersons as the fair value of our interest in the new venture exceeded our contribution to the venture.

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Total costs and expenses increased \$27.71 billion in 2019 compared to 2018 primarily due to:

- increased cost of revenues of \$24.18 billion primarily due to the inclusion of costs related to the Andeavor operations following the acquisition;
- increased impairment expense of \$1.20 billion primarily related to MPLX goodwill associated with the ANDX gathering and processing businesses acquired as part of the Andeavor acquisition;
- increased depreciation and amortization of \$1.15 billion largely due to the depreciation of the fair value of the assets acquired in connection with the Andeavor acquisition;
- increased selling, general and administrative expenses of \$990 million mainly due to the inclusion of costs related to Andeavor operations following the acquisition and reflecting MPC's classification of those costs and expenses; and
- increased other taxes of \$194 million primarily due to the inclusion of other taxes related to the acquired Andeavor operations.

Income from operations was flat in 2019 compared to 2018 as a result of the changes noted above. See Segment Results for additional information.

Net interest and other financial costs increased \$244 million mainly due to debt assumed in the acquisition of Andeavor and increased MPLX borrowings, partially offset by a decrease in pension settlement losses of \$44 million. We capitalized interest of \$158 million in 2019 and \$80 million in 2018. See Item 8. Financial Statements and Supplementary Data – Note 19 for further details.

Provision for income taxes increased \$112 million primarily due to non-deductible goodwill impairments partially offset by decreased income before taxes of \$239 million. The effective tax rate of 25 percent in 2019 is higher than the U.S. statutory rate of 21 percent, primarily due to permanent tax differences related to goodwill impairment and state and local tax expense, partially offset by permanent tax differences related to net income attributable to noncontrolling interests. The effective tax rate of 21 percent in 2018 is consistent with the U.S. statutory rate of 21 percent, as permanent benefit differences related to income attributable to noncontrolling interest were offset by state and local tax expense. See Item 8. Financial Statements and Supplementary Data – Note 12 for further details.

Noncontrolling interests decreased \$214 million primarily due lower MPLX net income primarily as a result of the \$1.2 billion goodwill impairment charge recorded in 2019.

2018 Compared to 2017

Net income attributable to MPC decreased \$652 million. Increased income from operations was more than offset by a tax benefit of \$1.5 billion resulting from the TCJA in 2017 and increased income attributable to noncontrolling interests in 2018. See Segment Results for additional information.

Total revenues and other income increased \$21.73 billion in 2018 compared to 2017 primarily due to:

- increased sales and other operating revenues of \$21.77 billion mainly due to an increase in our Refining & Marketing segment refined product sales volumes, which increased 402 mbpd, and higher averaged refined product sales prices, which increased \$0.34 per gallon. The increase in volume is largely due to the Andeavor acquisition on October 1, 2018. These increases were partially offset by our election to present revenues net of certain taxes under ASC 606 prospectively from January 1, 2018, which resulted in a decrease in revenues of \$6.66 billion for the year. See Item 8. Financial Statements and Supplementary Data – Note 2 for additional information;
- increased income from equity method investments of \$67 million primarily due to an increase in income from midstream equity affiliates; and
- decreased other income of \$118 million primarily due to a decrease in RIN sales.

Total costs and expenses increased \$20.18 billion in 2018 compared to 2017 primarily due to:

- increased cost of revenues of \$18.98 billion primarily due to:
 - an increase in refined product cost of sales of \$24.97 billion, primarily due to increased operations following the acquisition of Andeavor along with higher raw material costs attributable to an increase in our average crude oil costs of \$13.87 per barrel; and
 - a decrease in certain taxes of \$6.66 billion as a result of our election to present revenues net of certain taxes under ASC 606 prospectively from January 1, 2018. For the year, certain

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taxes continue to be presented on a gross basis and are included in cost of revenues. See Item 8. Financial Statements and Supplementary Data – Note 2 for additional information;

- increased depreciation and amortization of \$376 million, primarily due to the depreciation of the fair value of the assets acquired in connection with the Andeavor acquisition;
- increased selling, general and administrative expenses of \$724 million primarily due to approximately \$197 million of transaction related costs for financial advisors, employee severance and other costs associated with the Andeavor acquisition in addition to including costs and expenses for the acquired operations; and
- increased other taxes of \$103 million primarily due to the inclusion of other taxes related to the acquired Andeavor operations.

Net interest and other financial costs increased \$329 million mainly due to increased MPLX borrowings and debt assumed in the acquisition of Andeavor. In addition, MPLX recognized \$60 million of debt extinguishment costs in 2018 in connection with the redemption of its \$750 million of senior notes due 2023. We capitalized interest of \$80 million in 2018 and \$63 million in 2017. See Item 8. Financial Statements and Supplementary Data – Note 19 for further details.

Provision for income taxes increased \$1.42 billion primarily due to the absence of a tax benefit of \$1.5 billion in 2017 resulting from the TCJA and an increase in our income before income taxes, which increased \$1.22 billion. The effective tax rate of 21 percent in 2018 is consistent with the U.S. statutory rate of 21 percent, as permanent benefit differences related to income attributable to noncontrolling interest were offset by state and local tax expense. In 2017, our effective tax rate was impacted by 45 percentage points as a result of the TCJA which decreased our effective tax rate from 31 percent to (14) percent. The effective tax rate, excluding the TCJA, of 31 percent in 2017 was slightly less than the U.S. statutory rate of 35 percent primarily due to certain permanent benefit differences, including differences related to net income attributable to noncontrolling interests and the domestic manufacturing deduction, partially offset by state and local tax expense. See Item 8. Financial Statements and Supplementary Data – Note 12 for further details.

Noncontrolling interests increased \$454 million due to higher MPLX net income resulting primarily from the February 1, 2018 dropdown transaction, partially offset by the reduced ownership in MPLX held by noncontrolling interests following the general partner/incentive distribution rights exchange. Noncontrolling ownership in MPLX decreased to 36.4 percent at December 31, 2018 from 69.6 percent at December 31, 2017. In addition, 2018 reflects \$68 million of net income attributable to the noncontrolling interest in ANDX of 36.4 percent for the period from October 1, 2018 through the end of the year.

Segment Results

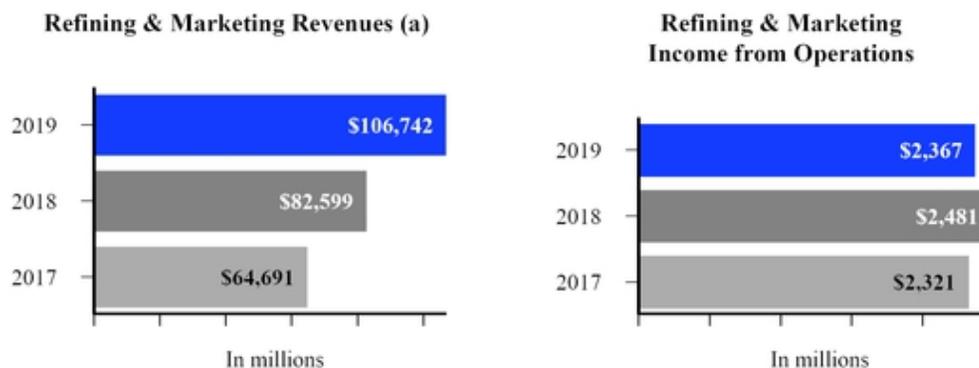
Our segment income from operations was approximately \$7.54 billion, \$6.26 billion and \$4.39 billion for the years ended December 31, 2019, 2018 and 2017, respectively. The following shows the percentage of segment income from operations by segment for the last three years.



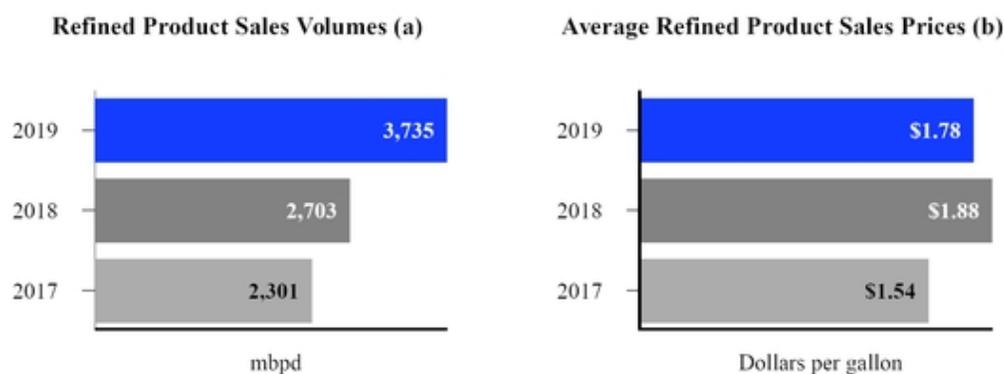
Refining & Marketing

The following includes key financial and operating data for 2019, 2018 and 2017. Our results include the results of Andeavor from the October 1, 2018 acquisition date forward.

We revised our Refining & Marketing segment supplemental reporting in the second quarter of 2019 as shown in the table on the following page. Costs formerly included in Refining & Marketing’s direct operating costs category are now presented in three categories: refining operating costs, refining planned turnaround costs and depreciation and amortization. We also present distribution costs, formerly referred to as other operating expenses, which are primarily related to transportation and marketing of refined products, including fees paid to MPLX.



^(a) We adopted ASC 606 (Revenue from Contracts with Customers), as of January 1, 2018, and elected to report certain taxes on a net basis. We applied the standard using the modified retrospective method, and, therefore, comparative information continues to reflect certain taxes on a gross basis.



^(a) Includes intersegment sales and sales destined for export.

^(b) For comparability purposes, these amounts exclude sales taxes for all periods presented. As noted above, Refining & Marketing revenues in 2019 and 2018 reflect these taxes on a net basis, while 2017 Refining & Marketing revenues continue to reflect these taxes on a gross basis. The average refined product sales price for 2017 included excise taxes of \$0.18 per gallon before this adjustment.

Refining & Marketing Operating Statistics	2019	2018	2017
Total refinery throughputs (<i>mbpd</i>)	3,112	2,274	1,944
Refining & Marketing margin per barrel ^{(a)(b)}	\$ 14.23	\$ 14.25	\$ 12.60
Less:			
Refining operating costs per barrel ^(c)	5.66	4.99	5.08
Distribution costs per barrel ^(d)	4.51	4.23	2.38
Refining planned turnaround costs per barrel	0.65	0.80	0.71
Depreciation and amortization per barrel	1.47	1.41	1.52
Plus:			
Purchase accounting-depreciation and amortization ^(e)	0.01	—	—
Biodiesel tax credit ^(f)	0.08	—	—
Other per barrel ^(g)	0.05	0.17	0.36
Refining & Marketing segment income per barrel	\$ 2.08	\$ 2.99	\$ 3.27

^(a) Sales revenue less cost of refinery inputs and purchased products, divided by total refinery throughputs.

^(b) See “Non-GAAP Measures” section for reconciliation and further information regarding this non-GAAP measure.

^(c) Includes refining operating and major maintenance costs. Excludes planned turnaround and depreciation and amortization expense.

^(d) Includes fees paid to MPLX. On a per barrel throughput basis, these fees were \$2.84 and \$2.74 for 2019 and 2018, respectively. Fees paid to MPLX for 2017 are prior to the dropdown of refining logistics and fuels distribution assets and are not comparable. Excludes depreciation and amortization expense.

^(e) Reflects the cumulative effects related to a measurement period adjustment arising from the finalization of purchase accounting.

^(f) Reflects a benefit of \$93 million in 2019 for the biodiesel tax credit attributable to volumes blended in 2018.

^(g) Includes income from equity method investments, net gain on disposal of assets and other income.

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The following table presents certain benchmark prices in our marketing areas and market indicators that we believe are helpful in understanding the results of our Refining & Marketing segment. Following the acquisition of Andeavor in October 2018, we expanded the benchmark prices included in these tables to include market information for the West Coast region of the United States, including LA CARBOB and LA CARB diesel spot prices, ANS crude prices and a West Coast ANS 3-2-1 crack spread. The results of the Andeavor businesses are only included in our results from October 1, 2018 forward. The benchmark crack spreads below do not reflect the market cost of RINs necessary to meet EPA renewable volume obligations for attributable products under the Renewable Fuel Standard.

Benchmark spot prices (<i>dollars per gallon</i>)	2019	2018	2017
Chicago CBOB unleaded regular gasoline	\$ 1.67	\$ 1.86	\$ 1.58
Chicago ultra-low sulfur diesel	1.86	2.07	1.64
USGC CBOB unleaded regular gasoline	1.63	1.83	1.55
USGC ultra-low sulfur diesel	1.88	2.05	1.62
LA CARBOB	1.98	2.06	—
LA CARB diesel	2.01	2.14	—
Market Indicators (<i>dollars per barrel</i>)			
LLS	\$ 62.69	\$ 69.93	\$ 54.00
WTI	57.04	64.10	50.85
ANS	65.04	68.46	54.44
Crack Spreads			
USGC LLS 3-2-1	\$ 8.22	\$ 7.91	8.55
Mid-Continent WTI 3-2-1	\$ 14.61	\$ 14.02	12.71
West Coast ANS 3-2-1	17.30	11.66	14.02
Blended 3-2-1 ^(a)	12.83	10.62	10.22
Crude Oil Differentials			
Sweet	\$ (2.35)	\$ (3.83)	\$ (1.04)
Sour	(3.15)	(7.60)	(5.02)

^(a) The blended crack spread for 2019 is weighted 38 percent of the USGC crack spread, 38 percent of the Mid-Continent crack spread and 24 percent of the West Coast crack spread. The blended crack spread for 2018 reflects the average of this same weighting for the fourth quarter of 2018 and a weighting of 60 percent of the USGC crack spread and 40 percent of the Mid-Continent crack spread for the first three quarters of 2018. The 2017 blended crack spread is weighted 60 percent of the USGC crack spread and 40 percent of the Mid-Continent crack spread for the period. These blends are based on MPC's refining capacity by region in each period.

2019 Compared to 2018

Refining & Marketing segment revenues increased \$24.14 billion primarily due to higher refined product sales volumes, which increased 1,032 mbpd largely due to the acquisition of Andeavor on October 1, 2018, partially offset by decreased average refined product sales prices of \$0.10 per gallon.

Refinery crude oil capacity utilization was 96 percent during 2019 and total refinery throughputs increased 838 mbpd primarily due to the refineries acquired from Andeavor.

Refining & Marketing segment income from operations decreased \$114 million primarily driven by higher operating, distribution and depreciation and amortization costs in addition to a slight decrease in Refining & Marketing margin on a per barrel basis. The increases in costs and expenses were primarily due to increased sales and production volumes following the Andeavor acquisition.

Refining & Marketing margin was \$14.23 per barrel for 2019 compared to \$14.25 per barrel for 2018. Refining & Marketing margin is affected by our performance against the market indicators shown earlier, which use spot market values and an estimated mix of crude purchases and product sales. Based on the market indicators and our crude oil throughput, we estimate a net positive impact of \$4.46 billion on Refining & Marketing margin, primarily due to an approximate \$5.35 billion benefit from increased throughput volume, mainly attributed to the Andeavor acquisition, partially offset by narrower sour and sweet crude oil differentials. Our

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reported Refining & Marketing margin differs from market indicators due to the mix of crudes purchased and their costs, the effects of market structure on our crude oil acquisition prices, RIN prices on the crack spread and other items like refinery yields and other feedstock variances. For 2019, the Refining & Marketing segment income from operations also reflects a benefit of \$93 million for the biodiesel tax credit attributable to volumes blended in 2018. These factors had an estimated net negative impact on Refining & Marketing segment income from operations of \$33 million in 2019 compared to 2018 resulting in a capture rate of 92 percent in 2019 compared to 91 percent in 2018.

The cost of inventories of crude oil and refinery feedstocks, refined products and merchandise is determined primarily under the LIFO method. There were no material liquidations of LIFO inventories in 2019 and 2018.

Refining operating costs, excluding depreciation and amortization, increased \$0.67 per barrel and distribution costs, excluding depreciation and amortization, increased \$0.28 per barrel primarily due to the inclusion of costs for the refining operations acquired from Andeavor. The per barrel increases, among other items, reflect the addition of Andeavor's West Coast refineries, which generally have higher operating costs than other regions in which we operate due to specific geographical location and regulatory factors. Distribution costs, excluding depreciation and amortization, include fees paid to MPLX of \$3.22 billion and \$2.28 billion for 2019 and 2018, respectively. Refining planned turnaround costs decreased \$0.15 per barrel due to the timing of turnaround activity. Depreciation and amortization per barrel increased by \$0.06, primarily due to the fair value of assets acquired from Andeavor as of October 1, 2018. During 2019, we recorded a \$0.01 per barrel adjustment to reduce depreciation and amortization, which reflects the cumulative effects related to a measurement period adjustment arising from the finalization of purchase accounting.

We purchase RINs to satisfy a portion of our RFS2 compliance. Our expenses associated with purchased RINs were \$356 million in 2019 and \$316 million in 2018. The increase in 2019 was primarily due to an increase in our RIN obligations resulting from the acquisition of Andeavor, partially offset by lower weighted average RIN costs.

2018 Compared to 2017

Refining & Marketing segment revenues increased \$17.91 billion in 2018 compared to 2017 primarily due to higher refined product sales prices and volumes, which increased 402 mbpd, and higher refined product sales prices, which increased \$0.34 per gallon. The increase in sales volumes is largely due to the acquisition of Andeavor on October 1, 2018. These increases were partially offset by our election to present revenues net of certain taxes under ASC 606 prospectively from January 1, 2018, which resulted in a decrease in Refining & Marketing segment revenues of \$4.58 billion in 2019. See Item 8. Financial Statements and Supplementary Data – Note 2 for additional information.

Refining & Marketing segment income from operations increased \$160 million primarily due to higher throughputs as a result of the Andeavor acquisition as well as wider sour and sweet crude differentials. For comparison purposes, as noted in the Market Indicators table, 2017 indicators have been included which reflect the new indicators we began using subsequent to the acquisition of Andeavor. Based on this, the USGC, Mid-Continent and West Coast blended 3-2-1 crack spread was \$10.62 in 2018 compared to \$10.22 in 2017. These crack spreads are net of RIN crack adjustments of \$1.61 and \$3.57 for 2018 and 2017, respectively.

Based on changes in the market indicators shown above and our refinery throughputs, we estimate a positive impact of \$3.40 billion for 2018 compared to 2017 on Refining & Marketing segment income from operations, of which \$1.81 billion and \$1.59 billion are due to the effects of changes in price and volume, respectively. The market indicators use spot market values and an estimated mix of crude purchases and product sales. Differences in our results compared to these market indicators, including product price realizations, the mix of crudes purchased and their costs, the effects of LCM inventory valuation adjustments, the effects of market structure on our crude oil acquisition prices, and other items like refinery yields and other feedstock variances, had an estimated negative impact on Refining & Marketing segment income from operations of \$698 million in 2018 compared to 2017 resulting in a capture rate of 91 percent in 2018 compared to 93 percent in 2017. The significant elements of the negative impact were unfavorable crude acquisition costs and unfavorable product price realizations relative to the market indicators.

The cost of inventories of crude oil and refinery feedstocks, refined products and merchandise is determined primarily under the LIFO method. There were no material liquidations of LIFO inventories in 2018 and 2017.

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Refining operating costs, excluding depreciation and amortization, decreased \$0.09 per barrel and depreciation and amortization decreased by \$0.11 per barrel primarily due to higher refinery throughput resulting from the addition of the refineries acquired from Andeavor. In addition, these costs decreased due to the dropdown of refining logistics and fuels distribution assets to MPLX on February 1, 2018. Distribution costs, excluding depreciation and amortization, increased \$1.85 per barrel mainly due to fees paid to MPLX of \$2.28 billion in 2018 for services provided related to the dropdown of refining logistics and fuels distribution assets. The per barrel increase, among other items, also reflects the addition of Andeavor's West Coast refineries, which generally have higher operating costs than other regions in which we operate due to specific geographical location and regulatory factors. Refining planned turnaround costs increased \$0.09 per barrel due to costs related to the additional refineries acquired from Andeavor as well as higher turnaround costs at our Detroit and Canton refineries, partially offset by lower turnaround costs at our Galveston Bay and Garyville refineries.

We purchase RINs to satisfy a portion of our RFS2 compliance. Our expenses associated with purchased RINs were \$316 million in 2018 and \$457 million in 2017. The decrease in 2018 was primarily due to lower weighted average RIN costs which more than offset the increase in our RIN obligations resulting from the acquisition of Andeavor.

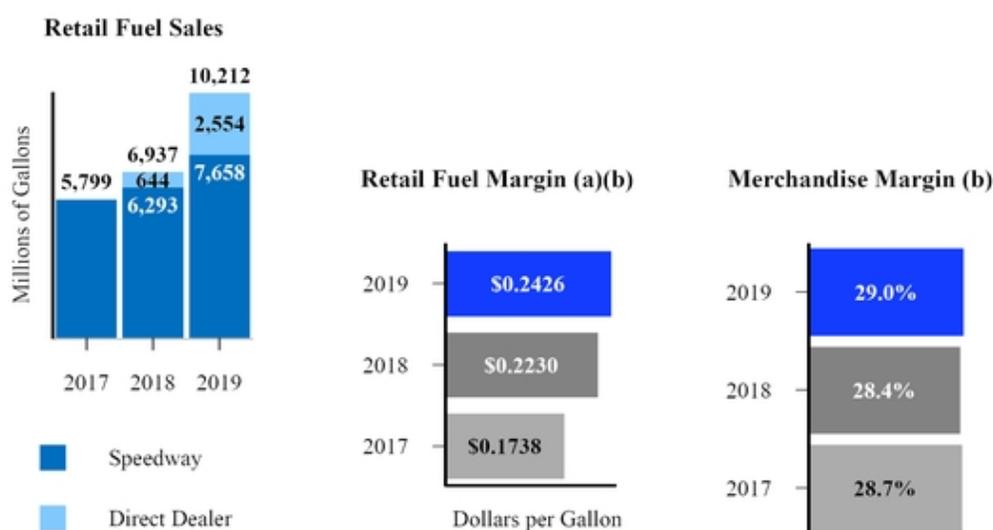
Supplemental Refining & Marketing Statistics

	2019	2018	2017
Refining & Marketing Operating Statistics			
Refined product export sales volumes (mbpd) ^(a)	397	334	297
Crude oil capacity utilization percent ^(b)	96	96	97
Refinery throughputs (mbpd): ^(c)			
Crude oil refined	2,902	2,081	1,765
Other charge and blendstocks	210	193	179
Total	<u>3,112</u>	<u>2,274</u>	<u>1,944</u>
Sour crude oil throughput percent	48	52	59
Sweet crude oil throughput percent	52	48	41
Refined product yields (mbpd): ^(c)			
Gasoline	1,560	1,107	932
Distillates	1,087	773	641
Feedstocks and petrochemicals	315	288	277
Asphalt	87	69	63
Propane	55	41	36
Heavy fuel oil	49	38	37
Total	<u>3,153</u>	<u>2,316</u>	<u>1,986</u>

^(a) Represents fully loaded export cargoes for each time period. These sales volumes are included in the total sales volumes amounts.

^(b) Based on calendar-day capacity, which is an annual average that includes down time for planned maintenance and other normal operating activities.

^(c) Excludes inter-refinery volumes which totaled 110 mbpd, 61 mbpd and 78 mbpd for 2019, 2018 and 2017, respectively, for all regions.



(a) The price paid by consumers or direct dealers less the cost of refined products, including transportation, consumer excise taxes and bankcard processing fees (where applicable), divided by gasoline and distillate sales volume. Excludes LCM inventory valuation adjustments.

(b) See “Non-GAAP Measures” section for reconciliation and further information regarding this non-GAAP measure.

Key Financial and Operating Data	2019	2018	2017
Average fuel sales prices (<i>dollars per gallon</i>)	\$ 2.64	\$ 2.71	\$ 2.34
Merchandise sales (<i>in millions</i>)	\$ 6,305	\$ 5,232	\$ 4,893
Merchandise margin (<i>in millions</i>) ^{(a)(b)}	\$ 1,827	\$ 1,486	\$ 1,402
Same store gasoline sales volume (period over period) ^(c)	(3.3)%	(1.5)%	(1.3)%
Same store merchandise sales (period over period) ^{(c)(d)}	5.4 %	4.2 %	1.2 %
Convenience stores at period-end	3,898	3,923	2,744
Direct dealer locations at period-end	1,068	1,065	—

(a) The price paid by the consumers less the cost of merchandise.

(b) See “Non-GAAP Measures” section for reconciliation and further information regarding this non-GAAP measure.

(c) Same store comparison includes only locations owned at least 13 months.

(d) Excludes cigarettes.

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2019 Compared to 2018

Retail segment revenues increased \$9.52 billion primarily due to increased fuel and merchandise sales resulting from the Andeavor acquisition on October 1, 2018. Total fuel sales increased 3.28 billion gallons primarily due to an increase in Speedway fuel sales volumes of 1.37 billion gallons and the addition of direct dealer fuel sales of 1.91 billion gallons, partially offset by a decrease in average gasoline and distillate selling prices of \$0.07 per gallon. Merchandise sales increased \$1.07 billion.

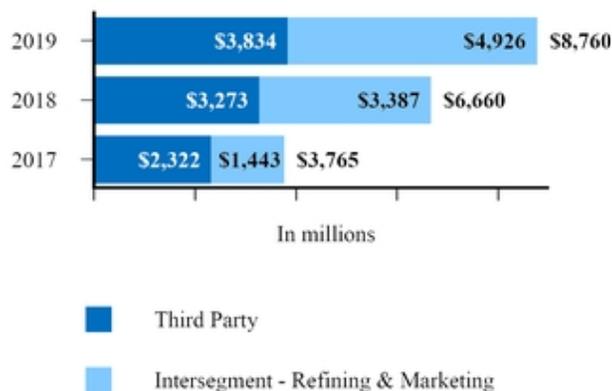
Retail segment income from operations increased \$554 million primarily due to higher light product and merchandise margins largely related to the addition of the Andeavor retail operations. These increases were partially offset by increases in operating expenses and depreciation primarily resulting from the locations acquired from Andeavor.

2018 Compared to 2017

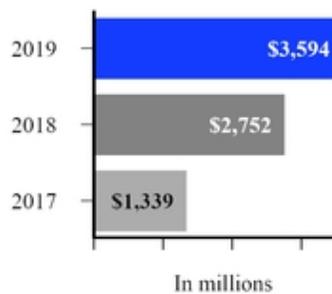
Retail segment revenues increased \$4.52 billion. The majority of this increase is due to the acquisition of Andeavor on October 1, 2018, which added company-owned and operated retail locations, which are included in Speedway fuel sales, and direct dealer locations. The existing Retail business also saw a \$1.18 billion increase in fuel and merchandise sales. Total fuel sales increased \$5.21 billion primarily due to an increase in Speedway fuel sales volumes of 494 million gallons, the addition of direct dealer fuel sales of 644 million gallons and an increase in average gasoline and distillate selling prices of \$0.37 per gallon. Merchandise sales increased \$339 million. The increases in Speedway fuel sales and merchandise sales as well as the addition of sales to direct dealers were primarily due to the acquisition of Andeavor. These increases were partially offset by our election to present revenues net of certain taxes under ASC 606 prospectively from January 1, 2018, which resulted in a decrease in Retail segment revenues of \$844 million in 2018. See Item 8. Financial Statements and Supplementary Data – Note 2 for additional information.

Retail segment income from operations increased \$299 million primarily due to contributions from the Retail operations acquired in the Andeavor acquisition. For locations owned prior to the Andeavor acquisition, increased gasoline and distillate and merchandise margins were more than offset by increased operating expenses.

Midstream Revenues (a)(b)

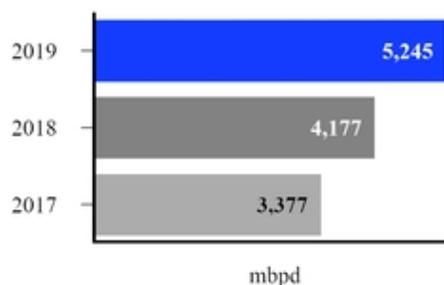


Midstream Income from Operations

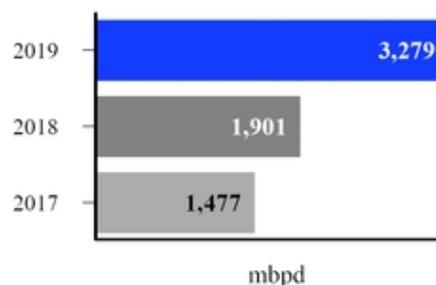


^(a) We adopted ASC 606 (Revenue from Contracts with Customers), as of January 1, 2018, and elected to report certain taxes on a net basis. We applied the standard using the modified retrospective method, and, therefore, comparative information continues to reflect certain taxes on a gross basis.

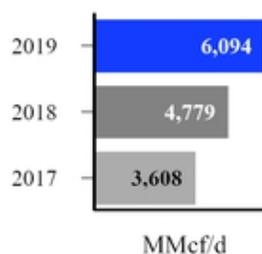
Pipeline Throughputs (a)



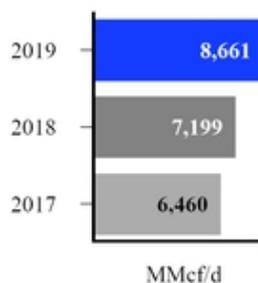
Terminal Throughput



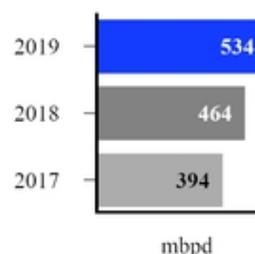
Gathering System Throughput (b)



Natural Gas Processed (b)



C2 (Ethane) + NGLs Fractionated (b)



^(a) On owned common-carrier pipelines, excluding equity method investments.

^(b) Includes amounts related to unconsolidated equity method investments on a 100 percent basis.

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Benchmark Prices	2019	2018	2017
Natural Gas NYMEX HH (\$ per MMBtu)	\$ 2.53	\$ 3.07	\$ 3.02
C2 + NGL Pricing (\$ per gallon) ^(a)	\$ 0.52	\$ 0.78	\$ 0.66

^(a) C2 + NGL pricing based on Mont Belvieu prices assuming an NGL barrel of approximately 35 percent ethane, 35 percent propane, six percent Iso-Butane, 12 percent normal butane and 12 percent natural gasoline.

2019 Compared to 2018

Midstream segment revenue increased \$2.10 billion primarily due to the inclusion of ANDX revenues subsequent to the Andeavor acquisition on October 1, 2018. On July 30, 2019, MPLX acquired ANDX. In addition, 2019 reflects an extra month of fees charged for fuels distribution and refining logistics services provided to our Refining & Marketing segment following the February 1, 2018 dropdown to MPLX. MPLX revenues from refining logistics and fuels distribution services provided to MPC were \$1.48 billion and \$1.36 billion for the years ended December 31, 2019, and 2018, respectively.

In 2019, Midstream segment income from operations increased \$842 million largely due to contributions from ANDX in addition to growth across MPLX's businesses.

2018 Compared to 2017

On February 1, 2018, we completed the dropdown of our refining logistics assets and fuels distribution services to MPLX, which is reported in our Midstream segment. Refining logistics contains the integrated tank farm assets that support MPC's refining operations. Fuels distribution is structured to provide a broad range of scheduling and marketing services as MPC's agent. These new businesses were reported in the Midstream segment prospectively from February 1, 2018. No effect was given to prior periods as these entities were not considered businesses prior to February 1, 2018.

Midstream segment revenue and income from operations increased \$2.90 billion and \$1.41 billion, respectively. Revenue increased \$1.94 billion primarily due to fees charged for fuels distribution and refining logistics services following the February 1, 2018 dropdown to MPLX in addition to services provided by ANDX following the acquisition of Andeavor on October 1, 2018. Revenues also increased by approximately \$502 million due to ASC 606 gross ups. See Item 8. Financial Statements and Supplementary Data – Note 2 for additional information.

In 2018, Midstream segment income from operations includes \$230 million due to contributions from ANDX and \$874 million from the refining logistics assets and fuels distribution services contributed to MPLX on February 1, 2018. Prior period Midstream segment results do not reflect the impact of these new businesses. The incremental \$309 million increase in Midstream segment results in 2018, was driven by record gathered, processed and fractionated volumes and record pipeline throughput volumes for MPLX.

Items not Allocated to Segments

Key Financial Information (in millions)	2019	2018	2017
Items not allocated to segments:			
Corporate and other unallocated items ^(a)	\$ (805)	\$ (502)	\$ (365)
Equity method investment restructuring gains	259	—	—
Transaction-related costs	(160)	(197)	—
Litigation	(22)	—	(29)
Impairments	(1,239)	9	23

^(a) Corporate and other unallocated items consists primarily of MPC's corporate administrative expenses and costs related to certain non-operating assets, except for corporate overhead expenses attributable to MPLX, which are included in the Midstream segment. Corporate overhead expenses are not allocated to the Refining & Marketing and Retail segments.

2019 Compared to 2018

Corporate and other unallocated expenses increased \$303 million in 2019 compared to 2018 largely due to the inclusion of costs and expenses related to Andeavor operations.

Other unallocated items in 2019 include \$259 million of equity method investment restructuring gains which include a \$207 million gain resulting from the agreements executed with Capline LLC to contribute our 33 percent undivided interest in the Capline pipeline system in exchange for a 33 percent ownership interest in

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Capline LLC. We also recognized a \$52 million gain due to the formation of a new joint venture with The Andersons as the fair value of our interest in the new venture exceeded our contribution to the venture. See Item 8. Financial Statements and Supplementary Data –Note 14 for additional information.

Other unallocated items also include transaction-related costs of \$160 million and a litigation reserve adjustment of \$22 million. The transaction-related costs recognized during the year include the recognition of an obligation for vacation benefits provided to former Andeavor employees in the first quarter as well as employee retention, severance and other costs. Beginning in the fourth quarter of 2019, transaction costs also include costs incurred in connection with the Speedway separation, Midstream strategic review and other related efforts. Effective October 1, 2019, we discontinued reporting Andeavor transaction-related costs separately as one year has passed since the Andeavor acquisition and any remaining costs are immaterial.

Impairment charges of \$1.24 billion primarily relate to MPLX goodwill associated with the ANDX gathering and processing businesses acquired as part of the Andeavor acquisition. See Item 8. Financial Statements and Supplementary Data – Note 16 for additional information.

2018 Compared to 2017

Corporate and other unallocated expenses increased \$137 million in 2018 compared to 2017 largely due to increased costs and expenses for the combined company after the Andeavor acquisition on October 1, 2018.

Other unallocated items in 2018 include \$197 million of transaction-related costs for financial advisors, employee severance and other costs associated with the Andeavor acquisition and MPC's share of gains from the sale of assets remaining from the canceled Sandpiper pipeline project. Other unallocated items in 2017 include an \$86 million litigation charge, a litigation benefit of \$57 million and a benefit of \$23 million related to MPC's share of gains from the sale of assets remaining from the canceled Sandpiper pipeline project.

Non-GAAP Financial Measures

Management uses certain financial measures to evaluate our operating performance that are calculated and presented on the basis of methodologies other than in accordance with GAAP. We believe these non-GAAP financial measures are useful to investors and analysts to assess our ongoing financial performance because, when reconciled to its most comparable GAAP financial measure, they provide improved comparability between periods through the exclusion of certain items that we believe are not indicative of our core operating performance and that may obscure our underlying business results and trends. These measures should not be considered a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP, and our calculations thereof may not be comparable to similarly titled measures reported by other companies. The non-GAAP financial measures we use are as follows:

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Refining & Marketing Margin

Refining margin is defined as sales revenue less the cost of refinery inputs and purchased products and excludes any LCM inventory market adjustment and other items reflected in the table below.

Reconciliation of Refining & Marketing income from operations to Refining & Marketing margin

(in millions)

	2019	2018	2017
Refining & Marketing income from operations	\$ 2,367	\$ 2,481	\$ 2,321
Plus (Less):			
Refining operating costs ^(a)	6,421	4,137	3,612
Refining depreciation and amortization	1,465	1,089	1,013
Refining planned turnaround costs	740	664	501
Distribution costs ^(b)	5,117	3,512	1,686
Distribution depreciation and amortization	200	85	69
Income from equity method investments	(11)	(15)	(17)
Net gain on disposal of assets	(6)	(4)	5
Other income	(43)	(125)	(249)
Biodiesel tax credit	(93)	—	—
Refining & Marketing margin	<u>\$ 16,157</u>	<u>\$ 11,824</u>	<u>\$ 8,941</u>

^(a) Includes refining operating and major maintenance costs. Excludes planned turnaround and depreciation and amortization expense.

^(b) Includes fees paid to MPLX of \$3.22 billion and \$2.28 billion for the years ended December 31, 2019, and 2018, respectively. Fees paid to MPLX for 2017 are prior to the dropdown of refining logistics and fuels distribution assets and are not comparable. Excludes depreciation and amortization expense.

Retail Fuel Margin

Retail fuel margin is defined as the price paid by consumers or direct dealers less the cost of refined products, including transportation, consumer excise taxes and bankcard processing fees (where applicable) and excluding any LCM inventory market adjustment.

Retail Merchandise Margin

Retail merchandise margin is defined as the price paid by consumers less the cost of merchandise.

Reconciliation of Retail income from operations to Retail total margin

(in millions)

	2019	2018	2017
Retail income from operations	\$ 1,582	\$ 1,028	\$ 729
Plus (Less):			
Operating, selling, general and administrative expenses	2,456	1,796	1,533
Depreciation and amortization	528	353	275
Income from equity method investments	(82)	(74)	(69)
Net gain on disposal of assets	(31)	(17)	(14)
Other income	(44)	(7)	(14)
Retail total margin	<u>\$ 4,409</u>	<u>\$ 3,079</u>	<u>\$ 2,440</u>
Retail total margin:			
Fuel margin	\$ 2,478	\$ 1,547	\$ 1,008
Merchandise margin	1,827	1,486	1,402
Other margin	104	46	30
Retail total margin	<u>\$ 4,409</u>	<u>\$ 3,079</u>	<u>\$ 2,440</u>

LIQUIDITY AND CAPITAL RESOURCES**Cash Flows**

Our cash and cash equivalents balance was \$1.53 billion at December 31, 2019 compared to \$1.69 billion at December 31, 2018. Net cash provided by (used in) operating activities, investing activities and financing activities for the past three years is presented in the following table.

<i>(In millions)</i>	2019	2018	2017
Net cash provided by (used in):			
Operating activities	\$ 9,441	\$ 6,158	\$ 6,612
Investing activities	(6,261)	(7,670)	(3,398)
Financing activities	(3,376)	222	(1,091)
Total	<u>\$ (196)</u>	<u>\$ (1,290)</u>	<u>\$ 2,123</u>

Net cash provided by operating activities increased \$3.28 billion in 2019 compared to 2018, primarily due to an increase in operating results, excluding impairment expenses, and favorable change in working capital of \$458 million. Net cash provided by operating activities decreased \$454 million in 2018 compared to 2017, primarily due to an unfavorable change in working capital of \$2.28 billion partially offset by an increase in operating results. The above changes in working capital exclude changes in short-term debt.

For 2019, changes in working capital were a net \$118 million source of cash, primarily due to the effect of increases in energy commodity prices and volumes on working capital. Accounts payable increased primarily due to higher crude oil payable price and volumes. Current receivables increased primarily due to increases in crude and refined product receivable volumes and prices. Inventories increased primarily due to increases in refined product and materials & supplies inventories partially offset by a decrease in crude inventory.

For 2018, changes in working capital were a net \$340 million use of cash, primarily due to the effect of decreases in energy commodity prices on working capital. Accounts payable decreased primarily due to lower crude oil payable prices. Inventories decreased primarily due to a decrease in crude and refined product inventories. Current receivables decreased primarily due to lower crude oil receivable prices. All of these effects exclude the working capital acquired in connection with the acquisition of Andeavor.

For 2017, changes in working capital were a net \$1.94 billion source of cash, primarily due to the effect of increases in energy commodity prices on working capital. Accounts payable increased primarily due to higher crude oil payable volumes and prices; current receivables increased primarily due to higher crude oil and refined product receivable prices and volumes; and inventories decreased primarily due to lower crude oil inventory volumes.

Cash flows used in investing activities decreased \$1.41 billion in 2019 compared to 2018 and increased \$4.27 billion in 2018 compared to 2017.

- Cash used for additions to property, plant and equipment was primarily due to spending in our Midstream segment. See discussion of capital expenditures and investments under the “Capital Spending” section.
- Cash used for acquisitions of \$3.82 billion in 2018 primarily includes cash paid to Andeavor stockholders of \$3.5 billion in connection with the acquisition of Andeavor on October 1, 2018.
- Net investments were a use of cash of \$966 million in 2019 compared to \$393 million in 2018 and \$743 million in 2017. Investments in 2019 are largely due to investments in connection with the Gray Oak Pipeline, which began initial start-up in the fourth quarter, the Wink to Webster Pipeline, the Whistler Pipeline and other Midstream projects. Investments in 2017 primarily include MPLX’s \$500 million investment to acquire a partial interest in the Bakken Pipeline system.
- Cash provided by disposal of assets totaled \$127 million, \$54 million and \$79 million in 2019, 2018 and 2017, respectively. The increase in 2019 is primarily due to proceeds from the sale of assets in our Retail segment.

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The consolidated statements of cash flows exclude changes to the consolidated balance sheets that did not affect cash. A reconciliation of additions to property, plant and equipment to total capital expenditures and investments follows for each of the last three years.

<i>(In millions)</i>	2019	2018	2017
Additions to property, plant and equipment per consolidated statements of cash flows	\$ 5,374	\$ 3,578	\$ 2,732
Asset retirement expenditures	1	8	2
Increase (decrease) in capital accruals	(306)	309	67
Total capital expenditures	5,069	3,895	2,801
Investments in equity method investees	1,064	409	305
Total capital expenditures and investments	\$ 6,133	\$ 4,304	\$ 3,106

Financing activities were a use of cash of \$3.38 billion in 2019, a source of cash of \$222 million in 2018 and a use of cash of \$1.09 billion in 2017.

- Long-term debt borrowings and repayments, including debt issuance costs, were a net \$1.18 billion source of cash in 2019 compared to a \$5.36 billion source of cash in 2018 and a \$2.24 billion source of cash in 2017. During 2019, MPLX issued \$2 billion of floating rate notes, the proceeds of which were used to repay various outstanding MPLX borrowings and for general business purposes, and had net borrowings of \$1 billion under its term loan agreement. In addition, MPLX repaid \$500 million of senior notes. During 2018, MPLX issued \$7.75 billion of senior notes, redeemed \$750 million of senior notes, borrowed and repaid \$4.1 billion under the MPLX term loan, and borrowed and repaid \$1.41 billion and \$1.92 billion, respectively, under the MPLX Credit Agreement. In addition, MPC redeemed \$600 million of senior notes. During 2017, MPLX issued \$2.25 billion of senior notes, borrowed \$505 million under the MPLX bank revolving credit agreement, repaid the remaining \$250 million under the MPLX term loan agreement and we repaid the remaining \$200 million balance under the MPC term loan agreement. See Item 8. Financial Statements and Supplementary Data – Note 19 for additional information on our long-term debt.
- Cash used in common stock repurchases totaled \$1.95 billion in 2019, \$3.29 billion in 2018, and \$2.37 billion in 2017. See the “Capital Requirements” section for further discussion of our stock repurchases.
- Cash used in dividend payments totaled \$1.40 billion in 2019, \$954 million in 2018 and \$773 million in 2017. The increase in 2019 was primarily due a net increase in the number of shares outstanding due to the approximate 239.8 million shares issued in connection with the Andeavor acquisition and a \$0.28 per share increase in our base dividend, partially offset by a reduction of shares resulting from share repurchases. The increase in 2018 was primarily due to an increase in our base dividend in addition to a net increase in the number of shares of our common stock outstanding due to issuances related to the Andeavor acquisition, partially offset by share repurchases. Dividends per share were \$2.12 in 2019, \$1.84 in 2018 and \$1.52 in 2017.
- Distributions to noncontrolling interests increased \$342 million in 2019 compared to 2018 and \$209 million in 2018 compared to 2017, primarily due to an increases in MPLX units outstanding and MPLX’s distribution per common unit. Distributions to noncontrolling interests included ANDX’s distribution per common unit paid in the first and second quarter of 2019, prior to the merger of ANDX and MPLX, and the fourth quarter of 2018 subsequent to the acquisition of Andeavor on October 1, 2018.
- Cash proceeds from the issuance of MPLX common units were \$473 million in 2017. See Item 8. Financial Statements and Supplementary Data – Note 4 for further discussion of MPLX.
- Cash used in financing activities in 2017 included a portion of the payments to the seller of the Galveston Bay refinery under the contingent earnout provisions of the purchase and sale agreement.

Derivative Instruments

See Item 7A. Quantitative and Qualitative Disclosures about Market Risk for a discussion of derivative instruments and associated market risk.

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Capital Resources

MPC, Excluding MPLX

We control MPLX through our ownership of the general partner, however, the creditors of MPLX do not have recourse to MPC's general credit through guarantees or other financial arrangements. The assets of MPLX can only be used to settle its own obligations and its creditors have no recourse to our assets. Therefore, in the following table, we present the liquidity of MPC, excluding MPLX. MPLX liquidity is discussed in the following section.

Our liquidity, excluding MPLX, totaled \$8.3 billion at December 31, 2019 consisting of:

<i>(In millions)</i>	December 31, 2019		
	Total Capacity	Outstanding Borrowings	Available Capacity
Bank revolving credit facility ^(a)	\$ 5,000	\$ 1	\$ 4,999
364 day bank revolving credit facility	1,000	—	1,000
Trade receivables facility	750	—	750
Total	<u>\$ 6,750</u>	<u>\$ 1</u>	<u>\$ 6,749</u>
Cash and cash equivalents ^(b)			1,512
Total liquidity			<u>\$ 8,261</u>

^(a) Outstanding borrowings include \$1 million in letters of credit outstanding under this facility. Excludes MPLX's \$3.5 billion bank revolving credit facility, which had no borrowings and no letters of credit outstanding as of December 31, 2019.

^(b) Excludes \$15 million of MPLX cash and cash equivalents.

Because of the alternatives available to us, including internally generated cash flow and access to capital markets, including a commercial paper program, we believe that our short-term and long-term liquidity is adequate to fund not only our current operations, but also our near-term and long-term funding requirements, including capital spending programs, the repurchase of shares of our common stock, dividend payments, defined benefit plan contributions, repayment of debt maturities and other amounts that may ultimately be paid in connection with contingencies.

Commercial Paper – We established a commercial paper program that allows us to have a maximum of \$2 billion in commercial paper outstanding, with maturities up to 397 days from the date of issuance. We do not intend to have outstanding commercial paper borrowings in excess of available capacity under our bank revolving credit facilities. At December 31, 2019, we had no amounts outstanding under the commercial paper program.

MPC Bank Revolving Credit Facilities – On August 28, 2018, in connection with the Andeavor acquisition, MPC entered into a credit agreement with a syndicate of lenders providing for a \$5 billion five-year revolving credit facility that expires in 2023. The five-year credit agreement became effective on October 1, 2018. On July 26, 2019, MPC entered into a credit agreement with a syndicate of lenders providing for a new \$1 billion 364-day revolving credit facility that became effective upon the expiration of MPC's previously existing \$1 billion 364-day revolving credit facility in September 2019. The new 364-day credit agreement contains substantially the same terms and conditions as our previously existing 364-day revolving credit facility and will expire in September 2020. There were no borrowings and approximately \$1 million of letters of credit outstanding under these facilities at December 31, 2019.

Trade receivables facility – Our trade receivables facility has a borrowing capacity of \$750 million (depending on the amount of our eligible domestic trade accounts receivable). On July 19, 2019, we amended our trade receivables facility to extend the maturity date to July 16, 2021. As of December 31, 2019, eligible trade receivables supported borrowings of \$750 million. There were no borrowings outstanding at December 31, 2019. Availability under our trade receivables facility is primarily a function of refined product selling prices.

The MPC credit agreements and our trade receivables facility contain representations and warranties, affirmative and negative covenants and events of default that we consider usual and customary for agreements of these types. The financial covenant requires us to maintain, as of the last day of each fiscal quarter, a ratio of Consolidated Net Debt to Total Capitalization (as defined in the MPC credit agreements) of no greater than 0.65 to 1.00. Other covenants restrict us and/or certain of our subsidiaries from incurring debt, creating liens

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on assets and entering into transactions with affiliates. As of December 31, 2019, we were in compliance with the covenants contained in the MPC credit agreements and our trade receivables facility, including the financial covenant with a ratio of Consolidated Net Debt to Total Capitalization of 0.21 to 1.00.

Our intention is to maintain an investment-grade credit profile. As of February 1, 2020, the credit ratings on our senior unsecured debt are as follows.

<u>Company</u>	<u>Rating Agency</u>	<u>Rating</u>
MPC	Moody's	Baa2 (negative outlook)
	Standard & Poor's	BBB (stable outlook)
	Fitch	BBB (stable outlook)

The ratings reflect the respective views of the rating agencies. Although it is our intention to maintain a credit profile that supports an investment-grade rating, there is no assurance that these ratings will continue for any given period of time. The ratings may be revised or withdrawn entirely by the rating agencies if, in their respective judgments, circumstances so warrant.

None of the MPC credit agreements or our trade receivables facility contains credit rating triggers that would result in the acceleration of interest, principal or other payments in the event that our credit ratings are downgraded. However, any downgrades of our senior unsecured debt could increase the applicable interest rates, yields and other fees payable under such agreements and may limit our flexibility to obtain financing in the future, including to refinance existing indebtedness. In addition, a downgrade of our senior unsecured debt rating to below investment-grade levels could, under certain circumstances, decrease the amount of trade receivables that are eligible to be sold under our trade receivables facility, impact our ability to purchase crude oil on an unsecured basis and could result in us having to post letters of credit under existing transportation services or other agreements.

See Item 8. Financial Statements and Supplementary Data – Note 19 for further discussion of our debt.

MPLX

MPLX's liquidity totaled \$4.42 billion at December 31, 2019 consisting of:

<i>(In millions)</i>	December 31, 2019		
	Total Capacity	Outstanding Borrowings	Available Capacity
MPLX LP - bank revolving credit facility	\$ 3,500	\$ —	\$ 3,500
MPLX Term Loan Agreement	1,000	1,000	—
MPC Intercompany Loan Agreement	1,500	594	906
Total	\$ 6,000	\$ 1,594	\$ 4,406
Cash and cash equivalents			15
Total liquidity			\$ 4,421

On September 26, 2019, MPLX entered into a term loan agreement which provides for a committed term loan facility for up to an aggregate of \$1 billion available to be drawn in up to four separate borrowings, subject to the satisfaction or waiver of certain customary conditions. Borrowings under the term loan agreement bear interest, at MPLX's election, at either the Adjusted LIBO Rate (as defined in the term loan agreement) plus a margin or the Alternate Base Rate (as defined in the term loan agreement) plus a margin. The applicable margins to the benchmark interest rates fluctuate from time-to-time based on our credit ratings. The proceeds from borrowings under the term loan agreement were used to fund the repayment of MPLX's existing indebtedness and for general business purposes. Amounts borrowed under the term loan agreement will be due and payable on September 26, 2021.

On September 9, 2019, MPLX issued \$2 billion aggregate principal amount of floating rate senior notes in a public offering, consisting of \$1 billion aggregate principal amount of notes due September 2021 and \$1 billion aggregate principal amount of notes due September 2022. The proceeds were used to repay various outstanding MPLX borrowings and for general business purposes. The interest rate applicable to the floating rate senior notes due September 2021 is LIBOR plus 0.9 percent per annum while the interest rate applicable to the

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floating rate senior notes due September 2022 is LIBOR plus 1.1 percent per annum. Interest is payable in March, June, September and December, commencing on December 9, 2019. Both series of floating rate notes are callable, in whole or in part, at par plus accrued and unpaid interest at any time on or after September 10, 2020.

In connection with MPLX's acquisition of ANDX on July 30, 2019, MPLX assumed ANDX's outstanding senior notes, which had an aggregate principal amount of \$3.75 billion, with interest rates ranging from 3.500 percent to 6.375 percent and maturity dates ranging from 2019 to 2047. On September 23, 2019, approximately \$3.06 billion aggregate principal amount of ANDX's outstanding senior notes were exchanged for new unsecured senior notes issued by MPLX having the same maturity and interest rates as the ANDX senior notes in an exchange offer and consent solicitation undertaken by MPLX, leaving approximately \$690 million aggregate principal of outstanding senior notes issued by ANDX. Of this, \$500 million was related to the 5.500 percent unsecured senior notes due 2019. The principal amount of \$500 million and accrued interest of \$14 million was paid on October 15, 2019, which included interest through the payoff date.

MPLX Credit Agreement – Upon the completion of MPLX's acquisition of ANDX on July 30, 2019, the MPLX bank revolving credit facility was amended and restated to increase the borrowing capacity to \$3.5 billion and to extend the maturity date to July 30, 2024. The ANDX revolving and dropdown credit facilities were terminated and all outstanding balances were repaid and funded with borrowings under the amended and restated MPLX \$3.5 billion bank revolving credit facility. There were no borrowings or letters of credit outstanding under this facility at December 31, 2019.

The MPLX credit agreement and term loan agreement contain certain representations and warranties, affirmative and restrictive covenants and events of default that we consider to be usual and customary for an agreement of this type. The financial covenant requires MPLX to maintain a ratio of Consolidated Total Debt as of the end of each fiscal quarter to Consolidated EBITDA (both as defined in the MPLX credit agreement) for the prior four fiscal quarters of no greater than 5.0 to 1.0 (or 5.5 to 1.0 for up to two fiscal quarters following certain acquisitions). Consolidated EBITDA is subject to adjustments for certain acquisitions completed and capital projects undertaken during the relevant period. Other covenants restrict MPLX and/or certain of its subsidiaries from incurring debt, creating liens on assets and entering into transactions with affiliates. As of December 31, 2019, MPLX was in compliance with the covenants, including the financial covenant with a ratio of Consolidated Total Debt to Consolidated EBITDA of 3.9 to 1.0.

Our intention is to maintain an investment-grade credit profile for MPLX. As of February 1, 2020, the credit ratings on MPLX's senior unsecured debt are as follows.

<u>Company</u>	<u>Rating Agency</u>	<u>Rating</u>
MPLX	Moody's	Baa2 (negative outlook)
	Standard & Poor's	BBB (stable outlook)
	Fitch	BBB (stable outlook)

The ratings reflect the respective views of the rating agencies. Although it is our intention to maintain a credit profile that supports an investment-grade rating for MPLX, there is no assurance that these ratings will continue for any given period of time. The ratings may be revised or withdrawn entirely by the rating agencies if, in their respective judgments, circumstances so warrant.

Neither the MPLX credit agreement or term loan agreement contains credit rating triggers that would result in the acceleration of interest, principal or other payments in the event that MPLX credit ratings are downgraded. However, any downgrades of MPLX senior unsecured debt could increase the applicable interest rates, yields and other fees payable under such agreements. In addition, a downgrade of MPLX senior unsecured debt ratings to below investment-grade levels may limit MPLX's ability to obtain future financing, including to refinance existing indebtedness.

See Item 8. Financial Statements and Supplementary Data – Note 19 for further discussion of MPLX's debt.

Capital Requirements

Capital Spending

MPC's capital investment plan for 2020 totals approximately \$2.6 billion for capital projects and investments, excluding MPLX, capitalized interest and acquisitions. MPC's 2020 capital investment plan includes all of the planned capital spending for Refining & Marketing, Retail and Corporate as well as a portion of the planned capital investments in Midstream. The remainder of the planned capital spending for Midstream reflects the capital investment plan for MPLX. We continuously evaluate our capital plan and make changes as conditions warrant. The 2020 capital investment plan for MPC and MPLX and capital expenditures and investments for each of the last three years are summarized by segment below.

<i>(In millions)</i>	2020 Plan	2019	2018	2017
Capital expenditures and investments: ^(a)				
MPC, excluding MPLX				
Refining & Marketing	\$ 1,550	\$ 1,999	\$ 1,057	\$ 832
Retail	550	607	460	381
Midstream - Other	300	360	70	36
Corporate and Other ^(b)	200	237	157	138
Total MPC, excluding MPLX	<u>\$ 2,600</u>	<u>\$ 3,203</u>	<u>\$ 1,744</u>	<u>\$ 1,387</u>
Midstream - MPLX	\$ 1,750	\$ 2,930	\$ 2,560	\$ 1,719

^(a) Capital expenditures include changes in capital accruals.

^(b) Includes capitalized interest of \$137 million, \$80 million and \$55 million for 2019, 2018 and 2017, respectively. The 2020 capital investment plan excludes capitalized interest.

Refining & Marketing

The Refining & Marketing segment's forecasted 2020 capital spending and investments is approximately \$1.6 billion. This amount includes approximately \$1.1 billion of growth capital focused on refinery optimization, production of higher value products, increased capacity to upgrade residual fuel oil and expanded export capacity. Maintenance capital is expected to be \$450 million.

Major capital projects completed over the last three years have prepared us to increase our diesel production, process light crude oil, increase our export capabilities and meet the transportation fuel regulatory mandate (Tier 3 fuel standards). In addition, the STAR investment project to transform our Galveston Bay refinery into a world-class refining complex is progressing according to plan and is scheduled to complete in 2022.

Retail

The Retail segment's 2020 capital forecast of approximately \$550 million is focused on continued conversion of acquired locations to the Speedway brand and systems, growth in existing and new markets, dealer sites, commercial fueling/diesel expansion, food service through store remodels and high quality acquisitions.

Major capital projects over the last three years included converting recently acquired locations to the Speedway brand and systems, building new store locations, remodeling and rebuilding existing locations in core markets and building out our network of commercial fueling lane locations to capitalize on diesel demand growth.

Midstream

MPLX's capital investment plan includes \$1.5 billion of organic growth capital and approximately \$250 million of maintenance capital. This growth plan includes the continued expansion of the Mt. Airy terminal in addition to projects which increase MPLX's long-haul crude oil, natural gas and NGL pipeline transportation capabilities. Many of MPLX's projects also increase its export capabilities which provides for additional flexibility and competitive advantages. MPLX's growth plan also includes the addition of approximately 580 MMcf/d of processing capacity at three gas processing plants, one in the Marcellus and two in the Southwest, and approximately 80 mbpd of fractionation capacity in the Marcellus and Utica basins.

Major capital projects over the last three years included investments for the development of natural gas and gas liquids infrastructure to support MPLX's producer customers, primarily in the Marcellus and Utica shale regions, development of various crude oil and refined petroleum products infrastructure projects, including a

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build-out of Utica Shale infrastructure in connection with the Cornerstone Pipeline, a butane cavern in Robinson, Illinois, and a tank farm expansion in Texas City, Texas.

The remaining Midstream segment's forecasted 2020 capital spend, excluding MPLX, is approximately \$300 million which primarily relates to investments in equity affiliates.

Corporate and Other

The 2020 capital forecast includes approximately \$200 million to support corporate activities. Major projects over the last three years included an expansion project for our corporate headquarters and upgrades to information technology systems.

Dividends

On January 27, 2020, we announced our board of directors approved a \$0.58 per share dividend, payable March 10, 2020 to shareholders of record at the close of business on February 19, 2020.

Share Repurchases

Since January 1, 2012, our board of directors has approved \$18.0 billion in total share repurchase authorizations and we have repurchased a total of \$15.0 billion of our common stock, leaving approximately \$3.0 billion available for repurchases as of December 31, 2019. Under these authorizations, we have acquired 327 million shares at an average cost per share of \$46.05. The table below summarizes our total share repurchases. See Item 8. Financial Statements and Supplementary Data – Note 9 for further discussion of the share repurchase plans.

<u>(In millions, except per share data)</u>	2019	2018	2017
Number of shares repurchased	34	47	44
Cash paid for shares repurchased	\$ 1,950	\$ 3,287	\$ 2,372
Average cost per share	\$ 58.87	\$ 69.46	\$ 53.85

We may utilize various methods to effect the repurchases, which could include open market repurchases, negotiated block transactions, tender offers, accelerated share repurchases or open market solicitations for shares, some of which may be effected through Rule 10b5-1 plans. The timing and amount of future repurchases, if any, will depend upon several factors, including market and business conditions, and such repurchases may be discontinued at any time.

Other Capital Requirements

In 2019, we made contributions totaling \$270 million to our funded pension plans. For 2020, we have an immaterial amount of required funding, but we may also make voluntary contributions to our funded pension plans at our discretion.

We may, from time to time, repurchase notes in the open market, in tender offers, in privately-negotiated transactions or otherwise in such volumes, at such prices and upon such other terms as we deem appropriate.

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Contractual Cash Obligations

The table below provides aggregated information on our consolidated obligations to make future payments under existing contracts as of December 31, 2019. The contractual obligations detailed below do not include our contractual obligations to MPLX under various fee-based commercial agreements as these transactions are eliminated in the consolidated financial statements.

<i>(In millions)</i>	Total	2020	2021-2022	2023-2024	Later Years
Long-term debt ^(a)	\$ 46,013	\$ 1,971	\$ 7,711	\$ 7,051	\$ 29,280
Finance lease obligations ^(b)	987	96	182	182	527
Operating lease obligations	2,833	698	992	509	634
Purchase obligations: ^(c)					
Crude oil, feedstock, refined product and renewable fuel contracts ^(d)	10,011	9,645	225	47	94
Transportation and related contracts	2,298	468	829	532	469
Contracts to acquire property, plant and equipment	1,617	1,558	59	—	—
Service, materials and other contracts ^(e)	2,693	644	779	505	765
Total purchase obligations	16,619	12,315	1,892	1,084	1,328
Other long-term liabilities reported in the consolidated balance sheet ^(f)	2,889	311	552	555	1,471
Total contractual cash obligations	\$ 69,341	\$ 15,391	\$ 11,329	\$ 9,381	\$ 33,240

^(a) Includes interest payments of \$17.21 billion for our senior notes and the MPLX senior notes, commitment and administrative fees for our credit agreements, the MPLX credit agreement and term loan agreement and our trade receivables facility.

^(b) Finance lease obligations represent future minimum payments.

^(c) Includes both short- and long-term purchases obligations.

^(d) These contracts include variable price arrangements. For purposes of this disclosure we have estimated prices to be paid primarily based on futures curves for the commodities to the extent available.

^(e) Primarily includes contracts to purchase services such as utilities, supplies and various other maintenance and operating services.

^(f) Primarily includes obligations for pension and other postretirement benefits including medical and life insurance, which we have estimated through 2029. See Item 8. Financial Statements and Supplementary Data – Note 23.

Off-Balance Sheet Arrangements

Off-balance sheet arrangements comprise those arrangements that may potentially impact our liquidity, capital resources and results of operations, even though such arrangements are not recorded as liabilities under accounting principles generally accepted in the United States. Our off-balance sheet arrangements are limited to indemnities and guarantees that are described below. Although these arrangements serve a variety of our business purposes, we are not dependent on them to maintain our liquidity and capital resources, and we are not aware of any circumstances that are reasonably likely to cause the off-balance sheet arrangements to have a material adverse effect on liquidity and capital resources.

We have provided various guarantees related to equity method investees. In conjunction with our spinoff from Marathon Oil, we entered into various indemnities and guarantees to Marathon Oil. These arrangements are described in Item 8. Financial Statements and Supplementary Data – Note 26.

TRANSACTIONS WITH RELATED PARTIES

We believe that transactions with related parties were conducted on terms comparable to those with unaffiliated parties. See Item 8. Financial Statements and Supplementary Data – Note 7 for discussion of activity with related parties.

ENVIRONMENTAL MATTERS AND COMPLIANCE COSTS

We have incurred and may continue to incur substantial capital, operating and maintenance, and remediation expenditures as a result of environmental laws and regulations. If these expenditures, as with all costs, are not ultimately reflected in the prices of our products and services, our operating results will be adversely affected.

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We believe that substantially all of our competitors must comply with similar environmental laws and regulations. However, the specific impact on each competitor may vary depending on a number of factors, including the age and location of its operating facilities, marketing areas, production processes and whether it is also engaged in the petrochemical business or the marine transportation of crude oil and refined products.

Legislation and regulations pertaining to fuel specifications, climate change and greenhouse gas emissions have the potential to materially adversely impact our business, financial condition, results of operations and cash flows, including costs of compliance and permitting delays. The extent and magnitude of these adverse impacts cannot be reliably or accurately estimated at this time because specific regulatory and legislative requirements have not been finalized and uncertainty exists with respect to the measures being considered, the costs and the time frames for compliance, and our ability to pass compliance costs on to our customers. For additional information see Item 1A. Risk Factors.

Our environmental expenditures, including non-regulatory expenditures, for each of the last three years were:

<i>(In millions)</i>	2019	2018	2017
Capital	\$ 555	\$ 380	\$ 343
Compliance: ^(a)			
Operating and maintenance	580	525	413
Remediation ^(b)	78	52	36
Total	<u>\$ 1,213</u>	<u>\$ 957</u>	<u>\$ 792</u>

^(a) Based on the American Petroleum Institute's definition of environmental expenditures.

^(b) These amounts include spending charged against remediation reserves, where permissible, but exclude non-cash provisions recorded for environmental remediation.

We accrue for environmental remediation activities when the responsibility to remediate is probable and the amount of associated costs can be reasonably estimated. As environmental remediation matters proceed toward ultimate resolution or as additional remediation obligations arise, charges in excess of those previously accrued may be required.

New or expanded environmental requirements, which could increase our environmental costs, may arise in the future. It is not possible to predict all of the ultimate costs of compliance, including remediation costs that may be incurred and penalties that may be imposed.

Our environmental capital expenditures accounted for 11 percent, 10 percent and 12 percent of capital expenditures, for 2019, 2018 and 2017, respectively, excluding acquisitions. Our environmental capital expenditures are expected to approximate \$160 million, or 4 percent, of total planned capital expenditures in 2020. Actual expenditures may vary as the number and scope of environmental projects are revised as a result of improved technology or changes in regulatory requirements and could increase if additional projects are identified or additional requirements are imposed.

For more information on environmental regulations that impact us, or could impact us, see Item 1. Business – Environmental Matters, Item 1A. Risk Factors and Item 3. Legal Proceedings.

CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements in accordance with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the consolidated financial statements and the reported amounts of revenues and expenses during the respective reporting periods. Accounting estimates are considered to be critical if (1) the nature of the estimates and assumptions is material due to the levels of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change; and (2) the impact of the estimates and assumptions on financial condition or operating performance is material. Actual results could differ from the estimates and assumptions used.

Fair Value Estimates

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. There are three approaches for measuring the fair value of assets and liabilities: the market approach, the income approach and the cost approach, each of which includes multiple valuation techniques. The market approach uses prices and other relevant information

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generated by market transactions involving identical or comparable assets or liabilities. The income approach uses valuation techniques to measure fair value by converting future amounts, such as cash flows or earnings, into a single present value amount using current market expectations about those future amounts. The cost approach is based on the amount that would currently be required to replace the service capacity of an asset. This is often referred to as current replacement cost. The cost approach assumes that the fair value would not exceed what it would cost a market participant to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence.

The fair value accounting standards do not prescribe which valuation technique should be used when measuring fair value and does not prioritize among the techniques. These standards establish a fair value hierarchy that prioritizes the inputs used in applying the various valuation techniques. Inputs broadly refer to the assumptions that market participants use to make pricing decisions, including assumptions about risk. Level 1 inputs are given the highest priority in the fair value hierarchy while Level 3 inputs are given the lowest priority. The three levels of the fair value hierarchy are as follows:

- Level 1 – Observable inputs that reflect unadjusted quoted prices for identical assets or liabilities in active markets as of the measurement date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.
- Level 2 – Observable market-based inputs or unobservable inputs that are corroborated by market data. These are inputs other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the measurement date.
- Level 3 – Unobservable inputs that are not corroborated by market data and may be used with internally developed methodologies that result in management’s best estimate of fair value.

Valuation techniques that maximize the use of observable inputs are favored. Assets and liabilities are classified in their entirety based on the lowest priority level of input that is significant to the fair value measurement. The assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the placement of assets and liabilities within the levels of the fair value hierarchy. We use an income or market approach for recurring fair value measurements and endeavor to use the best information available. See Item 8. Financial Statements and Supplementary Data – Note 17 for disclosures regarding our fair value measurements.

Significant uses of fair value measurements include:

- assessment of impairment of long-lived assets;
- assessment of impairment of intangible assets;
- assessment of impairment of goodwill;
- assessment of impairment of equity method investments;
- recorded values for assets acquired and liabilities assumed in connection with acquisitions; and
- recorded values of derivative instruments.

Impairment Assessments of Long-Lived Assets, Intangible Assets, Goodwill and Equity Method Investments

Fair value calculated for the purpose of testing our long-lived assets, intangible assets, goodwill and equity method investments for impairment is estimated using the expected present value of future cash flows method and comparative market prices when appropriate. Significant judgment is involved in performing these fair value estimates since the results are based on forecasted financial information prepared using significant assumptions including:

- *Future margins on products produced and sold.* Our estimates of future product margins are based on our analysis of various supply and demand factors, which include, among other things, industry-wide capacity, our planned utilization rate, end-user demand, capital expenditures and economic conditions. Such estimates are consistent with those used in our planning and capital investment reviews.
- *Future volumes.* Our estimates of future refinery, retail, pipeline throughput and natural gas and NGL processing volumes are based on internal forecasts prepared by our Refining & Marketing, Retail and Midstream segments operations personnel. Assumptions about our customers’ drilling activity are inherently subjective and contingent upon a number of variable factors (including future or

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expected pricing considerations), many of which are difficult to forecast. Management considers these volume forecasts and other factors when developing our forecasted cash flows.

- *Discount rate commensurate with the risks involved.* We apply a discount rate to our cash flows based on a variety of factors, including market and economic conditions, operational risk, regulatory risk and political risk. This discount rate is also compared to recent observable market transactions, if possible. A higher discount rate decreases the net present value of cash flows.
- *Future capital requirements.* These are based on authorized spending and internal forecasts.

We base our fair value estimates on projected financial information which we believe to be reasonable. However, actual results may differ materially from these projections.

The need to test for impairment can be based on several indicators, including a significant reduction in prices of or demand for products produced, a poor outlook for profitability, a significant reduction in pipeline throughput volumes, a significant reduction in natural gas or NGLs processed, a significant reduction in refining or retail fuel margins, other changes to contracts or changes in the regulatory environment.

Long-lived assets used in operations are assessed for impairment whenever changes in facts and circumstances indicate that the carrying value of the assets may not be recoverable based on the expected undiscounted future cash flow of an asset group. For purposes of impairment evaluation, long-lived assets must be grouped at the lowest level for which independent cash flows can be identified, which generally is the refinery and associated distribution system level for Refining & Marketing segment assets, company-owned convenience store locations for Retail segment assets, and the plant level or pipeline system level for Midstream segment assets. If the sum of the undiscounted estimated pretax cash flows is less than the carrying value of an asset group, fair value is calculated, and the carrying value is written down if greater than the calculated fair value.

Unlike long-lived assets, goodwill is subject to annual, or more frequent if necessary, impairment testing at the reporting unit level. A goodwill impairment loss is measured as the amount by which a reporting unit's carrying value exceeds its fair value, without exceeding the recorded amount of goodwill. As of December 31, 2019, we had a total of \$20.04 billion of goodwill recorded on our consolidated balance sheet, which was associated with eight of our ten reporting units.

Prior to performing our annual impairment assessment as of November 30, 2019, MPC had goodwill totaling approximately \$21.28 billion associated with nine reporting units. As part of this assessment, MPLX recorded approximately \$1.2 billion of impairment expense in the fourth quarter of 2019 related to its Western Gathering & Processing ("G&P") reporting unit, which brought the amount of goodwill recorded within this reporting unit to zero. The impairment was primarily driven by updated guidance related to the slowing of drilling activity, which has reduced production growth forecasts from MPLX's producer customers. For the eight remaining reporting units with goodwill, we determined that no significant adjustments to the carrying value of goodwill were necessary. The annual impairment assessment for these eight reporting units resulted in the fair value of the reporting units exceeding their carrying value by percentages ranging from approximately 8 percent to 457 percent. The reporting unit for which fair value exceeded its carrying amount by 8 percent, our Midstream Crude Gathering reporting unit, had goodwill totaling \$1.1 billion at December 31, 2019. The operations which make up this reporting unit were acquired through our acquisition of Andeavor and were subsequently acquired by MPLX on July 30, 2019 through a common control transaction. We accounted for the October 1, 2018 acquisition of Andeavor, including acquiring control of ANDX, using the acquisition method of accounting, which required Andeavor assets and liabilities to be recorded by us at the acquisition date fair value. As such, given the short amount of time from when fair value was established to the date of the annual impairment test, the amount by which the fair value exceeded the carrying value within this reporting unit is not unexpected. Also, our Midstream Eastern G&P reporting unit had fair value exceeding its carrying value of approximately 18 percent and had goodwill totaling \$1.8 billion as of December 31, 2019. An increase of one percentage point to the discount rate used to estimate the fair value of this reporting unit would not have resulted in goodwill impairment as of November 30, 2019. No other MPC reporting units had fair values exceeding carrying values of less than 19 percent.

Significant assumptions used to estimate the reporting units' fair value included estimates of future cash flows and market information for comparable assets. If estimates for future cash flows, which are impacted by producer customers' development plans, which impact future volumes and capital requirements, were to decline, the overall reporting units' fair value would decrease, resulting in potential goodwill impairment charges. Fair value determinations require considerable judgment and are sensitive to changes in underlying

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assumptions and factors. As a result, there can be no assurance that the estimates and assumptions made for purposes of the impairment tests will prove to be an accurate prediction of the future.

Equity method investments are assessed for impairment whenever factors indicate an other than temporary loss in value. Factors providing evidence of such a loss include the fair value of an investment that is less than its carrying value, absence of an ability to recover the carrying value or the investee's inability to generate income sufficient to justify our carrying value. During the fourth quarter of 2019, two of the joint ventures in which MPLX has an interest recorded impairments, which impacted the amount of income from equity method investments during the period by approximately \$28 million. For one of the joint ventures, MPLX also had a basis difference which was being amortized over the life of the underlying assets. As a result of the impairment recorded by the joint venture, MPLX also assessed this basis difference for impairment and recorded approximately \$14 million of impairment during the quarter related to this investment, which was recorded through "Income from equity method investments". This impairment was largely due to a reduction in forecasted volumes of the joint venture related to the loss of one of its customers. At December 31, 2019, we had \$6.90 billion of investments in equity method investments recorded on our consolidated balance sheet.

An estimate of the sensitivity to net income resulting from impairment calculations is not practicable, given the numerous assumptions (e.g., pricing, volumes and discount rates) that can materially affect our estimates. That is, unfavorable adjustments to some of the above listed assumptions may be offset by favorable adjustments in other assumptions.

See Item 8. Financial Statements and Supplementary Data – Note 14 for additional information on our equity method investments. See Item 8. Financial Statements and Supplementary Data – Note 16 for additional information on our goodwill and intangibles, including a table summarizing our recorded goodwill by segment.

Acquisitions

In accounting for business combinations, acquired assets, assumed liabilities and contingent consideration are recorded based on estimated fair values as of the date of acquisition. The excess or shortfall of the purchase price when compared to the fair value of the net tangible and identifiable intangible assets acquired, if any, is recorded as goodwill or a bargain purchase gain, respectively. A significant amount of judgment is involved in estimating the individual fair values of property, plant and equipment, intangible assets, contingent consideration and other assets and liabilities. We use all available information to make these fair value determinations and, for certain acquisitions, engage third-party consultants for valuation assistance.

The fair value of assets and liabilities, including contingent consideration, as of the acquisition date are often estimated using a combination of approaches, including the income approach, which requires us to project future cash flows and apply an appropriate discount rate; the cost approach, which requires estimates of replacement costs and depreciation and obsolescence estimates; and the market approach which uses market data and adjusts for entity-specific differences. The estimates used in determining fair values are based on assumptions believed to be reasonable but which are inherently uncertain. Accordingly, actual results may differ materially from the projected results used to determine fair value.

See Item 8. Financial Statements and Supplementary Data – Note 5 for additional information on our acquisitions. See Item 8. Financial Statements and Supplementary Data – Note 17 for additional information on fair value measurements.

Derivatives

We record all derivative instruments at fair value. Substantially all of our commodity derivatives are cleared through exchanges which provide active trading information for identical derivatives and do not require any assumptions in arriving at fair value. Fair value estimation for all our derivative instruments is discussed in Item 8. Financial Statements and Supplementary Data – Note 17. Additional information about derivatives and their valuation may be found in Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Variable Interest Entities

We evaluate all legal entities in which we hold an ownership or other pecuniary interest to determine if the entity is a VIE. Our interests in a VIE are referred to as variable interests. Variable interests can be contractual, ownership or other pecuniary interests in an entity that change with changes in the fair value of the VIE's assets. When we conclude that we hold an interest in a VIE we must determine if we are the entity's primary beneficiary. A primary beneficiary is deemed to have a controlling financial interest in a VIE. This controlling financial interest is evidenced by both (a) the power to direct the activities of the VIE that most significantly

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impact the VIE's economic performance and (b) the obligation to absorb losses that could potentially be significant to the VIE or the right to receive benefits that could potentially be significant to the VIE. We consolidate any VIE when we determine that we are the primary beneficiary. We must disclose the nature of any interests in a VIE that is not consolidated.

Significant judgment is exercised in determining that a legal entity is a VIE and in evaluating our interest in a VIE. We use primarily a qualitative analysis to determine if an entity is a VIE. We evaluate the entity's need for continuing financial support; the equity holder's lack of a controlling financial interest; and/or if an equity holder's voting interests are disproportionate to its obligation to absorb expected losses or receive residual returns. We evaluate our interests in a VIE to determine whether we are the primary beneficiary. We use a primarily qualitative analysis to determine if we are deemed to have a controlling financial interest in the VIE, either on a standalone basis or as part of a related party group. We continually monitor our interests in legal entities for changes in the design or activities of an entity and changes in our interests, including our status as the primary beneficiary to determine if the changes require us to revise our previous conclusions.

Changes in the design or nature of the activities of a VIE, or our involvement with a VIE, may require us to reconsider our conclusions on the entity's status as a VIE and/or our status as the primary beneficiary. Such reconsideration requires significant judgment and understanding of the organization. This could result in the deconsolidation or consolidation of the affected subsidiary, which would have a significant impact on our financial statements.

Variable Interest Entities are discussed in Item 8. Financial Statements and Supplementary Data – Note 6.

Pension and Other Postretirement Benefit Obligations

Accounting for pension and other postretirement benefit obligations involves numerous assumptions, the most significant of which relate to the following:

- the discount rate for measuring the present value of future plan obligations;
- the expected long-term return on plan assets;
- the rate of future increases in compensation levels;
- health care cost projections; and
- the mortality table used in determining future plan obligations.

We utilize the work of third-party actuaries to assist in the measurement of these obligations. We have selected different discount rates for each of our pension plans and retiree health and welfare based on the projected benefit payment patterns of each individual plan. The selected rates are compared to various similar bond indexes for reasonableness. In determining the assumed discount rates, we use our third-party actuaries' discount rate models. These models calculate an equivalent single discount rate for the projected benefit plan cash flows using yield curves derived from Aa or higher bond yields. The yield curves represent a series of annualized individual spot discount rates from 0.5 to 99 years. The bonds used have an average rating of Aa or higher by a recognized rating agency and generally only non-callable bonds are included. Outlier bonds that have a yield to maturity that deviate significantly from the average yield within each maturity grouping are not included. Each issue is required to have at least \$250 million par value outstanding.

Of the assumptions used to measure the year-end obligations and estimated annual net periodic benefit cost, the discount rate has the most significant effect on the periodic benefit cost reported for the plans. Decreasing the discount rates of 3.20 percent for our pension plans and 3.25 percent for our other postretirement benefit plans by 0.25 percent would increase pension obligations and other postretirement benefit plan obligations by \$90 million and \$37 million, respectively, and would increase defined benefit pension expense and other postretirement benefit plan expense by \$12 million and \$3 million, respectively.

The long-term asset rate of return assumption considers the asset mix of the plans (currently targeted at approximately 42 percent equity securities and 58 percent fixed income securities for the primary funded pension plan), past performance and other factors. Certain components of the asset mix are modeled with various assumptions regarding inflation and returns. In addition, our long-term asset rate of return assumption is compared to those of other companies and to historical returns for reasonableness. We used the 6.15 percent long-term rate of return to determine our 2019 defined benefit pension expense. After evaluating activity in the capital markets, along with the current and projected plan investments, we decreased the asset rate of return for our primary plan to 6.00 percent effective for 2020. Decreasing the 6.00 percent asset rate of return assumption by 0.25 percent would increase our defined benefit pension expense by \$5 million.

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Compensation change assumptions are based on historical experience, anticipated future management actions and demographics of the benefit plans.

Health care cost trend assumptions are developed based on historical cost data, the near-term outlook and an assessment of likely long-term trends.

We utilized the 2019 mortality tables from the U.S. Society of Actuaries.

Item 8. Financial Statements and Supplementary Data – Note 23 includes detailed information about the assumptions used to calculate the components of our annual defined benefit pension and other postretirement plan expense, as well as the obligations and accumulated other comprehensive loss reported on the year-end balance sheets.

ACCOUNTING STANDARDS NOT YET ADOPTED

As discussed in Item 8. Financial Statements and Supplementary Data – Note 3 to our audited consolidated financial statements, certain new financial accounting pronouncements will be effective for our financial statements in the future.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

General

We are exposed to market risks related to the volatility of crude oil and refined product prices. We employ various strategies, including the use of commodity derivative instruments, to hedge the risks related to these price fluctuations. We are also exposed to market risks related to changes in interest rates and foreign currency exchange rates. As of December 31, 2019, we did not have any financial derivative instruments to hedge the risks related to interest rate fluctuations; however, we have used them in the past, and we continually monitor the market and our exposure and may enter into these agreements again in the future. We are at risk for changes in fair value of all of our derivative instruments; however, such risk should be mitigated by price or rate changes related to the underlying commodity or financial transaction.

We believe that our use of derivative instruments, along with our risk assessment procedures and internal controls, does not expose us to material adverse consequences. While the use of derivative instruments could materially affect our results of operations in particular quarterly or annual periods, we believe that the use of these instruments will not have a material adverse effect on our financial position or liquidity.

See Item 8. Financial Statements and Supplementary Data – Notes 17 and 18 for more information about the fair value measurement of our derivatives, as well as the amounts recorded in our consolidated balance sheets and statements of income. We do not designate any of our commodity derivative instruments as hedges for accounting purposes.

Commodity Price Risk

Refining & Marketing

Our strategy is to obtain competitive prices for our products and allow operating results to reflect market price movements dictated by supply and demand. We use a variety of commodity derivative instruments, including futures and options, as part of an overall program to hedge commodity price risk. We also do a limited amount of trading not directly related to our physical transactions.

We use commodity derivative instruments on crude oil and refined product inventories to hedge price risk associated with inventories above or below LIFO inventory targets. We also use derivative instruments related to the acquisition of foreign-sourced crude oil and ethanol blended with refined petroleum products to hedge price risk associated with market volatility between the time we purchase the product and when we use it in the refinery production process or it is blended. In addition, we may use commodity derivative instruments on fixed price contracts for the sale of refined products to hedge risk by converting the refined product sales to market-based prices. The majority of these derivatives are exchange-traded contracts but we also enter into over-the-counter swaps, options and over-the-counter options. We closely monitor and hedge our exposure to market risk on a daily basis in accordance with policies approved by our board of directors. Our positions are monitored daily by a risk control group to ensure compliance with our stated risk management policy.

Midstream

NGL and natural gas prices are volatile and are impacted by changes in fundamental supply and demand, as well as market uncertainty, availability of NGL transportation and fractionation capacity and a variety of additional factors that are beyond MPLX's control. A portion of MPLX's profitability is directly affected by prevailing commodity prices primarily as a result of processing or conditioning at its own or third-party processing plants, purchasing and selling or gathering and transporting volumes of natural gas at index-related prices and the cost of third-party transportation and fractionation services. To the extent that commodity prices influence the level of natural gas drilling by MPLX's producer customers, such prices also indirectly affect profitability. MPLX has a committee comprised of senior management that oversees risk management activities, continually monitors the risk management program and adjusts its strategy as conditions warrant. Derivative contracts utilized for crude oil, natural gas and NGLs are swaps and options traded on the OTC market and fixed price forward contracts.

MPLX would be exposed to additional commodity risk in certain situations such as if producers under-deliver or over-deliver products or if processing facilities are operated in different recovery modes. In the event that MPLX has derivative positions in excess of the product delivered or expected to be delivered, the excess derivative positions may be terminated.

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MPLX management conducts a standard credit review on counterparties to derivative contracts, and it has provided the counterparties with a guaranty as credit support for its obligations. A separate agreement with certain counterparties allows MarkWest Liberty Midstream to enter into derivative positions without posting cash collateral. MPLX uses standardized agreements that allow for offset of certain positive and negative exposures in the event of default or other terminating events, including bankruptcy.

Open Derivative Positions and Sensitivity Analysis

The following table includes the composition of net losses/gains on our commodity derivative positions for the years ended December 31, 2019 and 2018, respectively.

<i>(In millions)</i>	2019	2018
Realized gain (loss) on settled derivative positions	\$ 48	\$ (11)
Unrealized loss on open net derivative positions	(144)	(35)
Net loss	\$ (96)	\$ (46)

See Item 8. Financial Statements and Supplementary Data – Note 18 for additional information on our open derivative positions at December 31, 2019.

Sensitivity analysis of the incremental effects on income from operations (“IFO”) of hypothetical 10 percent and 25 percent increases and decreases in commodity prices for open commodity derivative instruments as of December 31, 2019 is provided in the following table.

<i>(In millions)</i>	Change in IFO from a Hypothetical Price Increase of		Change in IFO from a Hypothetical Price Decrease of	
	10%	25%	10%	25%
As of December 31, 2019				
Crude	\$ (39)	\$ (98)	\$ 41	\$ 103
Refined products	22	56	(22)	(56)
Blending Products	(8)	(20)	8	20
Embedded derivatives	(6)	(15)	6	15

We remain at risk for possible changes in the market value of commodity derivative instruments; however, such risk should be mitigated by price changes in the underlying physical commodity. Effects of these offsets are not reflected in the above sensitivity analysis.

We evaluate our portfolio of commodity derivative instruments on an ongoing basis and add or revise strategies in anticipation of changes in market conditions and in risk profiles. Changes to the portfolio after December 31, 2019 would cause future IFO effects to differ from those presented above.

Interest Rate Risk

Our use of fixed or variable-rate debt directly exposes us to interest rate risk. Fixed rate debt, such as our senior notes, exposes us to changes in the fair value of our debt due to changes in market interest rates. Fixed rate debt also exposes us to the risk that we may need to refinance maturing debt with new debt at higher rates or that our current fixed rate debt may be higher than the current market. Variable-rate debt, such as borrowings under our revolving credit facilities, exposes us to short-term changes in market rates that impact our interest expense. See Item 8. Financial Statements and Supplementary Data – Note 19 for additional information on our debt.

Sensitivity analysis of the effect of a hypothetical 100-basis-point change in interest rates on long-term debt, including the portion classified as current and excluding finance leases, as of December 31, 2019 is provided in the following table. Fair value of cash and cash equivalents, receivables, accounts payable and accrued interest approximate carrying value and are relatively insensitive to changes in interest rates due to the short-term maturity of the instruments. Accordingly, these instruments are excluded from the table.

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<i>(In millions)</i>	Fair Value ^(a)	Change in Fair Value ^(b)	Change in Net Income for the Twelve Months Ended December 31, 2019 ^(c)
Long-term debt			
Fixed-rate	\$ 27,387	\$ 2,548	n/a
Variable-rate	1,000	n/a	20

^(a) Fair value was based on market prices, where available, or current borrowing rates for financings with similar terms and maturities.

^(b) Assumes a 100-basis point decrease in the weighted average yield-to-maturity at December 31, 2019.

^(c) Assumes a 100-basis-point change in interest rates. The change in net income was based on the weighted average balance of debt outstanding for the year ended December 31, 2019.

See Item 8. Financial Statements and Supplementary Data – Note 17 for additional information on the fair value of our debt.

Foreign Currency Exchange Rate Risk

We are impacted by foreign exchange rate fluctuations related to some of our purchases of crude oil denominated in Canadian dollars. We did not utilize derivatives to hedge our market risk exposure to these foreign exchange rate fluctuations in 2019.

Counterparty Risk

We are subject to risk of loss resulting from nonpayment by our customers to whom we provide services, lease assets, or sell natural gas or NGLs. We believe that certain contracts would allow us to pass those losses through to our customers, thus reducing our risk, when we are selling NGLs and acting as our producer customers' agent. Our credit exposure related to these customers is represented by the value of our trade receivables or lease receivables. Where exposed to credit risk, we analyze the customer's financial condition prior to entering into a transaction or agreement, establish credit terms and monitor the appropriateness of these terms on an ongoing basis. In the event of a customer default, we may sustain a loss and our cash receipts could be negatively impacted.

We are subject to risk of loss resulting from nonpayment or nonperformance by counterparties to our derivative contracts. Our credit exposure related to commodity derivative instruments is represented by the fair value of contracts with a net positive fair value at the reporting date. Outstanding instruments expose us to credit loss in the event of nonperformance by the counterparties to the agreements. Should the creditworthiness of one or more of our counterparties decline, our ability to mitigate nonperformance risk is limited to a counterparty agreeing to either a voluntary termination and subsequent cash settlement or a novation of the derivative contract to a third party. In the event of a counterparty default, we may sustain a loss and our cash receipts could be negatively impacted.

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MANAGEMENT’S RESPONSIBILITIES FOR FINANCIAL STATEMENTS

The accompanying consolidated financial statements of Marathon Petroleum Corporation and its subsidiaries (“MPC”) are the responsibility of management and have been prepared in conformity with accounting principles generally accepted in the United States of America. They necessarily include some amounts that are based on best judgments and estimates. The financial information displayed in other sections of this Annual Report on Form 10-K is consistent with these consolidated financial statements.

MPC seeks to assure the objectivity and integrity of its financial records by careful selection of its managers, by organizational arrangements that provide an appropriate division of responsibility and by communications programs aimed at assuring that its policies and methods are understood throughout the organization.

The board of directors pursues its oversight role in the area of financial reporting and internal control over financial reporting through its Audit Committee. This committee, composed solely of independent directors, regularly meets (jointly and separately) with the independent registered public accounting firm, management and internal auditors to monitor the proper discharge by each of their responsibilities relative to internal accounting controls and the consolidated financial statements.

/s/ Gary R. Heminger

*Gary R. Heminger
Chairman of the Board and
Chief Executive Officer*

/s/ Donald C. Templin

*Donald C. Templin
Executive Vice President and
Chief Financial Officer*

/s/ John J. Quaid

*John J. Quaid
Vice President and
Controller*

MANAGEMENT’S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

MPC’s management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) under the Securities Exchange Act of 1934, as amended). An evaluation of the design and effectiveness of our internal control over financial reporting, based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, was conducted under the supervision and with the participation of management, including our chief executive officer and chief financial officer. Based on the results of this evaluation, MPC’s management concluded that its internal control over financial reporting was effective as of December 31, 2019.

The effectiveness of MPC’s internal control over financial reporting as of December 31, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

/s/ Gary R. Heminger

*Gary R. Heminger
Chairman of the Board and
Chief Executive Officer*

/s/ Donald C. Templin

*Donald C. Templin
Executive Vice President and
Chief Financial Officer*

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Marathon Petroleum Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Marathon Petroleum Corporation and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, and the related consolidated statements of income, of comprehensive income, of equity and redeemable noncontrolling interest and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and

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(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill Impairment Tests - Certain Midstream Reporting Units

As described in Notes 2 and 16 to the consolidated financial statements, the Company's consolidated goodwill balance was \$20.0 billion as of December 31, 2019. As disclosed by management, within the midstream segment, the goodwill associated with the Eastern Gathering and Processing reporting unit amounted to \$1.8 billion and goodwill associated with the Crude Gathering reporting unit amounted to \$1.1 billion. In addition, an impairment charge of \$1.2 billion was recorded in 2019 related to the Western Gathering and Processing reporting unit, which brought the amount of goodwill recorded within this reporting unit to zero. Management conducts impairment tests as of November 30 of each year or more frequently if events or circumstances indicate that reporting unit carrying values of goodwill may be impaired. As a result of a change in reporting units during 2019, management performed impairment tests on these reporting units prior to and immediately following the change in reporting units. The fair value of each reporting unit is determined using a combination of income and market approach methods. The significant assumptions that were used to develop the estimates of the fair values of each reporting unit under the income approach include the discount rate as well as estimates of future cash flows, which are impacted primarily by producer customers' development plans, which impact future volumes and capital requirements.

The principal considerations for our determination that performing procedures relating to the goodwill impairment tests of the Company's Eastern Gathering and Processing, Western Gathering and Processing, and Crude Gathering reporting units, as well as certain related reporting units prior to the change, is a critical audit matter are there was significant judgment by management when estimating the fair values of the reporting units. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing audit procedures and evaluating evidence related to management's fair value estimates and significant assumptions related to producer customers' development plans, which impact future volumes and capital requirements.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment tests, including controls over the estimation of the fair values of the Eastern Gathering and Processing, Western Gathering and Processing, and Crude Gathering reporting units. These procedures also included, among others, testing management's process for developing the fair value estimates; evaluating the appropriateness of the valuation methods used; testing the completeness and accuracy of underlying data used by management; and evaluating the reasonableness of significant assumptions related to producer customers' development plans, which impact future volumes and capital requirements used in determining the fair values of each reporting unit under the income approach. Professionals with specialized skill and knowledge were utilized to assist in evaluating the appropriateness of the Company's income and market approach methods. Evaluating the assumptions related to producer customers' development plans, which impact future volumes and capital requirements involved (i) considering whether the assumptions used were reasonable based on past performance of each reporting unit, producer customers' historical and future production volumes, historical and approved future capital projects, and

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industry outlook reports, and (ii) considering whether the assumptions were consistent with evidence obtained in other areas of the audit.

/s/PricewaterhouseCoopers LLP

Toledo, Ohio
February 28, 2020

We have served as the Company's auditor since 2010.

MARATHON PETROLEUM CORPORATION
CONSOLIDATED STATEMENTS OF INCOME

<i>(In millions, except per share data)</i>	2019	2018	2017
Revenues and other income:			
Sales and other operating revenues ^(a)	\$ 123,949	\$ 96,504	\$ 74,733
Income from equity method investments	394	373	306
Net gain on disposal of assets	307	23	10
Other income	163	202	320
Total revenues and other income	124,813	97,102	75,369
Costs and expenses:			
Cost of revenues (excludes items below) ^(a)	110,243	86,066	67,089
Impairment expense	1,197	—	—
Depreciation and amortization	3,638	2,490	2,114
Selling, general and administrative expenses	3,408	2,418	1,694
Other taxes	751	557	454
Total costs and expenses	119,237	91,531	71,351
Income from operations	5,576	5,571	4,018
Net interest and other financial costs	1,247	1,003	674
Income before income taxes	4,329	4,568	3,344
Provision (benefit) for income taxes	1,074	962	(460)
Net income	3,255	3,606	3,804
Less net income attributable to:			
Redeemable noncontrolling interest	81	75	65
Noncontrolling interests	537	751	307
Net income attributable to MPC	\$ 2,637	\$ 2,780	\$ 3,432
Per Share Data (See Note 8)			
Basic:			
Net income attributable to MPC per share	\$ 4.00	\$ 5.36	\$ 6.76
Weighted average shares outstanding	659	518	507
Diluted:			
Net income attributable to MPC per share	\$ 3.97	\$ 5.28	\$ 6.70
Weighted average shares outstanding	664	526	512

^(a) The 2019 and 2018 periods reflect an election to present certain taxes on a net basis concurrent with our adoption of ASU 2014-09, Revenue - Revenue from Contracts with Customers ("ASC 606"). See Note 2 for further information.

The accompanying notes are an integral part of these consolidated financial statements.

MARATHON PETROLEUM CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

<i>(Millions of dollars)</i>	2019	2018	2017
Net income	\$ 3,255	\$ 3,606	\$ 3,804
Other comprehensive income (loss):			
Defined benefit plans:			
Actuarial changes, net of tax of (\$40), \$14 and \$17, respectively	(147)	75	29
Prior service credit, net of tax of (\$17), \$12 and (\$16), respectively	(27)	8	(26)
Other, net of tax of (\$1), \$1 and \$0, respectively	(2)	4	—
Other comprehensive income (loss)	(176)	87	3
Comprehensive income	3,079	3,693	3,807
Less comprehensive income attributable to:			
Redeemable noncontrolling interest	81	75	65
Noncontrolling interests	537	751	307
Comprehensive income attributable to MPC	<u>\$ 2,461</u>	<u>\$ 2,867</u>	<u>\$ 3,435</u>

The accompanying notes are an integral part of these consolidated financial statements.

**MARATHON PETROLEUM CORPORATION
CONSOLIDATED BALANCE SHEETS**

<i>(Millions of dollars, except share data)</i>	December 31,	
	2019	2018
Assets		
Current assets:		
Cash and cash equivalents	\$ 1,527	\$ 1,687
Receivables, less allowance for doubtful accounts of \$17 and \$9, respectively	7,872	5,853
Inventories	10,243	9,837
Other current assets	528	646
Total current assets	20,170	18,023
Equity method investments	6,898	5,898
Property, plant and equipment, net	45,615	45,058
Goodwill	20,040	20,184
Right of use assets ^(a)	2,459	—
Other noncurrent assets	3,374	3,777
Total assets	\$ 98,556	\$ 92,940
Liabilities		
Current liabilities:		
Accounts payable	\$ 11,623	\$ 9,366
Payroll and benefits payable	1,126	1,152
Accrued taxes	1,186	1,446
Debt due within one year	711	544
Operating lease liabilities ^(a)	604	—
Other current liabilities	897	708
Total current liabilities	16,147	13,216
Long-term debt	28,127	26,980
Deferred income taxes	6,392	4,864
Defined benefit postretirement plan obligations	1,643	1,509
Long-term operating lease liabilities ^(a)	1,875	—
Deferred credits and other liabilities	1,265	1,318
Total liabilities	55,449	47,887
Commitments and contingencies (see Note 26)		
Redeemable noncontrolling interest	968	1,004
Equity		
MPC stockholders' equity:		
Preferred stock, no shares issued and outstanding (par value \$0.01 per share, 30 million shares authorized)	—	—
Common stock:		
Issued – 978 million and 975 million shares (par value \$0.01 per share, 2 billion shares authorized)	10	10
Held in treasury, at cost – 329 million and 295 million shares	(15,143)	(13,175)
Additional paid-in capital	33,157	33,729
Retained earnings	15,990	14,755
Accumulated other comprehensive loss	(320)	(144)
Total MPC stockholders' equity	33,694	35,175
Noncontrolling interests	8,445	8,874
Total equity	42,139	44,049
Total liabilities, redeemable noncontrolling interest and equity	\$ 98,556	\$ 92,940

^(a) We adopted ASU No. 2016-02, Leases (“ASC 842”), as of January 1, 2019. See Notes 3 and 25 for further information.

The accompanying notes are an integral part of these consolidated financial statements.

MARATHON PETROLEUM CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

<i>(Millions of dollars)</i>	2019	2018	2017
Operating activities:			
Net income	\$ 3,255	\$ 3,606	\$ 3,804
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of deferred financing costs and debt discount	33	70	64
Impairment expense	1,197	—	—
Depreciation and amortization	3,638	2,490	2,114
Pension and other postretirement benefits, net	(64)	90	47
Deferred income taxes	1,023	47	(1,233)
Net gain on disposal of assets	(307)	(23)	(10)
Income from equity method investments	(394)	(373)	(306)
Distributions from equity method investments	662	519	391
Changes in the fair value of derivative instruments	(8)	(62)	116
Changes in operating assets and liabilities, net of effects of businesses acquired:			
Current receivables	(2,024)	1,589	(1,093)
Inventories	(366)	931	106
Current accounts payable and accrued liabilities	2,502	(2,798)	2,814
Right of use assets and operating lease liabilities, net	14	—	—
All other, net	280	72	(202)
Net cash provided by operating activities	9,441	6,158	6,612
Investing activities:			
Additions to property, plant and equipment	(5,374)	(3,578)	(2,732)
Acquisitions, net of cash acquired	(129)	(3,822)	(249)
Disposal of assets	127	54	79
Investments – acquisitions, loans and contributions	(1,064)	(409)	(805)
– redemptions, repayments and return of capital	98	16	62
All other, net	81	69	247
Net cash used in investing activities	(6,261)	(7,670)	(3,398)
Financing activities:			
Commercial paper – issued	—	—	300
– repayments	—	—	(300)
Long-term debt – borrowings	14,274	13,476	2,911
– repayments	(13,073)	(8,032)	(642)
Debt issuance costs	(22)	(86)	(33)
Issuance of common stock	10	24	46
Common stock repurchased	(1,950)	(3,287)	(2,372)
Dividends paid	(1,398)	(954)	(773)
Issuance of MPLX LP common units	—	—	473
Distributions to noncontrolling interests	(1,245)	(903)	(694)
Contributions from noncontrolling interests	97	12	129
Contingent consideration payment	—	—	(89)
All other, net	(69)	(28)	(47)
Net cash provided by (used in) financing activities	(3,376)	222	(1,091)
Net increase (decrease) in cash, cash equivalents and restricted cash	(196)	(1,290)	2,123
Cash, cash equivalents and restricted cash at beginning of period	1,725	3,015	892
Cash, cash equivalents and restricted cash at end of period	\$ 1,529	\$ 1,725	\$ 3,015

The accompanying notes are an integral part of these consolidated financial statements.

MARATHON PETROLEUM CORPORATION
CONSOLIDATED STATEMENTS OF EQUITY AND REDEEMABLE NONCONTROLLING INTEREST

<i>(Shares in millions; amounts in millions of dollars)</i>	MPC Stockholders' Equity									
	Common Stock		Treasury Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non- controlling Interests	Total Equity	Redeemable Non-controlling Interest
	Shares	Amount	Shares	Amount						
Balance as of December 31, 2016	731	\$ 7	(203)	\$ (7,482)	\$ 11,060	\$ 10,206	\$ (234)	\$ 6,646	\$ 20,203	\$ 1,000
Net income	—	—	—	—	—	3,432	—	307	3,739	65
Dividends declared on common stock (\$1.52 per share)	—	—	—	—	—	(774)	—	—	(774)	—
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(629)	(629)	(65)
Contributions from noncontrolling interests	—	—	—	—	—	—	—	129	129	—
Other comprehensive income	—	—	—	—	—	—	3	—	3	—
Shares repurchased	—	—	(44)	(2,372)	—	—	—	—	(2,372)	—
Stock-based compensation	3	—	(1)	(15)	92	—	—	8	85	—
Equity transactions of MPLX	—	—	—	—	110	—	—	334	444	—
Balance as of December 31, 2017	734	\$ 7	(248)	\$ (9,869)	\$ 11,262	\$ 12,864	\$ (231)	\$ 6,795	\$ 20,828	\$ 1,000
Cumulative effect of adopting new accounting standards	—	—	—	—	—	66	—	2	68	—
Net income	—	—	—	—	—	2,780	—	751	3,531	75
Dividends declared on common stock (\$1.84 per share)	—	—	—	—	—	(955)	—	—	(955)	—
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(832)	(832)	(71)
Contributions from noncontrolling interests	—	—	—	—	—	—	—	12	12	—
Other comprehensive income	—	—	—	—	—	—	87	—	87	—
Shares repurchased	—	—	(47)	(3,287)	—	—	—	—	(3,287)	—
Stock based compensation	1	1	—	(18)	345	—	—	14	342	—
Equity transactions of MPLX & ANDX	—	—	—	—	2,357	—	—	(2,927)	(570)	—
Issuance of shares for Andeavor acquisition	240	2	—	(1)	19,765	—	—	—	19,766	—
Noncontrolling interest acquired from Andeavor	—	—	—	—	—	—	—	5,059	5,059	—
Balance as of December 31, 2018	975	\$ 10	(295)	\$ (13,175)	\$ 33,729	\$ 14,755	\$ (144)	\$ 8,874	\$ 44,049	\$ 1,004
Net income	—	—	—	—	—	2,637	—	537	3,174	81
Dividends declared on common stock (\$2.12 per share)	—	—	—	—	—	(1,402)	—	—	(1,402)	—
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(1,164)	(1,164)	(81)
Contributions from noncontrolling interests	—	—	—	—	—	—	—	97	97	—
Other comprehensive loss	—	—	—	—	—	—	(176)	—	(176)	—
Shares repurchased	—	—	(34)	(1,950)	—	—	—	—	(1,950)	—
Stock based compensation	3	—	—	(18)	112	—	—	7	101	—
Equity transactions of MPLX & ANDX	—	—	—	—	(684)	—	—	94	(590)	(36)
Balance as of December 31, 2019	978	\$ 10	(329)	\$ (15,143)	\$ 33,157	\$ 15,990	\$ (320)	\$ 8,445	\$ 42,139	\$ 968

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF THE BUSINESS AND BASIS OF PRESENTATION

Description of the Business

We are a leading, integrated, downstream energy company headquartered in Findlay, Ohio. We operate the nation's largest refining system with more than 3 million barrels per day of crude oil capacity across 16 refineries. We sell refined products to wholesale marketing customers domestically and internationally, to buyers on the spot market, to consumers through our Retail business segment and to independent entrepreneurs who operate approximately 6,900 branded outlets. Our retail operations own and operate approximately 3,900 retail transportation fuel and convenience stores across the United States and also sell transportation fuel to consumers through approximately 1,070 direct dealer locations under long-term supply contracts. MPC's midstream operations are primarily conducted through MPLX LP ("MPLX"), which owns and operates crude oil and refined product transportation and logistics infrastructure and natural gas and NGL gathering, processing, and fractionation assets. We own the general partner and a majority limited partner interest in MPLX.

Refer to Note 5 for further information on the Andeavor acquisition, which closed on October 1, 2018, and to Notes 4 and 10 for additional information about our operations.

On October 31, 2019, we announced plans to separate our retail transportation fuel and convenience store business, which is operated primarily under the Speedway brand, into an independent, publicly traded company through a tax-free distribution to MPC shareholders of publicly traded stock in the new independent retail transportation fuel and convenience store company. This transaction is targeted to be completed by year-end 2020, subject to market, regulatory and certain other conditions, including final approval by the MPC Board of Directors, receipt of customary assurances regarding the intended tax-free nature of the transaction, and the effectiveness of a registration statement to be filed with the SEC. The Speedway business is currently a reporting unit within our Retail segment. Subsequent to the completion of the separation, the historical results of the Speedway business will be presented as discontinued operations in our consolidated financial statements.

Basis of Presentation

All significant intercompany transactions and accounts have been eliminated.

Certain prior period financial statement amounts have been reclassified to conform to current period presentation.

2. SUMMARY OF PRINCIPAL ACCOUNTING POLICIES

Principles Applied in Consolidation

These consolidated financial statements include the accounts of our majority-owned, controlled subsidiaries and MPLX. As of December 31, 2019, we owned the general partner and 63 percent of the outstanding MPLX common units. Due to our ownership of the general partner interest, we have determined that we control MPLX and therefore we consolidate MPLX and record a noncontrolling interest for the interest owned by the public. Changes in ownership interest in consolidated subsidiaries that do not result in a change in control are recorded as equity transactions.

Investments in entities over which we have significant influence, but not control, are accounted for using the equity method of accounting. This includes entities in which we hold majority ownership but the minority shareholders have substantive participating rights. Income from equity method investments represents our proportionate share of net income generated by the equity method investees.

Differences in the basis of the investments and the separate net asset values of the investees, if any, are amortized into net income over the remaining useful lives of the underlying assets and liabilities, except for any excess related to goodwill. Equity method investments are evaluated for impairment whenever changes in the facts and circumstances indicate an other than temporary loss in value has occurred. When the loss is deemed to be other than temporary, the carrying value of the equity method investment is written down to fair value.

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Use of Estimates

The preparation of financial statements in accordance with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the consolidated financial statements and the reported amounts of revenues and expenses during the respective reporting periods.

Revenue Recognition

We recognize revenue based on consideration specified in contracts or agreements with customers when we satisfy our performance obligations by transferring control over products or services to a customer. Concurrent with our adoption of ASU 2014-09, Revenue from Contracts with Customers ("ASC 606"), as of January 1, 2018, we made an accounting policy election that all taxes assessed by a governmental authority that are both imposed on and concurrent with a revenue-producing transaction and collected from our customers will be recognized on a net basis within sales and other operating revenues.

The adoption of ASC 606 did not materially change our revenue recognition patterns, which are described below by reportable segment:

- Refining & Marketing - The vast majority of our Refining & Marketing contracts contain pricing that is based on the market price for the product at the time of delivery. Our obligations to deliver product volumes are typically satisfied and revenue is recognized when control of the product transfers to our customers. Concurrent with the transfer of control, we typically receive the right to payment for the delivered product, the customer accepts the product and the customer has significant risks and rewards of ownership of the product. Payment terms require customers to pay shortly after delivery and do not contain significant financing components.
- Retail - Revenue is recognized when our customers receive control of the transportation fuels or merchandise. Payments from customers are received at the time sales occur in cash or by credit or debit card at our company-owned and operated retail locations and shortly after delivery for our direct dealers. Speedway offers a loyalty rewards program to its customers. We defer a minor portion of revenue on sales to the loyalty program participants until the participants redeem their rewards. The related contract liability, as defined in ASC 606, is not material to our financial statements.
- Midstream - Midstream revenue transactions typically are defined by contracts under which we sell a product or provide a service. Revenues from sales of product are recognized when control of the product transfers to the customer. Revenues from sales of services are recognized over time when the performance obligation is satisfied as services are provided in a series. We have elected to use the output measure of progress to recognize revenue based on the units delivered, processed or transported. The transaction prices in our Midstream contracts often have both fixed components, related to minimum volume commitments, and variable components, which are primarily dependent on volumes. Variable consideration will generally not be estimated at contract inception as the transaction price is specifically allocable to the services provided at each period end.

Refer to Note 20 for disclosure of our revenue disaggregated by segment and product line and to Note 10 for a description of our reportable segment operations.

Crude Oil and Refined Product Exchanges and Matching Buy/Sell Transactions

We enter into exchange contracts and matching buy/sell arrangements whereby we agree to deliver a particular quantity and quality of crude oil or refined products at a specified location and date to a particular counterparty and to receive from the same counterparty the same commodity at a specified location on the same or another specified date. The exchange receipts and deliveries are nonmonetary transactions, with the exception of associated grade or location differentials that are settled in cash. The matching buy/sell purchase and sale transactions are settled in cash. No revenues are recorded for exchange and matching buy/sell transactions as they are accounted for as exchanges of inventory. The exchange transactions are recognized at the carrying amount of the inventory transferred.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand and on deposit and investments in highly liquid debt instruments with maturities of three months or less.

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Restricted Cash

Restricted cash consists of cash and investments that must be maintained as collateral for letters of credit issued to certain third-party producer customers. The balances will be outstanding until certain capital projects are completed and the third party releases the restriction.

Accounts Receivable and Allowance for Doubtful Accounts

Our receivables primarily consist of customer accounts receivable. Customer receivables are recorded at the invoiced amounts and generally do not bear interest. Allowances for doubtful accounts are generally recorded when it becomes probable the receivable will not be collected and are booked to bad debt expense. The allowance for doubtful accounts is the best estimate of the amount of probable credit losses in customer accounts receivable. We review the allowance quarterly and past-due balances over 180 days are reviewed individually for collectability.

We mitigate credit risk with master netting agreements with companies engaged in the crude oil or refinery feedstock trading and supply business or the petroleum refining industry. A master netting agreement generally provides for a once per month net cash settlement of the accounts receivable from and the accounts payable to a particular counterparty.

Inventories

Inventories are carried at the lower of cost or market value. Cost of inventories is determined primarily under the LIFO method. Costs for crude oil, refinery feedstocks and refined product inventories are aggregated on a consolidated basis for purposes of assessing if the LIFO cost basis of these inventories may have to be written down to market value.

Derivative Instruments

We use derivatives to economically hedge a portion of our exposure to commodity price risk and, historically, to interest rate risk. We also have limited authority to use selective derivative instruments that assume market risk. All derivative instruments (including derivative instruments embedded in other contracts) are recorded at fair value. Certain commodity derivatives are reflected on the consolidated balance sheets on a net basis by counterparty as they are governed by master netting agreements. Cash flows related to derivatives used to hedge commodity price risk and interest rate risk are classified in operating activities with the underlying transactions.

Derivatives not designated as accounting hedges – Derivatives that are not designated as accounting hedges may include commodity derivatives used to hedge price risk on (1) inventories, (2) fixed price sales of refined products, (3) the acquisition of foreign-sourced crude oil, (4) the acquisition of ethanol for blending with refined products, (5) the sale of NGLs and (6) the purchase of natural gas. Changes in the fair value of derivatives not designated as accounting hedges are recognized immediately in net income.

Concentrations of credit risk – All of our financial instruments, including derivatives, involve elements of credit and market risk. The most significant portion of our credit risk relates to nonperformance by counterparties. The counterparties to our financial instruments consist primarily of major financial institutions and companies within the energy industry. To manage counterparty risk associated with financial instruments, we select and monitor counterparties based on an assessment of their financial strength and on credit ratings, if available. Additionally, we limit the level of exposure with any single counterparty.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost and depreciated on a straight-line basis over the estimated useful lives of the assets, which range from two years to 51 years. Such assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. If the sum of the expected undiscounted future cash flows from the use of the asset group and its eventual disposition is less than the carrying amount of the asset group, an impairment assessment is performed and the excess of the book value over the fair value of the asset group is recorded as an impairment loss.

When items of property, plant and equipment are sold or otherwise disposed of, any gains or losses are reported in net income. Gains on the disposal of property, plant and equipment are recognized when earned, which is generally at the time of closing. If a loss on disposal is expected, such losses are recognized when the assets are classified as held for sale.

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Interest expense is capitalized for qualifying assets under construction. Capitalized interest costs are included in property, plant and equipment and are depreciated over the useful life of the related asset.

Goodwill and Intangible Assets

Goodwill represents the excess of the purchase price over the estimated fair value of the net assets acquired in the acquisition of a business. Goodwill is not amortized, but rather is tested for impairment annually and when events or changes in circumstances indicate that the fair value of a reporting unit with goodwill has been reduced below carrying value. The impairment test requires allocating goodwill and other assets and liabilities to reporting units. The fair value of each reporting unit is determined using an income and/or market approach which is compared to the carrying value of the reporting unit. The fair value under the income approach is calculated using the expected present value of future cash flows method. Significant assumptions used in the cash flow forecasts include future net operating margins, future volumes, discount rates, and future capital requirements. If the carrying amount of the reporting unit exceeds its fair value, an impairment loss would be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit.

Amortization of intangibles with definite lives is calculated using the straight-line method, which is reflective of the benefit pattern in which the estimated economic benefit is expected to be received over the estimated useful life of the intangible asset. Intangibles subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the intangible may not be recoverable. If the sum of the expected undiscounted future cash flows related to the asset is less than the carrying amount of the asset, an impairment loss is recognized based on the fair value of the asset. Intangibles not subject to amortization are tested for impairment annually and when circumstances indicate that the fair value is less than the carrying amount of the intangible. If the fair value is less than the carrying value, an impairment is recorded for the difference.

Major Maintenance Activities

Costs for planned turnaround and other major maintenance activities are expensed in the period incurred. These types of costs include contractor repair services, materials and supplies, equipment rentals and our labor costs.

Environmental Costs

Environmental expenditures for additional equipment that mitigates or prevents future contamination or improves environmental safety or efficiency of the existing assets are capitalized. We recognize remediation costs and penalties when the responsibility to remediate is probable and the amount of associated costs can be reasonably estimated. The timing of remediation accruals coincides with completion of a feasibility study or the commitment to a formal plan of action. Remediation liabilities are accrued based on estimates of known environmental exposure and are discounted when the estimated amounts are reasonably fixed and determinable. If recoveries of remediation costs from third parties are probable, a receivable is recorded and is discounted when the estimated amount is reasonably fixed and determinable.

Asset Retirement Obligations

The fair value of asset retirement obligations is recognized in the period in which the obligations are incurred if a reasonable estimate of fair value can be made. The majority of our recognized asset retirement liability relates to conditional asset retirement obligations for removal and disposal of fire-retardant material from certain refining facilities. The remaining recognized asset retirement liability relates to other refining assets, the removal of underground storage tanks at our leased convenience stores, certain pipelines and processing facilities and other related pipeline assets. The fair values recorded for such obligations are based on the most probable current cost projections.

Asset retirement obligations have not been recognized for some assets because the fair value cannot be reasonably estimated since the settlement dates of the obligations are indeterminate. Such obligations will be recognized in the period when sufficient information becomes available to estimate a range of potential settlement dates. The asset retirement obligations principally include the hazardous material disposal and removal or dismantlement requirements associated with the closure of certain refining, terminal, retail, pipeline and processing assets.

Our practice is to keep our assets in good operating condition through routine repair and maintenance of component parts in the ordinary course of business and by continuing to make improvements based on technological advances. As a result, we believe that generally these assets have no expected settlement date

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for purposes of estimating asset retirement obligations since the dates or ranges of dates upon which we would retire these assets cannot be reasonably estimated at this time.

Income Taxes

Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their tax bases. Deferred tax assets are recorded when it is more likely than not that they will be realized. The realization of deferred tax assets is assessed periodically based on several factors, primarily our expectation to generate sufficient future taxable income.

Stock-Based Compensation Arrangements

The fair value of stock options granted to our employees is estimated on the date of grant using the Black-Scholes option pricing model. The model employs various assumptions based on management's estimates at the time of grant, which impact the calculation of fair value and ultimately, the amount of expense that is recognized over the vesting period of the stock option award. Of the required assumptions, the expected life of the stock option award and the expected volatility of our stock price have the most significant impact on the fair value calculation. The average expected life is based on our historical employee exercise behavior. The assumption for expected volatility of our stock price reflects a weighting of 50 percent of our common stock implied volatility and 50 percent of our common stock historical volatility.

The fair value of restricted stock awards granted to our employees is determined based on the fair market value of our common stock on the date of grant. The fair value of performance unit awards granted to our employees is estimated on the date of grant using a Monte Carlo valuation model.

Our stock-based compensation expense is recognized based on management's estimate of the awards that are expected to vest, using the straight-line attribution method for all service-based awards with a graded vesting feature. If actual forfeiture results are different than expected, adjustments to recognized compensation expense may be required in future periods. Unearned stock-based compensation is charged to equity when restricted stock awards are granted. Compensation expense is recognized over the vesting period and is adjusted if conditions of the restricted stock award are not met.

Business Combinations

We recognize and measure the assets acquired and liabilities assumed in a business combination based on their estimated fair values at the acquisition date. Any excess or surplus of the purchase consideration when compared to the fair value of the net tangible assets acquired, if any, is recorded as goodwill or gain from a bargain purchase. For material acquisitions, management engages an independent valuation specialist to assist with the determination of fair value of the assets acquired, liabilities assumed, noncontrolling interest, if any, and goodwill, based on recognized business valuation methodologies. An income, market or cost valuation method may be utilized to estimate the fair value of the assets acquired, liabilities assumed, and noncontrolling interest, if any, in a business combination. The income valuation method represents the present value of future cash flows over the life of the asset using: (i) discrete financial forecasts, which rely on management's estimates of revenue and operating expenses; (ii) long-term growth rates; and (iii) appropriate discount rates. The market valuation method uses prices paid for a reasonably similar asset by other purchasers in the market, with adjustments relating to any differences between the assets. The cost valuation method is based on the replacement cost of a comparable asset at prices at the time of the acquisition reduced for depreciation of the asset. If the initial accounting for the business combination is incomplete by the end of the reporting period in which the acquisition occurs, an estimate will be recorded. Subsequent to the acquisition date, and not later than one year from the acquisition date, we will record any material adjustments to the initial estimate based on new information obtained that would have existed as of the date of the acquisition. Any adjustment that arises from information obtained that did not exist as of the date of the acquisition will be recorded in the period of the adjustment. Acquisition-related costs are expensed as incurred in connection with each business combination.

Environmental Credits and Obligations

In order to comply with certain regulations, specifically the RFS2 requirements implemented by the EPA and the cap-and-trade emission reduction program and low carbon fuel standard implemented by the state of California, we are required to reduce our emissions, blend certain levels of biofuels or obtain allowances or credits to offset the obligations created by our operations. In regard to each program, we record an asset, included in other current or other noncurrent assets on the balance sheet, for allowances or credits owned in

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excess of our anticipated current period compliance requirements. The asset value is based on the product of the excess allowances or credits as of the balance sheet date, if any, and the weighted average cost of those allowances or credits. We record a liability, included in other current or other noncurrent liabilities on the balance sheet, when we are deficient allowances or credits based on the product of the deficient amount as of the balance sheet date, if any, and the market price of the allowances or credits at the balance sheet date. The cost of allowances or credits used for compliance is reflected in cost of revenues on the income statement. Any gains or losses on the sale or expiration of allowances or credits are classified as other income on the income statement. Proceeds from the sale of allowances or credits are reported in investing activities - all other, net on the cash flow statement.

3. ACCOUNTING STANDARDS

Recently Adopted

ASU 2016-02, Leases

We adopted ASU No. 2016-02, Leases (“ASC 842”), as of January 1, 2019, electing the transition method which permits entities to adopt the provisions of the standard using the modified retrospective approach without adjusting comparative periods. We also elected the package of practical expedients permitted under the transition guidance within the new standard, which among other things, allowed us to grandfather the historical accounting conclusions until a reassessment event is present. We have also elected the practical expedient to not recognize short-term leases on the balance sheet, the practical expedient related to right of way permits and land easements which allows us to carry forward our accounting treatment for those existing agreements, and the practical expedient to combine lease and non-lease components for the majority of our underlying classes of assets except for our third-party contractor service and equipment agreements and boat and barge equipment agreements in which we are the lessee. We did not elect the practical expedient to combine lease and non-lease components for arrangements in which we are the lessor. In instances where the practical expedient was not elected, lease and non-lease consideration is allocated based on relative standalone selling price.

Right of use (“ROU”) assets represent our right to use an underlying asset in which we obtain substantially all of the economic benefits and the right to direct the use of the asset during the lease term. Lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and lease liabilities are recognized at commencement date based on the present value of lease payments over the lease term. We recognize ROU assets and lease liabilities on the balance sheet for leases with a lease term of greater than one year. Payments that are not fixed at the commencement of the lease are considered variable and are excluded from the ROU asset and lease liability calculations. In the measurement of our ROU assets and lease liabilities, the fixed lease payments in the agreement are discounted using a secured incremental borrowing rate for a term similar to the duration of the lease, as our leases do not provide implicit rates. Operating lease expense is recognized on a straight-line basis over the lease term.

Adoption of the new standard resulted in the recording of ROU assets and lease liabilities of approximately \$2.8 billion and \$2.9 billion, respectively, as of January 1, 2019. The standard did not materially impact our consolidated statements of income, cash flows or equity as a result of adoption.

As a lessor under ASC 842, MPLX may be required to re-classify existing operating leases to sales-type leases upon modification and related reassessment of the leases. Modifications may result in the de-recognition of existing assets and recognition of a receivable in the amount of the present value of fixed payments expected to be received by MPLX under the lease.

ASU 2017-04, Intangibles - Goodwill and Other - Simplifying the Test for Goodwill Impairment

In connection with our annual goodwill impairment test, we adopted ASU 2017-04 prospectively during the fourth quarter of 2019. Under ASU 2017-04, the recognition of an impairment charge is calculated based on the amount by which the carrying amount exceeds the reporting unit’s fair value, which could be different from the amount calculated under the former method using the implied fair value of the goodwill; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. During the fourth quarter of 2019, we recorded certain goodwill impairment charges as described in Note 16.

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We also adopted the following ASUs during 2019, none of which had a material impact to our financial statements or financial statement disclosures:

ASU		Effective Date
2018-02	Reporting Comprehensive Income - Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income	January 1, 2019
2017-12	Derivatives and Hedging - Targeted Improvements to Accounting for Hedging Activities	January 1, 2019

Not Yet Adopted

ASU 2019-12, Income Taxes (Topic 740) - Simplifying the Accounting for Income Taxes

In December 2019, the FASB issued new guidance to simplify the accounting for income taxes. Amendments include removal of certain exceptions to the general principles of ASC 740 and simplification in several other areas such as accounting for a franchise tax or similar tax that is partially based on income. The change is effective for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. Early adoption is permitted in any interim or annual period, with any adjustments reflected as of the beginning of the fiscal year of adoption. We do not expect the application of this ASU to have a material impact on our consolidated financial statements.

ASU 2016-13, Credit Losses - Measurement of Credit Losses on Financial Instruments

In June 2016, the FASB issued an ASU related to the accounting for credit losses on certain financial instruments. The guidance requires that for most financial assets, losses be based on an expected loss approach which includes estimates of losses over the life of exposure that considers historical, current and forecasted information. Expanded disclosures related to the methods used to estimate the losses as well as a specific disaggregation of balances for financial assets are also required. The change is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption permitted for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The application of this ASU will not have a material impact on our consolidated financial statements.

4. MASTER LIMITED PARTNERSHIP

We own the general partner and a majority limited partner interest in MPLX, which owns and operates crude oil and refined product transportation and logistics infrastructure and natural gas and NGL gathering, processing, and fractionation assets. We control MPLX through our ownership of the general partner interest and as of December 31, 2019, we owned approximately 63 percent of the outstanding MPLX common units.

MPLX's Acquisition of ANDX

On July 30, 2019, MPLX completed its acquisition of Andeavor Logistics LP ("ANDX"), and ANDX survived as a wholly-owned subsidiary of MPLX. At the effective time of the merger, each common unit held by ANDX's public unitholders was converted into the right to receive 1.135 MPLX common units. ANDX common units held by MPC were converted into the right to receive 1.0328 MPLX common units. Additionally, 600,000 ANDX preferred units were converted into 600,000 preferred units of MPLX ("Series B preferred units"). Series B preferred unitholders are entitled to receive, when and if declared by the MPLX board, a fixed distribution of \$68.75 per unit, per annum, payable semi-annually in arrears on February 15 and August 15, or the first business day thereafter, up to and including February 15, 2023. After February 15, 2023, the holders of Series B preferred units are entitled to receive cumulative, quarterly distributions payable in arrears on the 15th day of February, May, August and November of each year, or the first business day thereafter, based on a floating annual rate equal to the three month LIBOR plus 4.652 percent.

MPC accounted for this transaction as a common control transaction, as defined by ASC 805, which resulted in an increase to noncontrolling interest and a decrease to additional paid-in capital of approximately \$55 million, net of tax. During the third quarter of 2019, we pushed down to MPLX the portion of the goodwill attributable to ANDX as of October 1, 2018. Due to this push down of goodwill, we also recorded an incremental \$642 million deferred tax liability associated with the portion of the non-deductible goodwill attributable to the noncontrolling interest in MPLX with an offsetting reduction of our additional paid-in capital balance.

As described in Notes 5 and 6, we have consolidated ANDX since the acquisition date of October 1, 2018 in accordance with ASC 810.

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Dropdowns to MPLX and GP/IDR Exchange

On February 1, 2018, we contributed our refining logistics assets and fuels distribution services to MPLX in exchange for \$4.1 billion in cash and approximately 112 million common units and 2 million general partner units from MPLX. MPLX financed the cash portion of the transaction with its \$4.1 billion 364-day term loan facility, which was entered into on January 2, 2018. We agreed to waive approximately one-third of the first quarter 2018 distributions on the common units issued in connection with this transaction. The contributions of these assets were accounted for as transactions between entities under common control and we did not record a gain or loss.

Immediately following the February 1, 2018 dropdown to MPLX, our IDRs were cancelled and our economic general partner interest was converted into a non-economic general partner interest, all in exchange for 275 million newly issued MPLX common units (“GP/IDR Exchange”). As a result of this transaction, the general partner units and IDRs were eliminated, are no longer outstanding and no longer participate in distributions of cash from MPLX.

On September 1, 2017, we contributed our joint-interest ownership in certain pipelines and storage facilities to MPLX in exchange for \$420 million in cash and approximately 19 million MPLX common units and 378 thousand general partner units from MPLX. We also agreed to waive approximately two-thirds of the third quarter 2017 common unit distributions, IDRs and general partner distributions with respect to the common units issued in this transaction. The contributions of these assets were accounted for as transactions between entities under common control and we did not record a gain or loss.

On March 1, 2017, we contributed certain terminal, pipeline and storage assets to MPLX in exchange for total consideration of \$1.5 billion in cash and approximately 13 million common units and 264 thousand general partner units from MPLX. We also agreed to waive two-thirds of the first quarter 2017 common unit distributions, IDRs and general partner distributions with respect to the common units issued in the transaction. The contributions of these assets were accounted for as transactions between entities under common control and we did not record a gain or loss.

Agreements

We have various long-term, fee-based commercial agreements with MPLX. Under these agreements, MPLX provides transportation, storage, distribution and marketing services to us. With certain exceptions, these agreements generally contain minimum volume commitments. These transactions are eliminated in consolidation but are reflected as intersegment transactions between our Refining & Marketing and Midstream segments. We also have agreements with MPLX that establish fees for operational and management services provided between us and MPLX and for executive management services and certain general and administrative services provided by us to MPLX. These transactions are eliminated in consolidation but are reflected as intersegment transactions between our Corporate and Midstream segments.

Noncontrolling Interest

As a result of equity transactions of MPLX and ANDX, we are required to adjust non-controlling interest and additional paid-in capital to reflect these changes in ownership. Changes in MPC’s additional paid-in capital resulting from changes in its ownership interest in MPLX and ANDX were as follows:

<i>(In millions)</i>	2019	2018	2017
Increase due to the issuance of MPLX common units and general partner units to MPC	\$ —	\$ 1,114	\$ 114
Increase due to GP/IDR Exchange	—	1,808	—
Increase (decrease) due to the issuance of MPLX & ANDX common units	(51)	6	25
Increase (decrease) in MPC's additional paid-in capital	(51)	2,928	139
Tax impact	(633)	(571)	(29)
Increase (decrease) in MPC's additional paid-in capital, net of tax	\$ (684)	\$ 2,357	\$ 110

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5. ACQUISITIONS

Acquisition of Andeavor

On October 1, 2018, we acquired Andeavor. Under the terms of the merger agreement, Andeavor stockholders had the option to choose 1.87 shares of MPC common stock or \$152.27 in cash per share of Andeavor common stock. The merger agreement included election proration provisions that resulted in approximately 22.9 million shares of Andeavor common stock being converted into cash consideration and the remaining 128.2 million shares of Andeavor common stock being converted into stock consideration. Andeavor stockholders received in the aggregate approximately 239.8 million shares of MPC common stock and approximately \$3.5 billion in cash in connection with the Andeavor acquisition. The fair value of the MPC shares issued was determined on the basis of the closing market price of MPC's common shares on the acquisition date. The cash portion of the purchase price was funded using cash on hand.

At the time of the acquisition, all Andeavor equity awards, with the exception of non-employee director units, were converted to MPC equity awards. The converted equity awards will continue to be governed by the same terms and conditions as were applicable to such Andeavor equity awards immediately prior to the acquisition. We recognized \$203 million of purchase consideration to reflect the portion of the fair value of the time-based converted equity awards attributable to pre-combination service completed by the award holders. The non-employee director units were accelerated in full and cancelled and the holders of such units received an amount of cash equal to the number of shares of Andeavor common stock subject to such non-employee director units multiplied by the cash consideration per share.

Our financial results reflect the results of Andeavor from October 1, 2018, the date of the acquisition.

The components of the fair value of consideration transferred are as follows:

(In millions)

Fair value of MPC shares issued	\$	19,766
Cash payment to Andeavor stockholders		3,486
Cash settlement of non-employee director units		7
Fair value of converted equity awards		203
Total fair value of consideration transferred	\$	<u>23,462</u>

We accounted for the Andeavor acquisition using the acquisition method of accounting, which requires Andeavor assets and liabilities to be recorded to our balance sheet at fair value as of the acquisition date. The size and the breadth of the Andeavor acquisition necessitated the use of the one year measurement period provided under ASC 805 to fully analyze all the factors used in establishing the asset and liability fair values as of the acquisition date. We completed a final determination of the fair value of certain assets and liabilities during the three months ended September 30, 2019 and recorded final adjustments to our preliminary purchase price allocation. These adjustments reflect the completion of valuation studies of the acquired property, plant and equipment in order to finalize assumptions used in their cost approach valuation methodology and finalization of specific valuation assumptions and data inputs for other individual asset valuation models. The fair value estimates of assets acquired and liabilities assumed as of the acquisition date are noted in the table below.

<i>(In millions)</i>	As originally reported	Adjustments	As adjusted
Cash and cash equivalents	\$ 382	\$ —	\$ 382
Receivables	2,744	(5)	2,739
Inventories	5,204	37	5,241
Other current assets	378	(6)	372
Equity method investments	865	(113)	752
Property, plant and equipment, net	16,545	(1,021)	15,524
Other noncurrent assets ^(a)	3,086	(11)	3,075
Total assets acquired	29,204	(1,119)	28,085

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<i>(In millions)</i>	As originally reported	Adjustments	As adjusted
Accounts payable	4,003	(41)	3,962
Payroll and benefits payable	348	9	357
Accrued taxes	590	(110)	480
Debt due within one year	34	—	34
Other current liabilities	392	27	419
Long-term debt	8,875	1	8,876
Deferred income taxes	1,609	(60)	1,549
Defined benefit postretirement plan obligations	432	—	432
Deferred credit and other liabilities	714	33	747
Noncontrolling interests	5,059	3	5,062
Total liabilities and noncontrolling interest assumed	22,056	(138)	21,918
Net assets acquired excluding goodwill	7,148	(981)	6,167
Goodwill	16,314	981	17,295
Net assets acquired	<u>\$ 23,462</u>	<u>\$ —</u>	<u>\$ 23,462</u>

^(a) Includes intangible assets.

Details of our valuation methodology and significant inputs for fair value measurements are included by asset class below. The fair value measurements for equity method investments, property, plant and equipment, intangible assets and long-term debt are based on significant inputs that are not observable in the market and, therefore, represent Level 3 measurements.

Goodwill

The purchase consideration allocation resulted in the recognition of \$17.3 billion in goodwill, of which \$1.0 billion is tax deductible due to a carryover basis from Andeavor. Our Refining & Marketing, Midstream and Retail segments recognized \$5.2 billion, \$8.1 billion and \$3.9 billion of goodwill. The recognized goodwill represents the value expected to be created by further optimization of crude supply, a nationwide retail and marketing platform, diversification of our refining and midstream footprints and optimization of information systems and business processes.

Inventory

The fair value of inventory was determined by recognizing crude oil and feedstocks at market prices as of October 1, 2018 and recognizing refined product inventory at market prices less selling costs and profit margin associated with the remaining distribution process.

Equity Method Investments

The fair value of the equity method investments was determined based on applying income and market approaches. The income approach relied on the discounted cash flow method and the market approach relied on a market multiple approach considering historical and projected financial results. Discount rates for the discounted cash flow models were based on capital structures for similar market participants and included various risk premiums that account for risks associated with the specific investments. For more information about our equity method investments, see Note 14.

Property, Plant and Equipment

The fair value of property, plant and equipment was based primarily on the cost approach. Key assumptions in the cost approach included determining the replacement cost by evaluating recent purchases of similar assets or published data, and adjusting replacement cost for economic and functional obsolescence, location, normal useful lives, and capacity (if applicable).

Acquired Intangible Assets

The fair value of the acquired identifiable intangible assets is \$2.8 billion, which represents the value of various customer contracts and relationships, brand rights and tradenames and other intangible assets. The fair value of customer contracts and relationships is \$2.5 billion, which was valued by applying the multi-period excess

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earnings method, which is an income approach. Key assumptions in the income approach include the underlying contract cash flow estimates, remaining contract term, probability of renewal, growth rates and discount rates. Brand rights and tradenames were valued by applying the relief of royalty method, which is an income approach. The intangible assets are all definite lived and will be amortized over 2 to 10 years.

Debt

The fair value of the Andeavor and ANDX unsecured notes was measured using a market approach, based upon the average of quotes for the acquired debt from major financial institutions and a third-party valuation service. Additionally, borrowings under revolving credit agreements and other debt were assumed to approximate fair value.

Noncontrolling Interest

Through the Andeavor acquisition, we acquired the general partnership interest of ANDX, which was a VIE because the limited partners of ANDX did not have substantive kick-out or substantive participating rights over the general partner. We were the primary beneficiary of ANDX because in addition to our significant economic interest, we also had the ability, through our 100 percent ownership of the general partner, to control the decisions that most significantly impact ANDX. The fair value of the noncontrolling interest in ANDX was based on the unit price, units outstanding and the percent of public unitholders of ANDX on October 1, 2018.

Acquisition Costs

We recognized \$47 million in acquisition costs. Additionally, we recognized various other transaction-related costs, including employee-related costs associated with the Andeavor acquisition. All of these costs are reflected in selling, general and administrative expenses. The employee-related costs are primarily due to pre-existing Andeavor change in control and equity award agreements that create obligations and accelerated equity vesting upon MPC notifying employees of significant changes to or elimination of their responsibilities.

Andeavor Revenues and Income from Operations

Andeavor's results have been included in MPC's financial statements for the period subsequent to the date of the acquisition on October 1, 2018. Andeavor contributed revenues of approximately \$11.3 billion for the period from October 1 through December 31, 2018. We do not believe it is practical to disclose Andeavor's contribution to earnings for the period from October 1, 2018 through December 31, 2018 as our integration efforts have resulted in the elimination of Andeavor stand-alone discrete financial information due mainly to our inclusion of Andeavor inventory in our consolidated LIFO inventory pools, which does not allow us to objectively distinguish the cost of sales between the two historical reporting entities.

Pro Forma Financial Information

The following unaudited pro forma financial information presents consolidated results assuming the Andeavor acquisition occurred on January 1, 2017.

(In millions, except per share data)

	2018	2017
Sales and other operating revenues ^(a)	\$ 131,921	\$ 118,179
Net income attributable to MPC	4,218	4,712

^(a) The 2018 period reflects an election to present certain taxes on a net basis concurrent with our adoption of ASC 606.

The pro forma information includes adjustments to align accounting policies, an adjustment to depreciation expense to reflect the increased fair value of property, plant and equipment, increased amortization expense related to identifiable intangible assets and the related income tax effects. The pro forma information does not reflect the \$727 million effect on net income attributable to MPC related to purchase accounting related inventory effects and transaction-related costs as these charges do not have a continuing impact on the consolidated results.

Acquisition of Terminal and Retail Locations in New York

During the third quarter of 2019, we acquired a 900,000-barrel capacity light product and asphalt terminal and 33 NOCO Express retail stores in Buffalo, Syracuse and Rochester, New York, from NOCO Incorporated for total consideration of \$135 million.

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Based on the final fair value estimates of assets acquired and liabilities assumed at the acquisition date, \$38 million of the purchase price was allocated to property, plant and equipment, \$3 million to inventory and \$94 million to goodwill. Goodwill is tax deductible and represents the value expected to be created by geographically expanding our retail platform and the assembled workforce. The terminal is accounted for within the R&M segment and the retail stores are accounted for within the Retail segment.

The amount of revenue and income from operations associated with the acquisition from the acquisition date to December 31, 2019 did not have a material impact on the consolidated financial statements. In addition, assuming the acquisition had occurred on January 1, 2018, the consolidated pro forma results would not have been materially different from the reported results.

Acquisition of Express Mart

During the fourth quarter of 2018, Speedway acquired 78 transportation fuel and convenience store locations from Petr-All Petroleum Consulting Corporation for total consideration of \$266 million. These stores are located primarily in the Syracuse, Rochester and Buffalo markets in New York and operate under the Express Mart brand.

Based on the final fair value estimates of assets acquired and liabilities assumed at the acquisition date, \$97 million of the purchase price was allocated to property, plant and equipment, \$9 million to inventory, \$2 million to intangibles and \$158 million to goodwill. Goodwill is tax deductible and represents the value expected to be created by geographically expanding our retail platform and the assembled workforce.

The amount of revenue and income from operations associated with the acquisition from the acquisition date to December 31, 2018 did not have a material impact on the consolidated financial statements. In addition, assuming the acquisition had occurred on January 1, 2017, the consolidated pro forma results would not have been materially different from the reported results.

Acquisition of Mt. Airy Terminal

On September 26, 2018, MPLX acquired an eastern U.S. Gulf Coast export terminal (“Mt. Airy Terminal”) from Pin Oak Holdings, LLC for total consideration of \$451 million. At the time of the acquisition, the terminal included tanks with 4 million barrels of third-party leased storage capacity and a dock with 120 mbpd of capacity. The Mt. Airy Terminal is located on the Mississippi River between New Orleans and Baton Rouge, near several Gulf Coast refineries, including our Garyville Refinery, and numerous rail lines and pipelines. The Mt. Airy Terminal is accounted for within the Midstream segment. In the first quarter of 2019, an adjustment to the initial purchase price was made for approximately \$5 million related to the final settlement of the acquisition. This reduced the total purchase price to \$446 million and resulted in \$336 million of property, plant and equipment, \$121 million of goodwill and the remainder being attributable to net liabilities assumed.

Goodwill represents the significant growth potential of the terminal due to the multiple pipelines and rail lines which cross the property, the terminal’s position as an aggregation point for liquids growth in the region for both ocean-going vessels and inland barges, the proximity of the terminal to our Garyville refinery and other refineries in the region as well as the opportunity to construct an additional dock at the site. All of the goodwill recognized related to this transaction is tax deductible.

The amount of revenue and income from operations associated with the acquisition from the terminal acquisition date to December 31, 2018 did not have a material impact on the consolidated financial statements. In addition, assuming the terminal acquisition had occurred on January 1, 2017, the consolidated pro forma results would not have been materially different from the reported results.

Acquisition of Ozark Pipeline

On March 1, 2017, MPLX acquired the Ozark pipeline from Enbridge Pipelines (Ozark) LLC for approximately \$219 million, including purchase price adjustments made in the second quarter of 2017. Based on the fair value of assets acquired and liabilities assumed at the acquisition date, the final purchase price was primarily allocated to property, plant and equipment. The Ozark pipeline is a 433-mile, 22-inch crude oil pipeline originating in Cushing, Oklahoma, and terminating in Wood River, Illinois, capable of transporting approximately 230 mbpd. We present the Ozark pipeline within the Midstream segment.

The amount of revenue and income from operations associated with the acquisition from the acquisition date to December 31, 2017 did not have a material impact on the consolidated financial statements. In addition,

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assuming the acquisition of the Ozark pipeline had occurred on January 1, 2016, the consolidated pro forma results would not have been materially different from reported results.

Investment in Pipeline Company

On February 15, 2017, MPLX acquired a partial, indirect equity interest in the Dakota Access Pipeline (“DAPL”) and Energy Transfer Crude Oil Company Pipeline (“ETCOP”) projects, collectively referred to as the Bakken Pipeline system, through a joint venture with Enbridge Energy Partners L.P. (“Enbridge Energy Partners”). MPLX contributed \$500 million of the \$2 billion purchase price paid by the joint venture, MarEn Bakken Company LLC (“MarEn Bakken”), to acquire a 36.75 percent indirect equity interest in the Bakken Pipeline system from Energy Transfer Partners, L.P. (“ETP”) and Sunoco Logistics Partners, L.P. (“SXL”). MPLX holds, through a subsidiary, a 25 percent interest in MarEn Bakken, which equates to an approximate 9.2 percent indirect equity interest in the Bakken Pipeline system. We account for the investment in MarEn Bakken as part of our Midstream segment using the equity method of accounting.

Formation of Gathering and Processing Joint Venture

Effective January 1, 2017, MPLX and Antero Midstream formed a joint venture, Sherwood Midstream LLC (“Sherwood Midstream”), to support the development of Antero Resources Corporation’s Marcellus Shale acreage in West Virginia. MPLX has a 50 percent ownership interest in Sherwood Midstream. In connection with this transaction, MPLX contributed assets then under construction at the Sherwood Complex with a fair value of approximately \$134 million and cash of approximately \$20 million. Antero Midstream made an initial capital contribution of approximately \$154 million.

Also effective January 1, 2017, MPLX converted all of its ownership interests in MarkWest Ohio Fractionation Company, L.L.C. (“Ohio Fractionation”), a previously wholly-owned subsidiary, to Class A Interests and amended its LLC Agreement to create Class B-3 Interests, which were sold to Sherwood Midstream for \$126 million in cash. The Class B-3 Interests provide Sherwood Midstream with the right to fractionation revenue and the obligation to pay expenses related to 20 mbpd of capacity in the Hopedale 3 fractionator.

Effective January 1, 2017, MPLX and Sherwood Midstream formed a joint venture, Sherwood Midstream Holdings LLC (“Sherwood Midstream Holdings”), for the purpose of owning, operating and maintaining all of the shared assets for the benefit of and use in the operation of the gas plants and other assets owned by Sherwood Midstream and the gas plants and de-ethanization facilities owned by MPLX. MPLX contributed certain real property, equipment and facilities with a fair value of approximately \$209 million to Sherwood Midstream Holdings in exchange for a 79 percent initial ownership interest. Sherwood Midstream contributed cash of approximately \$44 million to Sherwood Midstream Holdings in exchange for a 21 percent initial ownership interest. The net book value of the contributed assets was approximately \$203 million. The contribution was determined to be an in-substance sale of real estate. As such, MPLX only recognized a gain for the portion attributable to Antero Midstream’s indirect interest of approximately \$2 million.

We account for our direct interests in Sherwood Midstream and Sherwood Midstream Holdings as part of our Midstream segment using the equity method of accounting. We continue to consolidate Ohio Fractionation and have recognized a noncontrolling interest for Sherwood Midstream’s interest in that entity.

See Note 6 for additional information related to the investments in Sherwood Midstream and Sherwood Midstream Holdings.

6. VARIABLE INTEREST ENTITIES

Consolidated VIE

We control MPLX through our ownership of the general partner. MPLX is a VIE because the limited partners do not have substantive kick-out or substantive participating rights over the general partner. We are the primary beneficiary of MPLX because in addition to our significant economic interest, we also have the ability, through our ownership of the general partner, to control the decisions that most significantly impact MPLX. We therefore consolidate MPLX and record a noncontrolling interest for the interest owned by the public. We also record a redeemable noncontrolling interest related to MPLX’s Series A preferred units.

The creditors of MPLX do not have recourse to MPC’s general credit through guarantees or other financial arrangements, except as noted. MPC has effectively guaranteed certain indebtedness of LOOP LLC (“LOOP”) and LOCAP LLC (“LOCAP”), in which MPLX holds an interest. See Note 26 for more information. The

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assets of MPLX can only be used to settle its own obligations and its creditors have no recourse to our assets, except as noted earlier.

On July 30, 2019, MPLX acquired ANDX. We have consolidated ANDX since the acquisition date of October 1, 2018 in accordance with ASC 810. The ANDX balances at December 31, 2018 reflected in the table below are ANDX's historical balances as the preliminary purchase accounting adjustments related to ANDX's assets and liabilities in connection with the Andeavor acquisition had not yet been pushed down to ANDX. The MPLX balances at December 31, 2019 reflect the inclusion of ANDX's balances at fair values determined in connection with MPC's acquisition of Andeavor on October 1, 2018. See Notes 4 and 5 for additional information.

The following table presents balance sheet information for the assets and liabilities of MPLX and ANDX, which are included in our balance sheets.

<i>(In millions)</i>	December 31, 2019		December 31, 2018			
	MPLX		MPLX	ANDX		
Assets						
Cash and cash equivalents	\$	15	\$	68	\$	10
Receivables, less allowance for doubtful accounts		615		425		199
Inventories		110		77		22
Other current assets		110		45		57
Equity method investments		5,275		4,174		602
Property, plant and equipment, net		22,174		14,639		6,845
Goodwill		9,536		2,586		1,051
Right of use assets		365		—		—
Other noncurrent assets		1,323		458		1,242
Liabilities						
Accounts payable	\$	744	\$	776	\$	215
Payroll and benefits payable		5		2		10
Accrued taxes		80		48		23
Debt due within one year		9		1		504
Operating lease liabilities		66		—		—
Other current liabilities		259		177		77
Long-term debt		19,704		13,392		4,469
Deferred income taxes		12		13		1
Long-term operating lease liabilities		302		—		—
Deferred credits and other liabilities		409		276		68

Non-Consolidated VIEs

Crowley Coastal Partners

In May 2016, Crowley Coastal Partners LLC (“Crowley Coastal Partners”) was formed to own an interest in both Crowley Ocean Partners LLC (“Crowley Ocean Partners”) and Crowley Blue Water Partners LLC (“Crowley Blue Water Partners”). We have determined that Crowley Coastal Partners is a VIE based on the terms of the existing financing arrangements for Crowley Blue Water Partners and Crowley Ocean Partners and the associated debt guarantees by MPC and Crowley. Our maximum exposure to loss at December 31, 2019 was \$440 million, which includes our equity method investment in Crowley Coastal Partners and the debt guarantees provided to each of the lenders to Crowley Blue Water Partners and Crowley Ocean Partners. We are not the primary beneficiary of this VIE because we do not have the ability to control the activities that significantly influence the economic outcomes of the entity and, therefore, do not consolidate the entity.

MPLX VIEs

As a result of MPLX's acquisition of ANDX, MPLX acquired an ownership interest in Rendezvous Gas Services, L.L.C. (“RGS”), Minnesota Pipe Line Company, LLC and Andeavor Logistics Rio Pipeline LLC (“ALRP”), among others. RGS and ALRP have been deemed to be VIEs, however, neither MPLX nor any of

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its subsidiaries have been deemed to be the primary beneficiary due to voting rights on significant matters. For all of the investments acquired through the merger, MPLX has the ability to exercise influence through participation in the management committees which make all significant decisions. However, since MPLX has equal or proportionate influence over each committee as a joint interest partner and all significant decisions require the consent of the other investors without regard to economic interest, we have determined that these entities should not be consolidated and we apply the equity method of accounting with respect to MPLX's investment in each entity.

In addition to the investments above, MarkWest Utica EMG, L.L.C., Sherwood Midstream, MarkWest EMG Jefferson Dry Gas Gathering Company, L.L.C. and Sherwood Midstream Holdings are also deemed to be VIEs. Consistent with the investments above, neither MPLX nor any of its subsidiaries are deemed to be the primary beneficiary due to voting rights on significant matters. Sherwood Midstream has been deemed the primary beneficiary of Sherwood Midstream Holdings due to its controlling financial interest through its authority to manage the joint venture. As a result, Sherwood Midstream consolidates Sherwood Midstream Holdings.

MPLX's maximum exposure to loss as a result of its involvement with equity method investments includes its equity investment, any additional capital contribution commitments and any operating expenses incurred by the subsidiary operator in excess of its compensation received for the performance of the operating services.

We account for our ownership interest in each of these investments as an equity method investment. See Note 14 for ownership percentages and investment balances related to these VIEs.

7. RELATED PARTY TRANSACTIONS

Transactions with related parties were as follows:

<i>(In millions)</i>	2019	2018	2017
Sales to related parties	\$ 768	\$ 754	\$ 629
Purchases from related parties	763	610	570

Sales to related parties, which are included in sales and other operating revenues, consist primarily of sales of refined products to PFJ Southeast, an equity affiliate which owns and operates travel plazas primarily in the Southeast region of the United States.

Purchases from related parties are included in cost of revenues. We obtain utilities, transportation services and purchase ethanol from certain of our equity affiliates.

8. EARNINGS PER SHARE

We compute basic earnings per share by dividing net income attributable to MPC less income allocated to participating securities by the weighted average number of shares of common stock outstanding. Since MPC grants certain incentive compensation awards to employees and non-employee directors that are considered to be participating securities, we have calculated our earnings per share using the two-class method. Diluted income per share assumes exercise of certain stock-based compensation awards, provided the effect is not anti-dilutive.

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<i>(In millions, except per share data)</i>	2019	2018	2017
Basic earnings per share:			
Allocation of earnings:			
Net income attributable to MPC	\$ 2,637	\$ 2,780	\$ 3,432
Income allocated to participating securities	1	1	2
Income available to common stockholders – basic	\$ 2,636	\$ 2,779	\$ 3,430
Weighted average common shares outstanding	659	518	507
Basic earnings per share	\$ 4.00	\$ 5.36	\$ 6.76
Diluted earnings per share:			
Allocation of earnings:			
Net income attributable to MPC	\$ 2,637	\$ 2,780	\$ 3,432
Income allocated to participating securities	1	1	2
Income available to common stockholders – diluted	\$ 2,636	\$ 2,779	\$ 3,430
Weighted average common shares outstanding	659	518	507
Effect of dilutive securities	5	8	5
Weighted average common shares, including dilutive effect	664	526	512
Diluted earnings per share	\$ 3.97	\$ 5.28	\$ 6.70

The following table summarizes the shares that were anti-dilutive, and therefore, were excluded from the diluted share calculation.

<i>(In millions)</i>	2019	2018	2017
Shares issuable under stock-based compensation plans	3	—	1

9. EQUITY

As of December 31, 2019, we had \$2.96 billion of remaining share repurchase authorizations from our board of directors. We may utilize various methods to effect the repurchases, which could include open market repurchases, negotiated block transactions, tender offers, accelerated share repurchases or open market solicitations for shares, some of which may be effected through Rule 10b5-1 plans. The timing and amount of future repurchases, if any, will depend upon several factors, including market and business conditions, and such repurchases may be discontinued at any time.

Total share repurchases were as follows for the respective periods:

<i>(In millions, except per share data)</i>	2019	2018	2017
Number of shares repurchased	34	47	44
Cash paid for shares repurchased	\$ 1,950	\$ 3,287	\$ 2,372
Average cost per share	\$ 58.87	\$ 69.46	\$ 53.85

10. SEGMENT INFORMATION

We have three reportable segments: Refining & Marketing, Retail and Midstream. Each of these segments is organized and managed based upon the nature of the products and services it offers.

- Refining & Marketing – refines crude oil and other feedstocks at our 16 refineries in the Gulf Coast, Mid-Continent and West Coast regions of the United States, purchases refined products and ethanol for resale and distributes refined products through transportation, storage, distribution and marketing services provided largely by our Midstream segment. We sell refined products to wholesale marketing customers domestically and internationally, to buyers on the spot market, to our Retail business segment and to independent entrepreneurs who operate primarily Marathon® branded outlets.
- Retail – sells transportation fuels and convenience products in the retail market across the United States through company-owned and operated convenience stores, primarily under the Speedway® brand, and

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long-term fuel supply contracts with direct dealers who operate locations mainly under the ARCO® brand.

- Midstream – transports, stores, distributes and markets crude oil and refined products principally for the Refining & Marketing segment via refining logistics assets, pipelines, terminals, towboats and barges; gathers, processes and transports natural gas; and gathers, transports, fractionates, stores and markets NGLs. The Midstream segment primarily reflects the results of MPLX.

On October 1, 2018, we acquired Andeavor and its results are included in each of our segments from the date of the acquisition. Also, on February 1, 2018, we contributed certain refining logistics assets and fuels distribution services to MPLX. The results of these new businesses are reported in the Midstream segment prospectively from February 1, 2018, resulting in a net reduction to Refining & Marketing segment results and a net increase to Midstream segment results of the same amount. No effect was given to prior periods as these entities were not considered businesses prior to February 1, 2018.

Segment income from operations represents income from operations attributable to the reportable segments. Corporate administrative expenses, except for those attributable to MPLX, and costs related to certain non-operating assets are not allocated to the Refining & Marketing and Retail segments. In addition, certain items that affect comparability (as determined by the chief operating decision maker) are not allocated to the reportable segments.

<i>(In millions)</i>	Refining & Marketing	Retail	Midstream	Total
Year Ended December 31, 2019				
Revenues:				
Third party ^(a)	\$ 87,056	\$ 33,059	\$ 3,834	\$ 123,949
Intersegment	19,686	8	4,926	24,620
Segment revenues	<u>\$ 106,742</u>	<u>\$ 33,067</u>	<u>\$ 8,760</u>	<u>\$ 148,569</u>
Segment income from operations	\$ 2,367	\$ 1,582	\$ 3,594	\$ 7,543

Supplemental Data

Depreciation and amortization ^(b)	1,665	528	1,267	3,460
Capital expenditures and investments ^(c)	1,999	607	3,290	5,896

<i>(In millions)</i>	Refining & Marketing	Retail	Midstream	Total
Year Ended December 31, 2018				
Revenues:				
Third party ^(a)	\$ 69,685	\$ 23,546	\$ 3,273	\$ 96,504
Intersegment	12,914	6	3,387	16,307
Segment revenues	<u>\$ 82,599</u>	<u>\$ 23,552</u>	<u>\$ 6,660</u>	<u>\$ 112,811</u>
Segment income from operations	\$ 2,481	\$ 1,028	\$ 2,752	\$ 6,261

Supplemental Data

Depreciation and amortization ^(b)	1,174	353	885	2,412
Capital expenditures and investments ^(c)	1,057	460	2,630	4,147

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<i>(In millions)</i>	Refining & Marketing	Retail	Midstream	Total
Year Ended December 31, 2017				
Revenues:				
Third party ^(a)	\$ 53,382	\$ 19,029	\$ 2,322	\$ 74,733
Intersegment ^(d)	11,309	4	1,443	12,756
Segment revenues	<u>\$ 64,691</u>	<u>\$ 19,033</u>	<u>\$ 3,765</u>	<u>\$ 87,489</u>
Segment income from operations	\$ 2,321	\$ 729	\$ 1,339	\$ 4,389

Supplemental Data

Depreciation and amortization ^(b)	1,082	275	699	2,056
Capital expenditures and investments ^(c)	832	381	1,755	2,968

^(a) Includes related party sales. See Note 7 for additional information.

^(b) Differences between segment totals and MPC totals represent amounts related to unallocated items and are included in items not allocated to segment in the reconciliation below.

^(c) Includes changes in capital expenditure accruals and investments in affiliates.

^(d) Management believes intersegment transactions were conducted under terms comparable to those with unaffiliated parties.

The following reconciles segment income from operations to income before income taxes as reported in the consolidated statements of income:

<i>(In millions)</i>	2019	2018	2017
Segment income from operations	\$ 7,543	\$ 6,261	\$ 4,389
Items not allocated to segments:			
Corporate and other unallocated items ^(a)	(805)	(502)	(365)
Equity method investment restructuring gains ^(b)	259	—	—
Transaction-related costs ^(c)	(160)	(197)	—
Litigation	(22)	—	(29)
Impairments ^(d)	<u>(1,239)</u>	<u>9</u>	<u>23</u>
Income from operations	5,576	5,571	4,018
Net interest and other financial costs	<u>1,247</u>	<u>1,003</u>	<u>674</u>
Income before income taxes	<u>\$ 4,329</u>	<u>\$ 4,568</u>	<u>\$ 3,344</u>

^(a) Corporate and other unallocated items consists primarily of MPC's corporate administrative expenses and costs related to certain non-operating assets, except for corporate overhead expenses attributable to MPLX, which are included in the Midstream segment. Corporate overhead expenses are not allocated to the Refining & Marketing and Retail segments.

^(b) Includes gains related to The Andersons Marathon Holdings LLC and Capline Pipeline Company LLC. See Note 14.

^(c) 2019 includes costs incurred in connection with the proposed Speedway separation, Midstream strategic review and other related efforts. Both 2019 and 2018 include employee severance, retention and other costs related to the acquisition of Andeavor. Effective October 1, 2019, we have discontinued reporting Andeavor transaction-related costs as one year has passed since the Andeavor acquisition. The post October 1, 2019 transaction costs are immaterial and reported in corporate and other unallocated items.

^(d) 2019 reflects impairments of goodwill and equity method investments. See Notes 16 and 14. 2018 and 2017 includes MPC's share of gains from the sale of assets remaining from the Sandpiper pipeline project, which was cancelled and impaired in 2016.

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The following reconciles segment capital expenditures and investments to total capital expenditures:

<i>(In millions)</i>	2019	2018	2017
Segment capital expenditures and investments	\$ 5,896	\$ 4,147	\$ 2,968
Less investments in equity method investees	1,064	409	305
Plus items not allocated to segments:			
Corporate	100	77	83
Capitalized interest	137	80	55
Total capital expenditures ^(a)	\$ 5,069	\$ 3,895	\$ 2,801

^(a) Includes changes in capital expenditure accruals. See Note 21 for a reconciliation of total capital expenditures to additions to property, plant and equipment as reported in the consolidated statements of cash flows.

No single customer accounted for more than 10 percent of annual revenues for the years ended December 31, 2019, 2018 and 2017. See Note 20 for the disaggregation of our revenue by segment and product line.

We do not have significant operations in foreign countries. Therefore, revenues in foreign countries and long-lived assets located in foreign countries, including property, plant and equipment and investments, are not material to our operations.

11. NET INTEREST AND OTHER FINANCIAL COSTS

Net interest and other financial costs was:

<i>(In millions)</i>	2019	2018	2017
Interest income	\$ (40)	\$ (87)	\$ (27)
Interest expense	1,396	1,026	688
Interest capitalized	(158)	(80)	(63)
Pension and other postretirement non-service costs ^(a)	3	53	49
Loss on extinguishment of debt	—	64	—
Other financial costs	46	27	27
Net interest and other financial costs	\$ 1,247	\$ 1,003	\$ 674

^(a) See Note 23.

12. INCOME TAXES

Income tax provision (benefit) was:

<i>(In millions)</i>	2019	2018	2017
Current:			
Federal	\$ (3)	\$ 715	\$ 681
State and local	53	178	98
Foreign	1	22	(6)
Total current	51	915	773
Deferred:			
Federal	898	2	(1,270)
State and local	116	61	33
Foreign	9	(16)	4
Total deferred	1,023	47	(1,233)
Income tax provision (benefit)	\$ 1,074	\$ 962	\$ (460)

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A reconciliation of the federal statutory income tax rate applied to income before income taxes to the provision for income taxes follows:

	2019	2018	2017
Statutory rate applied to income before income taxes	21 %	21 %	35 %
State and local income taxes, net of federal income tax effects	3	4	2
Goodwill impairment	3	—	—
Noncontrolling interests	(3)	(4)	(4)
TCJA legislation	—	—	(45)
Other	1	—	(2)
Provision for income taxes	<u>25 %</u>	<u>21 %</u>	<u>(14) %</u>

Deferred tax assets and liabilities resulted from the following:

<i>(In millions)</i>	December 31,	
	2019	2018
Deferred tax assets:		
Employee benefits	\$ 693	\$ 660
Environmental remediation	99	111
Debt financing	17	39
Net operating loss carryforwards	18	17
Foreign currency	15	28
Tax credit carryforwards	14	21
Other	57	88
Total deferred tax assets	<u>913</u>	<u>964</u>
Deferred tax liabilities:		
Property, plant and equipment	3,444	2,830
Inventories	652	678
Investments in subsidiaries and affiliates	3,114	2,130
Intangibles	56	97
Other	19	64
Total deferred tax liabilities	<u>7,285</u>	<u>5,799</u>
Net deferred tax liabilities	<u>\$ 6,372</u>	<u>\$ 4,835</u>

Net deferred tax liabilities were classified in the consolidated balance sheets as follows:

<i>(In millions)</i>	December 31,	
	2019	2018
Assets:		
Other noncurrent assets	\$ 20	\$ 29
Liabilities:		
Deferred income taxes	6,392	4,864
Net deferred tax liabilities	<u>\$ 6,372</u>	<u>\$ 4,835</u>

At December 31, 2019 and 2018, federal operating loss carryforwards were \$7 million and \$7 million, respectively, which expire in 2022 through 2038. As of December 31, 2019 and 2018, state and local operating loss carryforwards were \$11 million and \$10 million, respectively, which expire in 2020 through 2038.

As of December 31, 2019 and 2018, \$11 million and \$10 million of valuation allowances have been recorded against foreign tax credits and state net operating losses due to the expectation that these deferred tax assets are not likely to be realized.

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MPC is continuously undergoing examination of its U.S. federal income tax returns by the Internal Revenue Service (“IRS”). Since 2012, we have continued to participate in the Compliance Assurance Process (“CAP”). CAP is a real-time audit of the U.S. Federal income tax return that allows the IRS, working in conjunction with MPC, to determine tax return compliance with the U.S. Federal tax law prior to filing the return. This program provides us with greater certainty about our tax liability for years under examination by the IRS. While Andeavor also underwent continual IRS examination, it did not participate in the CAP for tax periods prior to the October 1, 2018 acquisition of Andeavor.

MPC’s IRS audits have been completed through the 2010 tax year. Andeavor and its subsidiaries’ IRS audits have been completed through the 2010 tax year. We believe adequate provision has been established for potential tax in periods not closed to examination. Further, we are routinely involved in U.S. state income tax audits. We believe all other audits will be resolved with the amounts provided for these liabilities. As of December 31, 2019, our income tax returns remain subject to examination in the following major tax jurisdictions for the tax years indicated:

United States Federal	2011	-	2018
States	2006	-	2018

The following table summarizes the activity in unrecognized tax benefits:

<i>(In millions)</i>	2019	2018	2017
January 1 balance	\$ 211	\$ 19	\$ 7
Additions for tax positions of prior years	2	—	13
Reductions for tax positions of prior years	(2)	(5)	—
Settlements	(19)	—	(1)
Statute of limitations	(160)	(12)	—
Acquired from Andeavor	—	209	—
December 31 balance	\$ 32	\$ 211	\$ 19

If the unrecognized tax benefits as of December 31, 2019 were recognized, \$23 million would affect our effective income tax rate. There were \$2 million of uncertain tax positions as of December 31, 2019 for which it is reasonably possible that the amount of unrecognized tax benefits would significantly decrease during the next twelve months. For tax years 2009 and 2010, Andeavor had asserted a federal income tax claim for \$159 million resulting from the income tax effect of the receipt of the ethanol blender’s excise tax credit, for which the tax benefit was not recorded. The statute of limitations for the IRS appeal process was allowed to expire during the fourth quarter 2019 since the ability to obtain a refund was remote.

Prior to its spinoff on June 30, 2011, Marathon Petroleum Corporation was included in the Marathon Oil Corporation (“Marathon Oil”) U.S. federal income tax returns for all applicable years. During the third quarter of 2017, Marathon Oil received a notice of Final Partnership Administrative Adjustment (“FPAA”) from the IRS for taxable year 2010, relating to certain partnership transactions. Marathon Oil filed a U.S. Tax Court petition disputing these adjustments during the fourth quarter of 2017. We received an FPAA for taxable years 2011-2014 for items resulting from the Marathon Oil IRS dispute discussed above. We filed a U.S. Tax Court petition in the fourth quarter of 2017 for tax years 2011-2014 to dispute these corollary adjustments. In the third quarter of 2019, the U.S. Tax court entered a decision in favor of both Marathon Oil and us for all material items and the U.S. Internal Revenue Service is in the process of preparing the final reports for these tax years.

Pursuant to our tax sharing agreement with Marathon Oil, the unrecognized tax benefits related to pre-spinoff operations for which Marathon Oil was the taxpayer remain the responsibility of Marathon Oil and we have indemnified Marathon Oil accordingly. See Note 26 for indemnification information.

Interest and penalties related to income taxes are recorded as part of the provision for income taxes. Such interest and penalties were net expenses (benefits) of \$(2) million, \$1 million and \$3 million in 2019, 2018 and 2017, respectively. As of December 31, 2019 and 2018, \$7 million and \$18 million of interest and penalties were accrued related to income taxes.

13. INVENTORIES

<i>(In millions)</i>	December 31,	
	2019	2018
Crude oil	\$ 3,472	\$ 3,655
Refined products	5,548	5,234
Materials and supplies	996	720
Merchandise	227	228
Total	\$ 10,243	\$ 9,837

The LIFO method accounted for 90 percent and 92 percent of total inventory value at December 31, 2019 and 2018, respectively. Current acquisition costs of inventories were estimated to exceed the LIFO inventory value at December 31, 2019 by \$871 million. There was no excess of replacement or current cost over our stated LIFO cost at December 31, 2018. There were no material liquidations of LIFO inventories in 2019, 2018 and 2017.

14. EQUITY METHOD INVESTMENTS

The Andersons Marathon Holdings LLC

Effective October 1, 2019, The Andersons, Inc. and MPC contributed jointly owned equity interests in three ethanol entities into a new legal entity, The Andersons Marathon Holdings LLC (“TAMH”). Concurrently, The Andersons, Inc. contributed a wholly-owned ethanol facility to TAMH. In accordance with ASC 845, we derecognized the historical cost of our equity method investments in the legacy entities amounting to \$123 million and recognized the new equity method investment in TAMH at fair value. We used a combination of market, income and cost approaches to determine the fair value of our ownership interest in TAMH with more reliance on the market and income approaches. The estimated cash flows used in the income approach were discounted using a weighted average cost of capital estimate and the market approach utilized EBITDA and capacity multiples for similar companies and transactions. This is a nonrecurring fair value measurement and is recognized in Level 3 of the fair value hierarchy. We estimated the fair value of our ownership interest to be \$175 million. The excess of the estimated fair value of our ownership interest over the carrying value of the derecognized net assets resulted in a \$52 million non-cash net gain recorded as a net gain on disposal of assets in the accompanying consolidated statements of income.

Capline LLC

During the three months ended March 31, 2019, we executed agreements with Capline Pipeline Company LLC (“Capline LLC”) to contribute our 33 percent undivided interest in the Capline pipeline system in exchange for a 33 percent ownership interest in Capline LLC. In connection with our execution of these agreements, Capline LLC initiated a binding open season for southbound service from Patoka, Illinois to St. James, Louisiana or Liberty, Mississippi with an additional origination point at Cushing, Oklahoma. Service from Cushing, Oklahoma is part of a joint tariff with Diamond pipeline. Crude oil service is expected to begin in the first half of 2021.

In accordance with ASC 810, we derecognized our undivided interest amounting to \$143 million of net assets and recognized the Capline LLC ownership interest we received at fair value. We used an income approach to determine the fair value of our ownership interest under a Monte Carlo simulation method. We estimated the fair value of our ownership interest to be \$350 million. This is a nonrecurring fair value measurement and is categorized in Level 3 of the fair value hierarchy. The Monte Carlo simulation inputs include ranges of tariff rates, operating volumes, operating cost and capital expenditure assumptions. The estimated cash flows were discounted using a Monte Carlo market participant weighted average cost of capital estimate. None of the inputs to the Monte Carlo simulation are individually significant. The excess of the estimated fair value of our ownership interest over the carrying value of the derecognized net assets resulted in a \$207 million non-cash net gain recorded as a net gain on disposal of assets in the accompanying consolidated statements of income.

As the Capline system is currently idled, Capline LLC is unable to fund its operations without financial support from its equity owners and is a VIE. MPC is not deemed to be the primary beneficiary, due to our inability to unilaterally control significant decision-making rights. Our maximum exposure to loss as a result of our

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involvement with Capline LLC includes our equity investment, any additional capital contribution commitments and any operating expenses incurred by Capline LLC in excess of compensation received for performance of the operating services.

Impairments

During the fourth quarter of 2019, two joint ventures in which MPLX has an interest recorded impairments, which impacted the amount of income from equity method investments during the period by approximately \$28 million. For one of the joint ventures, MPLX also had a basis difference which was being amortized over the life of the underlying assets. As a result of the impairment recorded by the joint venture, MPLX also assessed this basis difference for impairment and recorded approximately \$14 million of impairment expense during the fourth quarter related to this investment.

Investments in Equity Method Affiliates

<i>(Dollars in millions)</i>	Ownership as of	Carrying value at	
	December 31,	December 31,	
	2019	2019	2018
Refining & Marketing			
The Andersons Marathon Holdings LLC	50%	\$ 177	\$ —
Watson Cogeneration Company	51%	26	84
Other ^(a)		—	121
Refining & Marketing Total		\$ 203	\$ 205
Retail			
PFJ Southeast LLC	29%	\$ 330	\$ 341
Retail Total		\$ 330	\$ 341
Midstream			
<i>MPLX</i>			
Andeavor Logistics Rio Pipeline LLC	67%	\$ 202	\$ 181
Centrahoma Processing LLC	40%	153	160
Explorer Pipeline Company	25%	83	90
Illinois Extension Pipeline Company, L.L.C.	35%	265	275
LOOP LLC	41%	238	226
MarEn Bakken Company LLC	25%	481	498
MarkWest EMG Jefferson Dry Gas Gathering Company, L.L.C.	67%	302	236
MarkWest Utica EMG, L.L.C.	56%	1,984	2,039
Minnesota Pipe Line Company, LLC	17%	190	197
Rendezvous Gas Services, L.L.C.	78%	170	248
Sherwood Midstream Holdings LLC	53%	157	157
Sherwood Midstream LLC	50%	537	366
Whistler Pipeline LLC	38%	134	—
Wink to Webster Pipeline LLC	15%	126	—
Other		253	228
MPLX Total		\$ 5,275	\$ 4,901
<i>MPC-Retained</i>			
Capline Pipeline Company LLC	33%	\$ 374	\$ —
Crowley Coastal Partners, LLC	50%	188	190
Gray Oak Pipeline, LLC	25%	298	73
LOOP LLC	10%	59	56
Other		171	132
MPC-Retained Total		\$ 1,090	\$ 451
Midstream Total		\$ 6,365	\$ 5,352
Total		\$ 6,898	\$ 5,898

^(a) 2018 represents our investment in three ethanol entities jointly owned with The Andersons, Inc. In 2019, these entities were contributed into a new legal entity, The

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Summarized financial information for all equity method investments in affiliated companies, combined, was as follows:

<i>(In millions)</i>	2019	2018	2017
Income statement data:			
Revenues and other income	\$ 7,718	\$ 7,726	\$ 6,235
Income from operations	1,472	1,375	1,075
Net income	1,284	1,242	922
Balance sheet data – December 31:			
Current assets	\$ 1,333	\$ 1,443	
Noncurrent assets	17,216	12,408	
Current liabilities	1,006	1,857	
Noncurrent liabilities	2,772	1,788	

As of December 31, 2019, the carrying value of our equity method investments was \$1.4 billion higher than the underlying net assets of investees. This basis difference is being amortized into net income over the remaining estimated useful lives of the underlying net assets, except for \$700 million of excess related to goodwill and other non-depreciable assets. The basis difference reflects the preliminary purchase price allocation of Capline LLC, which will be completed in the one year measurement period as required by ASC 805, “Business Combinations”.

Dividends and partnership distributions received from equity method investees (excluding distributions that represented a return of capital previously contributed) were \$662 million, \$519 million and \$391 million in 2019, 2018 and 2017.

15. PROPERTY, PLANT AND EQUIPMENT

<i>(In millions)</i>	Estimated Useful Lives	December 31,	
		2019	2018
Refining & Marketing	4 - 30 years	\$ 29,037	\$ 27,590
Retail	4 - 25 years	7,104	6,637
Midstream	2 - 51 years	27,193	25,692
Corporate and Other	4 - 40 years	1,289	1,294
Total		64,623	61,213
Less accumulated depreciation		19,008	16,155
Property, plant and equipment, net		\$ 45,615	\$ 45,058

Property, plant and equipment includes gross assets acquired under finance leases of \$806 million and \$786 million at December 31, 2019 and 2018, respectively, with related amounts in accumulated depreciation of \$226 million and \$202 million at December 31, 2019 and 2018. Property, plant and equipment includes construction in progress of \$3.48 billion and \$3.49 billion at December 31, 2019 and 2018, respectively, which primarily relates to capital projects at our refineries and midstream facilities.

16. GOODWILL AND INTANGIBLES

Goodwill

Goodwill is tested for impairment on an annual basis and when events or changes in circumstances indicate the fair value of a reporting unit with goodwill has been reduced below the carrying value of the net assets of the reporting unit. In 2019, we recorded an impairment of goodwill as outlined below based on MPLX’s annual evaluation. There were no other impairments of goodwill required based on our annual test of goodwill in 2019. In 2018, our annual testing did not indicate any impairment of goodwill.

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MPLX annually evaluates goodwill for impairment as of November 30, as well as whenever events or changes in circumstances indicate it is more likely than not that the fair value of a reporting unit with goodwill is less than the carrying amount. As a result of the merger of MPLX and ANDX and subsequent changes to MPLX's internal organization structure, the number of reporting units within our Midstream segment was reduced from 16 to 7 in conjunction with the annual impairment test, however, this change in structure did not have any impact on MPC's operating segments. Reporting units are determined based on the way in which segment management operates and reviews each operating segment. MPLX performed a goodwill impairment assessment prior to the change in reporting units in addition to performing an impairment assessment immediately following the change in their reporting units. Significant assumptions used to estimate the reporting units' fair value include the discount rate as well as estimates of future cash flows, which are impacted primarily by producer customers' development plans, which impact future volumes and capital requirements. After MPLX performed its evaluations related to the impairment of goodwill, we recorded an impairment of \$1,156 million prior to the change in reporting units and additional impairment of \$41 million subsequent to the change in reporting units. The remainder of the reporting units fair values were in excess of their carrying values. The impairment was primarily driven by the updated guidance related to the slowing of drilling activity which has reduced production growth forecasts from MPLX's producer customers.

The fair value of the reporting units for the annual goodwill impairment analysis described above was determined based on applying both a discounted cash flow or income approach as well as a market approach. The discounted cash flow fair value estimate is based on known or knowable information at the measurement date. The significant assumptions that were used to develop the estimates of the fair values under the discounted cash flow method included management's best estimates of the expected future results and discount rates, which range from 9.0 percent to 10.0 percent. Fair value determinations require considerable judgment and are sensitive to changes in underlying assumptions and factors. As a result, there can be no assurance that the estimates and assumptions made for purposes of the annual goodwill impairment test will prove to be an accurate prediction of the future. The fair value measurements for the individual reporting units' overall fair values, and the fair values of the goodwill assigned thereto, represent Level 3 measurements.

The changes in the carrying amount of goodwill for 2018 and 2019 were as follows:

<i>(In millions)</i>	Refining & Marketing	Retail	Midstream	Total
Balance at January 1, 2018	\$ 519	\$ 791	\$ 2,276	\$ 3,586
Acquisitions	4,717	4,050	7,831	16,598
Dropdowns to MPLX	(216)	—	216	—
Balance at December 31, 2018	\$ 5,020	\$ 4,841	\$ 10,323	\$ 20,184
Acquisitions	38	56	—	94
Purchase price allocation adjustments	514	54	408	976
Impairments	—	—	(1,197)	(1,197)
Dispositions	—	—	(17)	(17)
Balance at December 31, 2019	\$ 5,572	\$ 4,951	\$ 9,517	\$ 20,040

Intangible Assets

Our definite lived intangible assets as of December 31, 2019 and 2018 are as shown below.

<i>(In millions)</i>	December 31, 2019			December 31, 2018		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Customer contracts and relationships	\$ 3,273	\$ 610	\$ 2,663	\$ 3,184	\$ 261	\$ 2,923
Brand rights and tradenames	155	55	100	208	33	175
Royalty agreements	133	78	55	129	70	59
Other	147	37	110	190	33	157
Total	\$ 3,708	\$ 780	\$ 2,928	\$ 3,711	\$ 397	\$ 3,314

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At December 31, 2019 and 2018, we had indefinite lived intangible assets of \$94 million and \$94 million, respectively, which are primarily emission allowance credits and trademarks.

Amortization expense for 2019 and 2018 was \$372 million and \$134 million, respectively. Estimated future amortization expense related to the intangible assets at December 31, 2019 is as follows:

(In millions)

2020	\$	387
2021		380
2022		379
2023		363
2024		305

17. FAIR VALUE MEASUREMENTS

Fair Values – Recurring

The following tables present assets and liabilities accounted for at fair value on a recurring basis as of December 31, 2019 and 2018 by fair value hierarchy level. We have elected to offset the fair value amounts recognized for multiple derivative contracts executed with the same counterparty, including any related cash collateral as shown below; however, fair value amounts by hierarchy level are presented on a gross basis in the following tables.

<i>(In millions)</i>	December 31, 2019						
	Fair Value Hierarchy			Netting and Collateral ^(a)	Net Carrying Value on Balance Sheet ^(b)	Collateral Pledged Not Offset	
	Level 1	Level 2	Level 3				
Assets:							
Commodity contracts	\$ 57	\$ 6	\$ —	\$ (55)	\$ 8	\$ 73	
Liabilities:							
Commodity contracts	\$ 95	\$ 11	\$ —	\$ (106)	\$ —	\$ —	
Embedded derivatives in commodity contracts	—	—	60	—	60	—	

<i>(In millions)</i>	December 31, 2018						
	Fair Value Hierarchy			Netting and Collateral ^(a)	Net Carrying Value on Balance Sheet ^(b)	Collateral Pledged Not Offset	
	Level 1	Level 2	Level 3				
Assets:							
Commodity contracts	\$ 370	\$ 31	\$ —	\$ (323)	\$ 78	\$ 2	
Liabilities:							
Commodity contracts	\$ 255	\$ 37	\$ —	\$ (284)	\$ 8	\$ —	
Embedded derivatives in commodity contracts	—	—	61	—	61	—	

^(a) Represents the impact of netting assets, liabilities and cash collateral when a legal right of offset exists. As of December 31, 2019, \$51 million was netted with mark-to-market liabilities. As of December 31, 2018, cash collateral of \$52 million was netted with mark-to-market derivative assets and \$13 million was netted with mark-to-market derivative liabilities.

^(b) We have no derivative contracts which are subject to master netting arrangements reflected gross on the balance sheet.

Commodity derivatives in Level 1 are exchange-traded contracts for crude oil and refined products measured at fair value with a market approach using the close-of-day settlement prices for the market. Commodity derivatives are covered under master netting agreements with an unconditional right to offset. Collateral deposits in futures commission merchant accounts covered by master netting agreements related to Level 1 commodity derivatives are classified as Level 1 in the fair value hierarchy.

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Level 2 instruments are valued based on quoted prices for similar assets and liabilities in active markets, and inputs other than quoted prices, such as liquidity, that are observable for the asset or liability. Commodity derivatives in Level 2 are OTC contracts, which are valued using market quotations from independent price reporting agencies, third-party brokers and commodity exchange price curves that are corroborated with market data.

Level 3 instruments are OTC NGL contracts and embedded derivatives in commodity contracts. The embedded derivative liability relates to a natural gas purchase agreement embedded in a keep-whole processing agreement. The fair value calculation for these Level 3 instruments at December 31, 2019 used significant unobservable inputs including: (1) NGL prices interpolated and extrapolated due to inactive markets ranging from \$0.43 to \$1.23 per gallon and (2) the probability of renewal of 94 percent for the first five-year term and 83 percent for the second five-year term of the gas purchase agreement and the related keep-whole processing agreement. For these contracts, increases in forward NGL prices result in a decrease in the fair value of the derivative assets and an increase in the fair value of the derivative liabilities. Increases or decreases in the fractionation spread result in an increase or decrease in the fair value of the embedded derivative liability. An increase in the probability of renewal would result in an increase in the fair value of the related embedded derivative liability.

The following is a reconciliation of the net beginning and ending balances recorded for net liabilities classified as Level 3 in the fair value hierarchy.

<i>(In millions)</i>	2019	2018
Beginning balance	\$ 61	\$ 66
Unrealized and realized losses included in net income	5	3
Settlements of derivative instruments	(6)	(8)
Ending balance	<u>\$ 60</u>	<u>\$ 61</u>
The amount of total losses for the period included in earnings attributable to the change in unrealized losses relating to assets still held at the end of period:	\$ 5	\$ 8

See Note 18 for the income statement impacts of our derivative instruments.

Fair Values – Reported

We believe the carrying value of our other financial instruments, including cash and cash equivalents, receivables, accounts payable and certain accrued liabilities approximate fair value. Our fair value assessment incorporates a variety of considerations, including the short-term duration of the instruments and the expected insignificance of bad debt expense, which includes an evaluation of counterparty credit risk. The borrowings under our revolving credit facilities, which include variable interest rates, approximate fair value. The fair value of our fixed rate long-term debt is based on prices from recent trade activity and is categorized in Level 3 of the fair value hierarchy. The carrying and fair values of our debt were approximately \$28.3 billion and \$30.1 billion at December 31, 2019, respectively, and approximately \$27.0 billion and \$26.5 billion at December 31, 2018, respectively. These carrying and fair values of our debt exclude the unamortized issuance costs which are netted against our total debt.

18. DERIVATIVES

For further information regarding the fair value measurement of derivative instruments, including any effect of master netting agreements or collateral, see Note 17. See Note 2 for a discussion of the types of derivatives we use and the reasons for them. We do not designate any of our commodity derivative instruments as hedges for accounting purposes.

The following table presents the fair value of derivative instruments as of December 31, 2019 and 2018 and the line items in the balance sheets in which the fair values are reflected. The fair value amounts below are presented on a gross basis and do not reflect the netting of asset and liability positions permitted under the terms of our master netting arrangements including cash collateral on deposit with, or received from, brokers. We offset the recognized fair value amounts for multiple derivative instruments executed with the same counterparty in our financial statements when a legal right of offset exists. As a result, the asset and liability amounts below will not agree with the amounts presented in our consolidated balance sheets.

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<i>(In millions)</i>	December 31, 2019	
	Asset	Liability
<u>Balance Sheet Location</u>		
Commodity derivatives		
Other current assets	\$ 63	\$ 106
Other current liabilities ^(a)	—	5
Deferred credits and other liabilities ^(a)	—	55

<i>(In millions)</i>	December 31, 2018	
	Asset	Liability
<u>Balance Sheet Location</u>		
Commodity derivatives		
Other current assets	\$ 400	\$ 283
Other current liabilities ^(a)	1	16
Deferred credits and other liabilities ^(a)	—	54

^(a) Includes embedded derivatives.

The table below summarizes open commodity derivative contracts for crude oil, refined products and blending products as of December 31, 2019.

<i>(Units in thousands of barrels)</i>	Percentage of contracts that expire next quarter	Position	
		Long	Short
<u>Exchange-traded^(a)</u>			
Crude oil	85.7%	26,287	27,237
Refined products	94.7%	15,298	12,519
Blending products	99.5%	1,976	3,770

^(a) Included in exchange-traded are spread contracts in thousands of barrels: Crude oil - 5,130 long and 330 short; Refined products - 950 long and 450 short

The following table summarizes the effect of all commodity derivative instruments in our consolidated statements of income:

<i>(In millions)</i>	Gain (Loss)		
	2019	2018	2017
<u>Income Statement Location</u>			
Sales and other operating revenues	\$ (19)	\$ 13	\$ 5
Cost of revenues	(77)	(59)	(26)
Total	\$ (96)	\$ (46)	\$ (21)

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19. DEBT

Our outstanding borrowings at December 31, 2019 and 2018 consisted of the following:

<i>(In millions)</i>	December 31, 2019	December 31, 2018
Marathon Petroleum Corporation:		
Senior notes	\$ 8,474	\$ 8,474
Notes payable	10	11
Finance lease obligations	679	629
MPLX LP:		
Term loan facility	1,000	—
Senior notes	19,100	13,850
Finance lease obligations	19	6
ANDX LP:^(a)		
Revolving and dropdown credit facilities	—	1,245
Senior notes	—	3,750
Finance lease obligations	—	15
Total debt	\$ 29,282	\$ 27,980
Unamortized debt issuance costs	(134)	(128)
Unamortized discount	(310)	(328)
Amounts due within one year	(711)	(544)
Total long-term debt due after one year	\$ 28,127	\$ 26,980

^(a) On July 30, 2019, MPLX acquired ANDX and assumed its debt obligations. See Note 4 and the discussion below for additional information.

MPC Senior Notes

<i>(In millions)</i>	December 31,	
	2019	2018
Marathon Petroleum Corporation:		
Senior notes, 3.400% due December 2020	\$ 650	\$ 650
Senior notes, 5.125% due March 2021	1,000	1,000
Senior notes, 5.375% due October 2022	337	337
Senior notes, 4.750% due December 2023	614	614
Senior notes, 5.125% due April 2024	241	241
Senior notes, 3.625%, due September 2024	750	750
Senior notes, 5.125% due December 2026	719	719
Senior notes, 3.800% due April 2028	496	496
Senior notes, 6.500% due March 2041	1,250	1,250
Senior notes, 4.750% due September 2044	800	800
Senior notes, 5.850% due December 2045	250	250
Senior notes, 4.500% due April 2048	498	498
Andeavor senior notes, 3.800% - 5.375% due 2022 - 2048	469	469
Senior notes, 5.000%, due September 2054	400	400
Total	8,474	8,474

In connection with the acquisition of Andeavor on October 1, 2018, we assumed an aggregate principal amount of \$3.374 billion senior notes issued by Andeavor, with interest rates ranging from 3.800 percent to 5.375 percent and maturity dates ranging from 2022 to 2048. In October 2018, approximately \$2.905 billion aggregate

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principal amount of Andeavor's outstanding senior notes were exchanged for new unsecured senior notes issued by MPC having the same maturity and interest rates as the Andeavor senior notes and cash in an exchange offer and consent solicitation undertaken by MPC and Andeavor. After giving effect to the exchange offer, approximately \$469 million aggregate principal of outstanding senior notes issued by Andeavor remain outstanding.

Interest on each series of senior notes is payable semi-annually in arrears. The MPC senior notes are unsecured and unsubordinated obligations of MPC and rank equally with all of MPC's other existing and future unsecured and unsubordinated indebtedness. The MPC senior notes are non-recourse and structurally subordinated to the indebtedness of our subsidiaries, including the outstanding indebtedness of Andeavor, MPLX and ANDX. The Andeavor senior notes are unsecured, unsubordinated obligations of Andeavor and are non-recourse to MPC and any of MPC's subsidiaries other than Andeavor.

On March 15, 2018, we redeemed all of the \$600 million outstanding aggregate principal amount of our 2.700 percent senior notes due on December 14, 2018. The 2018 senior notes were redeemed at a price equal to par plus a make whole premium and accrued and unpaid interest. The make whole premium of \$2.5 million was calculated based on the market yield of the applicable treasury issue as of the redemption date as determined in accordance with the indenture governing the 2018 senior notes.

MPLX Term Loan

On September 26, 2019, MPLX entered into a term loan agreement which provides for a committed term loan facility for up to an aggregate of \$1 billion available to be drawn in up to four separate borrowings, subject to the satisfaction or waiver of certain customary conditions. Borrowings under the term loan agreement bear interest, at MPLX's election, at either the Adjusted LIBO Rate (as defined in the term loan agreement) plus a margin or the Alternate Base Rate (as defined in the term loan agreement) plus a margin. The applicable margins to the benchmark interest rates fluctuate from time-to-time based on our credit ratings. The proceeds from borrowings under the term loan agreement were used to fund the repayment of MPLX's existing indebtedness and/or for general business purposes. Amounts borrowed under the term loan agreement will be due and payable on September 26, 2021. As of December 31, 2019, MPLX had drawn \$1 billion on the term loan at an average interest rate of 2.561 percent.

The term loan agreement contains representations and warranties, affirmative and negative covenants and events of default that we consider to be customary for an agreement of this type and are substantially similar to MPLX's existing revolving credit facility, including a covenant that requires MPLX's ratio of Consolidated Total Debt to Consolidated EBITDA (as both terms are defined in the term loan agreement) for the four prior fiscal quarters not to exceed 5.0 to 1.0 as of the last day of each fiscal quarter (or during the six-month period following certain acquisitions, 5.5 to 1.0). Consolidated EBITDA is subject to adjustments for certain acquisitions completed and capital projects undertaken during the relevant period.

On January 2, 2018, MPLX entered into a term loan agreement with a syndicate of lenders providing for a \$4.1 billion, 364-day term loan facility. MPLX drew the entire amount of the term loan facility in a single borrowing to fund the cash portion of the consideration for the February 1, 2018 dropdown. On February 8, 2018, MPLX used \$4.1 billion of the net proceeds from the issuance of MPLX senior notes to repay the 364-day term-loan facility.

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MPLX Senior Notes

<i>(In millions)</i>	Average Rate	December 31,	
		2019	2018
MPLX LP:			
Floating rate notes due September 2021	2.948%	1,000	—
Floating rate notes due September 2022	3.148%	1,000	—
Senior notes, 6.250% due October 2022		266	—
Senior notes, 3.500% due December 2022		486	—
Senior notes, 3.375% due March 2023		500	500
Senior notes, 4.500% due July 2023		989	989
Senior notes, 6.375% due May 2024		381	—
Senior notes, 4.875% due December 2024		1,149	1,149
Senior notes, 5.250% due January 2025		708	—
Senior notes, 4.000% due February 2025		500	500
Senior notes, 4.875% due June 2025		1,189	1,189
MarkWest senior notes, 4.500% - 5.500% due 2023 - 2025		23	23
Senior notes, 4.125% due March 2027		1,250	1,250
Senior notes, 4.250% due December 2027		732	—
Senior notes, 4.000% due March 2028		1,250	1,250
Senior notes, 4.800% due February 2029		750	750
Senior notes, 4.500% due April 2038		1,750	1,750
Senior notes, 5.200% due March 2047		1,000	1,000
Senior notes, 5.200% due December 2047		487	—
ANDX senior notes, 3.500% - 6.375% due 2019 - 2047		190	—
Senior notes, 4.700% due April 2048		1,500	1,500
Senior notes, 5.500% due February 2049		1,500	1,500
Senior notes, 4.900% due April 2058		500	500
Total		19,100	13,850

On September 9, 2019, MPLX issued \$2 billion aggregate principal amount of floating rate senior notes in a public offering, consisting of \$1 billion aggregate principal amount of notes due September 2021 and \$1 billion aggregate principal amount of notes due September 2022. Net proceeds from the issuance of the floating rate senior notes were used to repay MPLX's existing indebtedness and/or for general business purposes. The interest rate applicable to the floating rate senior notes due September 2021 is LIBOR plus 0.9 percent per annum while the interest rate applicable to the floating rate senior notes due September 2022 is LIBOR plus 1.1 percent per annum. Interest is payable in March, June, September and December, commencing on December 9, 2019. Both series of floating rate notes are callable, in whole or in part, at par plus accrued and unpaid interest at any time on or after September 10, 2020.

In connection with MPLX's acquisition of ANDX on July 30, 2019, MPLX assumed ANDX's outstanding senior notes, which had an aggregate principal amount of \$3.75 billion, with interest rates ranging from 3.500 percent to 6.375 percent and maturity dates ranging from 2019 to 2047. On September 23, 2019, approximately \$3.06 billion aggregate principal amount of ANDX's outstanding senior notes were exchanged for new unsecured senior notes issued by MPLX having the same maturity and interest rates as the ANDX senior notes in an exchange offer and consent solicitation undertaken by MPLX, leaving approximately \$690 million aggregate principal of outstanding senior notes issued by ANDX. Of this, \$500 million was related to the 5.500 percent unsecured senior notes due 2019. The principal amount of \$500 million and accrued interest of \$14 million was paid on October 15, 2019, which included interest through the payoff date.

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On November 15, 2018, MPLX issued \$2.25 billion in aggregate principal amount of senior notes in a public offering. On December 10, 2018, a portion of the net proceeds from the offering was used to redeem the \$750 million in aggregate principal amount of 5.500 percent unsecured notes due February 2023 issued by MPLX and MarkWest. These notes were redeemed at 101.833 percent of the principal amount. The make whole premium plus the write off of unamortized deferred financing costs resulted in a loss on extinguishment of debt of \$60 million. The remaining net proceeds were used to repay borrowings under MPLX's revolving credit facility and intercompany loan agreement with MPC and for general partnership purposes.

On February 8, 2018, MPLX issued \$5.5 billion in aggregate principal amount of senior notes in a public offering. On February 8, 2018, \$4.1 billion of the net proceeds were used to repay the 364-day term-loan facility entered into on January 2, 2018. The remaining proceeds were used to repay outstanding borrowings under MPLX's revolving credit facility and intercompany loan agreement with MPC and for general partnership purposes.

Interest on each series of MPLX fixed rate senior notes is payable semi-annually in arrears. The MPLX senior notes are unsecured, unsubordinated obligations of MPLX and are non-recourse to MPC and its subsidiaries other than MPLX and MPLX GP LLC, as the general partner of MPLX except as otherwise noted.

Schedule of Maturities

Principal maturities of long-term debt, excluding finance lease obligations, as of December 31, 2019 for the next five years are as follows:

(In millions)

2020	\$	650
2021		3,008
2022		2,275
2023		2,350
2024		2,652

Available Capacity under our Facilities

<i>(Dollars in millions)</i>	Total Capacity	Outstanding Borrowings	Outstanding Letters of Credit	Available Capacity	Weighted Average Interest Rate	Expiration
MPC 364-day bank revolving credit facility	\$ 1,000	\$ —	\$ —	\$ 1,000	—	September 2020
MPC bank revolving credit facility	5,000	—	1	4,999	—	October 2023
MPC trade receivables securitization facility	750	—	—	750	—	July 2021
MPLX bank revolving credit facility	3,500	—	—	3,500	—	July 2024

Commercial Paper

On February 26, 2016, we established a commercial paper program that allows us to have a maximum of \$2 billion in commercial paper outstanding, with maturities up to 397 days from the date of issuance. We do not intend to have outstanding commercial paper borrowings in excess of available capacity under our bank revolving credit facilities. During 2019, we had no borrowings or repayments under the commercial paper program. At December 31, 2019, we had no amounts outstanding under the commercial paper program.

MPC Revolving Credit Agreements

On August 28, 2018, in connection with the Andeavor acquisition, MPC entered into a credit agreement with a syndicate of lenders providing for a \$5 billion five-year revolving credit facility that expires in 2023. The five-year credit agreement became effective on October 1, 2018. On July 26, 2019, MPC entered into a credit agreement with a syndicate of lenders providing for a new \$1 billion 364-day revolving credit facility that became effective upon the expiration of MPC's previously existing \$1 billion 364-day revolving credit facility

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in September 2019. The new 364-day credit agreement contains substantially the same terms and conditions as our previously existing 364-day revolving credit facility and will expire in September 2020.

MPC has an option under its \$5 billion five-year credit agreement to increase the aggregate commitments by up to an additional \$1 billion, subject to, among other conditions, the consent of the lenders whose commitments would be increased. In addition, MPC may request up to two one-year extensions of the maturity date of the five-year credit agreement subject to, among other conditions, the consent of lenders holding a majority of the commitments, provided that the commitments of any non-consenting lenders will terminate on the then-effective maturity date. The five-year credit agreement includes sub-facilities for swing-line loans of up to \$250 million and letters of credit of up to \$2.2 billion (which may be increased to up to \$3 billion upon receipt of additional letter of credit issuing commitments).

Borrowings under the MPC credit agreements bear interest, at our election, at either the Adjusted LIBO Rate or the Alternate Base Rate (both as defined in the MPC credit agreements), plus an applicable margin. We are charged various fees and expenses under the MPC credit agreements, including administrative agent fees, commitment fees on the unused portion of the commitments and fees related to issued and outstanding letters of credit. The applicable margins to the benchmark interest rates and the commitment fees payable under the MPC credit agreements fluctuate based on changes, if any, to our credit ratings.

The MPC credit agreements contain certain representations and warranties, affirmative and restrictive covenants and events of default that we consider to be usual and customary for arrangements of this type, including a financial covenant that requires us to maintain a ratio of Consolidated Net Debt to Total Capitalization (each as defined in the MPC credit agreements) of no greater than 0.65 to 1.00 as of the last day of each fiscal quarter. The covenants also restrict, among other things, our ability and/or the ability of certain of our subsidiaries to incur debt, create liens on assets or enter into transactions with affiliates. As of December 31, 2019, we were in compliance with the covenants contained in the MPC credit agreements.

Trade Receivables Securitization Facility

The trade receivables facility consists of one of our wholly-owned subsidiaries, Marathon Petroleum Company LP (“MPC LP”), selling or contributing on an on-going basis all of its trade receivables (including trade receivables acquired from Marathon Petroleum Trading Canada LLC, a wholly-owned subsidiary of MPC LP), together with all related security and interests in the proceeds thereof, without recourse, to another wholly-owned, bankruptcy-remote special purpose subsidiary, MPC Trade Receivables Company LLC (“TRC”), in exchange for a combination of cash, equity and/or borrowings under a subordinated note issued by TRC to MPC LP. TRC, in turn, has the ability to sell undivided ownership interests in qualifying trade receivables, together with all related security and interests in the proceeds thereof, without recourse, to the purchasing group in exchange for cash proceeds. The trade receivables facility also provides for the issuance of letters of credit up to \$750 million, provided that the aggregate credit exposure of the purchasing group, including outstanding letters of credit, may not exceed the lesser of \$750 million or the balance of qualifying trade receivables at any one time.

To the extent that TRC retains an ownership interest in the receivables it has purchased or received from MPC LP, such interest will be included in our consolidated financial statements solely as a result of the consolidation of the financial statements of TRC with those of MPC. The receivables sold or contributed to TRC are available first and foremost to satisfy claims of the creditors of TRC and are not available to satisfy the claims of creditors of MPC. TRC has granted a security interest in all of its assets to the purchasing group to secure its obligations under the Receivables Purchase Agreement.

Proceeds from the sale of undivided percentage ownership interests in qualifying receivables under the trade receivables facility are reflected as debt on our consolidated balance sheet. We remain responsible for servicing the receivables sold to the purchasing group. TRC pays floating-rate interest charges and usage fees on amounts outstanding under the trade receivables facility, if any, unused fees on the portion of unused commitments and certain other fees related to the administration of the facility and letters of credit that are issued and outstanding under the trade receivables facility.

The receivables purchase agreement and receivables sale agreement contain representations and covenants that we consider usual and customary for arrangements of this type. Trade receivables are subject to customary criteria, limits and reserves before being deemed to qualify for sale by TRC pursuant to the trade receivables facility. In addition, further purchases of qualified trade receivables under the trade receivables facility are subject to termination, and TRC may be subject to default fees, upon the occurrence of certain amortization

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events that are included in the receivables purchase agreement, all of which we consider to be usual and customary for arrangements of this type. As of December 31, 2019, we were in compliance with the covenants contained in the receivables purchase agreement and receivables sale agreement.

MPLX Credit Agreement

Upon the completion of the merger of MPLX and ANDX on July 30, 2019, the MPLX bank revolving credit facility was amended and restated to increase the borrowing capacity to \$3.5 billion and to extend the maturity date to July 30, 2024. The ANDX revolving and dropdown credit facilities were terminated and all outstanding balances were repaid and funded with borrowings under the amended and restated MPLX \$3.5 billion bank revolving credit facility.

The MPLX credit agreement includes letter of credit issuing capacity of up to approximately \$300 million and swingline loan capacity of up to \$150 million. The revolving borrowing capacity may be increased by up to an additional \$1 billion, subject to certain conditions, including the consent of the lenders whose commitments would increase.

Borrowings under the MPLX credit agreement bear interest, at MPLX's election, at the Adjusted LIBO Rate or the Alternate Base Rate (both as defined in the MPLX credit agreement) plus an applicable margin. MPLX is charged various fees and expenses in connection with the agreement, including administrative agent fees, commitment fees on the unused portion of the commitments and fees with respect to issued and outstanding letters of credit. The applicable margins to the benchmark interest rates and the commitment fees payable under the MPLX credit agreement fluctuate based on changes, if any, to MPLX's credit ratings.

The MPLX credit agreement contains certain representations and warranties, affirmative and restrictive covenants and events of default that we consider to be usual and customary for an agreement of this type, including a financial covenant that requires MPLX to maintain a ratio of Consolidated Total Debt as of the end of each fiscal quarter to Consolidated EBITDA (both as defined in the MPLX credit agreement) for the prior four fiscal quarters of no greater than 5.0 to 1.0 (or 5.5 to 1.0 for up to two fiscal quarters following certain acquisitions). Consolidated EBITDA is subject to adjustments for certain acquisitions completed and capital projects undertaken during the relevant period. The covenants also restrict, among other things, MPLX's ability and/or the ability of certain of its subsidiaries to incur debt, create liens on assets and enter into transactions with affiliates. As of December 31, 2019, MPLX was in compliance with the covenants contained in the MPLX credit agreement.

20. REVENUE

The following table presents our revenues disaggregated by segment and product line:

<i>(In millions)</i>	Refining & Marketing	Retail	Midstream	Total
Year Ended December 31, 2019				
Refined products	\$ 82,169	\$ 26,681	\$ 809	\$ 109,659
Merchandise	4	6,281	—	6,285
Crude oil	4,402	—	—	4,402
Midstream services and other	481	97	3,025	3,603
Sales and other operating revenues	<u>\$ 87,056</u>	<u>\$ 33,059</u>	<u>\$ 3,834</u>	<u>\$ 123,949</u>
<i>(In millions)</i>	Refining & Marketing	Retail	Midstream	Total
Year Ended December 31, 2018				
Refined products	\$ 65,916	\$ 18,279	\$ 887	\$ 85,082
Merchandise	11	5,227	—	5,238
Crude oil	3,345	—	—	3,345
Midstream services and other	413	40	2,386	2,839
Sales and other operating revenues	<u>\$ 69,685</u>	<u>\$ 23,546</u>	<u>\$ 3,273</u>	<u>\$ 96,504</u>

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<i>(In millions)</i>	Refining & Marketing	Retail	Midstream	Total
Year Ended December 31, 2017				
Refined products	\$ 50,193	\$ 14,113	\$ 889	\$ 65,195
Merchandise	4	4,893	—	4,897
Crude oil	2,862	—	—	2,862
Midstream services and other	323	23	1,433	1,779
Sales and other operating revenues	<u>\$ 53,382</u>	<u>\$ 19,029</u>	<u>\$ 2,322</u>	<u>\$ 74,733</u>

We do not disclose information on the future performance obligations for any contract with expected duration of one year or less at inception. As of December 31, 2019, we do not have future performance obligations that are material to future periods.

Receivables

On the accompanying consolidated balance sheets, receivables, less allowance for doubtful accounts primarily consists of customer receivables. Significant, non-customer balances included in our receivables at December 31, 2019 include matching buy/sell receivables of \$2.24 billion.

21. SUPPLEMENTAL CASH FLOW INFORMATION

<i>(In millions)</i>	2019	2018	2017
Net cash provided by operating activities included:			
Interest paid (net of amounts capitalized)	\$ 1,174	\$ 887	\$ 525
Net income taxes paid to taxing authorities	491	424	904
Cash paid for amounts included in the measurement of lease liabilities			
Payments on operating leases ^(a)	764	—	—
Interest payments under finance lease obligations ^(a)	34	—	—
Net cash provided by financing activities included:			
Principal payments under finance lease obligations ^(a)	55	—	—
Non-cash investing and financing activities:			
Capital leases	—	172	71
Right of use assets obtained in exchange for new operating lease obligations ^(a)	352	—	—
Right of use assets obtained in exchange for new finance lease obligations ^(a)	96	—	—
Contribution of assets ^(b)	266	—	337
Fair value of assets acquired ^(c)	525	—	45
Acquisition:			
Fair value of MPC shares issued	—	19,766	—
Fair value of converted equity awards	—	203	—

^(a) Disclosure added in 2019 following the adoption of ASC 842.

^(b) 2019 includes the contribution of net assets to The Andersons Marathon Holdings LLC and Capline LLC. See Note 14. 2017 includes MPLX's contribution of assets to Sherwood Midstream and Sherwood Midstream Holdings. See Note 5.

^(c) 2019 includes the recognition of The Andersons Marathon Holdings LLC and Capline LLC equity method investments. See Note 14. 2017 represents emission allowance credits received as part of a litigation settlement agreement.

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<i>(In millions)</i>	December 31, 2019	December 31, 2018
Cash and cash equivalents	\$ 1,527	\$ 1,687
Restricted cash ^(a)	2	38
Cash, cash equivalents and restricted cash	<u>\$ 1,529</u>	<u>\$ 1,725</u>

^(a) The restricted cash balance is included within other current assets on the consolidated balance sheets.

The consolidated statements of cash flows exclude changes to the consolidated balance sheets that did not affect cash. The following is a reconciliation of additions to property, plant and equipment to total capital expenditures:

<i>(In millions)</i>	2019	2018	2017
Additions to property, plant and equipment per the consolidated statements of cash flows	\$ 5,374	\$ 3,578	\$ 2,732
Asset retirement expenditures	1	8	2
Increase (decrease) in capital accruals	(306)	309	67
Total capital expenditures	<u>\$ 5,069</u>	<u>\$ 3,895</u>	<u>\$ 2,801</u>

22. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table shows the changes in accumulated other comprehensive loss by component.

<i>(In millions)</i>	Pension Benefits	Other Benefits	Gain on Cash Flow Hedge	Workers Compensation	Total
Balance as of December 31, 2017	\$ (190)	\$ (48)	\$ 4	\$ 3	\$ (231)
Other comprehensive income (loss) before reclassifications, net of tax of \$23	14	27	(1)	9	49
Amounts reclassified from accumulated other comprehensive loss:					
Amortization – prior service credit ^(a)	(33)	(3)	—	—	(36)
– actuarial loss ^(a)	31	(1)	—	—	30
– settlement loss ^(a)	53	—	—	—	53
Other	—	—	—	(5)	(5)
Tax effect	(7)	2	(1)	2	(4)
Other comprehensive income (loss)	<u>58</u>	<u>25</u>	<u>(2)</u>	<u>6</u>	<u>87</u>
Balance as of December 31, 2018	<u>\$ (132)</u>	<u>\$ (23)</u>	<u>\$ 2</u>	<u>\$ 9</u>	<u>\$ (144)</u>

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<i>(In millions)</i>	Pension Benefits	Other Benefits	Gain on Cash Flow Hedge	Workers Compensation	Total
Balance as of December 31, 2018	\$ (132)	\$ (23)	\$ 2	\$ 9	\$ (144)
Other comprehensive income (loss) before reclassifications, net of tax of (\$52)	(71)	(92)	—	1	(162)
Amounts reclassified from accumulated other comprehensive loss:					
Amortization – prior service credit ^(a)	(45)	—	—	—	(45)
– actuarial loss ^(a)	22	(1)	—	—	21
– settlement loss ^(a)	9	—	—	—	9
Other	—	—	(1)	(4)	(5)
Tax effect	5	—	—	1	6
Other comprehensive loss	(80)	(93)	(1)	(2)	(176)
Balance as of December 31, 2019	\$ (212)	\$ (116)	\$ 1	\$ 7	\$ (320)

^(a) These accumulated other comprehensive loss components are included in the computation of net periodic benefit cost. See Note 23.

23. PENSION AND OTHER POSTRETIREMENT BENEFITS

We have noncontributory defined benefit pension plans covering substantially all employees. Benefits under these plans have been based primarily on age, years of service and final average pensionable earnings. The years of service component of this formula was frozen as of December 31, 2009. Benefits for service beginning January 1, 2010 are based on a cash balance formula with an annual percentage of eligible pay credited based upon age and years of service. Eligible employees in our Retail segment accrue benefits under a defined contribution plan for service years beginning January 1, 2010.

We also have other postretirement benefits covering most employees. Health care benefits are provided through comprehensive hospital, surgical and major medical benefit provisions subject to various cost-sharing features. Retiree life insurance benefits are provided to a closed group of retirees. Other postretirement benefits are not funded in advance.

In connection with the Andeavor acquisition, we assumed a number of additional qualified and nonqualified noncontributory benefit pension plans, covering substantially all former Andeavor employees. Benefits under these plans are determined based on final average compensation and years of service through December 31, 2010 and a cash balance formula for service beginning January 1, 2011. These plans were frozen as of December 31, 2018. Further, as of December 31, 2019, the qualified plans were merged with our existing qualified plans in which the actuarial assumptions were materially the same between the plans. We also assumed a number of additional postretirement benefits covering eligible employees. These benefits were merged with our existing benefits beginning January 1, 2019.

Obligations and Funded Status

The accumulated benefit obligation for all defined benefit pension plans was \$3,031 million and \$2,632 million as of December 31, 2019 and 2018.

The following summarizes our defined benefit pension plans that have accumulated benefit obligations in excess of plan assets.

<i>(In millions)</i>	December 31,	
	2019	2018
Projected benefit obligations	\$ 3,239	\$ 2,779
Accumulated benefit obligations	3,031	2,632
Fair value of plan assets	2,531	2,089

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The following summarizes the projected benefit obligations and funded status for our defined benefit pension and other postretirement plans:

<i>(In millions)</i>	Pension Benefits		Other Benefits	
	2019	2018	2019	2018
Change in benefit obligations:				
Benefit obligations at January 1	\$ 2,779	\$ 2,164	\$ 884	\$ 826
Service cost	234	159	31	30
Interest cost	108	83	37	30
Actuarial (gain) loss	401	(159)	125	(71)
Benefits paid	(283)	(273)	(45)	(36)
Plan amendments	—	(90)	(1)	34
Acquisitions	—	895	—	71
Benefit obligations at December 31	3,239	2,779	1,031	884
Change in plan assets:				
Fair value of plan assets at January 1	2,089	1,840	—	—
Actual return on plan assets	436	(115)	—	—
Employer contributions	289	115	45	36
Benefits paid from plan assets	(283)	(273)	(45)	(36)
Acquisitions	—	522	—	—
Fair value of plan assets at December 31	2,531	2,089	—	—
Funded status of plans at December 31	\$ (708)	\$ (690)	\$ (1,031)	\$ (884)
Amounts recognized in the consolidated balance sheets:				
Current liabilities	\$ (49)	\$ (21)	\$ (47)	\$ (44)
Noncurrent liabilities	(659)	(669)	(984)	(840)
Accrued benefit cost	<u>\$ (708)</u>	<u>\$ (690)</u>	<u>\$ (1,031)</u>	<u>\$ (884)</u>
Pretax amounts recognized in accumulated other comprehensive loss:^(a)				
Net actuarial loss	\$ 579	\$ 517	\$ 135	\$ 9
Prior service cost (credit)	(250)	(295)	33	35

^(a) Amounts exclude those related to LOOP and Explorer, equity method investees with defined benefit pension and postretirement plans for which net losses of \$17 million and less than \$1 million were recorded in accumulated other comprehensive loss in 2019, reflecting our ownership share.

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Components of Net Periodic Benefit Cost and Other Comprehensive Loss

The following summarizes the net periodic benefit costs and the amounts recognized as other comprehensive loss for our defined benefit pension and other postretirement plans.

<i>(In millions)</i>	Pension Benefits			Other Benefits		
	2019	2018	2017	2019	2018	2017
Components of net periodic benefit cost:						
Service cost	\$ 234	\$ 159	\$ 132	\$ 31	\$ 30	\$ 25
Interest cost	108	83	75	37	30	30
Expected return on plan assets	(127)	(109)	(100)	—	—	—
Amortization – prior service credit	(45)	(33)	(39)	—	(3)	(3)
– actuarial (gain) loss	22	31	36	(1)	(1)	(2)
– settlement loss	9	53	52	—	—	—
Net periodic benefit cost ^(a)	\$ 201	\$ 184	\$ 156	\$ 67	\$ 56	\$ 50
Other changes in plan assets and benefit obligations recognized in other comprehensive loss (pretax):						
Actuarial (gain) loss	\$ 93	\$ 64	\$ (20)	\$ 125	\$ (71)	\$ 61
Prior service cost (credit)	—	(90)	—	(1)	34	—
Amortization of actuarial gain (loss)	(31)	(84)	(88)	1	1	2
Amortization of prior service credit	45	33	39	—	3	3
Total recognized in other comprehensive loss	\$ 107	\$ (77)	\$ (69)	\$ 125	\$ (33)	\$ 66
Total recognized in net periodic benefit cost and other comprehensive loss	\$ 308	\$ 107	\$ 87	\$ 192	\$ 23	\$ 116

^(a) Net periodic benefit cost reflects a calculated market-related value of plan assets which recognizes changes in fair value over three years.

For certain of our pension plans, lump sum payments to employees retiring in 2019, 2018 and 2017 exceeded the plan's total service and interest costs expected for those years. Settlement losses are required to be recorded when lump sum payments exceed total service and interest costs. As a result, pension settlement expenses were recorded in 2019, 2018 and 2017.

The estimated net actuarial loss and prior service credit for our defined benefit pension plans that will be amortized from accumulated other comprehensive loss into net periodic benefit cost in 2020 are \$33 million and \$45 million, respectively. The estimated amount that will be amortized from accumulated other comprehensive loss into net periodic benefit cost in 2020 is \$3 million for net actuarial loss and less than \$1 million for prior service cost for our other defined benefit postretirement plans.

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Plan Assumptions

The following summarizes the assumptions used to determine the benefit obligations at December 31, and net periodic benefit cost for the defined benefit pension and other postretirement plans for 2019, 2018 and 2017.

	Pension Benefits			Other Benefits		
	2019	2018	2017	2019	2018	2017
Weighted-average assumptions used to determine benefit obligation:						
Discount rate	3.03%	4.21%	3.55%	3.00%	4.26%	3.70%
Rate of compensation increase	4.90%	5.00%	5.00%	4.90%	5.00%	5.00%
Weighted-average assumptions used to determine net periodic benefit cost:						
Discount rate	4.05%	3.88%	3.85%	4.30%	3.72%	4.25%
Expected long-term return on plan assets	6.00%	6.15%	6.50%	—%	—%	—%
Rate of compensation increase	4.90%	4.80%	5.00%	4.90%	5.00%	5.00%

Expected Long-term Return on Plan Assets

The overall expected long-term return on plan assets assumption is determined based on an asset rate-of-return modeling tool developed by a third-party investment group. The tool utilizes underlying assumptions based on actual returns by asset category and inflation and takes into account our asset allocation to derive an expected long-term rate of return on those assets. Capital market assumptions reflect the long-term capital market outlook. The assumptions for equity and fixed income investments are developed using a building-block approach, reflecting observable inflation information and interest rate information available in the fixed income markets. Long-term assumptions for other asset categories are based on historical results, current market characteristics and the professional judgment of our internal and external investment teams.

Assumed Health Care Cost Trend

The following summarizes the assumed health care cost trend rates.

	December 31,		
	2019	2018	2017
Health care cost trend rate assumed for the following year:			
Medical: Pre-65	6.20%	6.80%	6.75%
Prescription drugs	8.10%	9.50%	8.75%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate):			
Medical: Pre-65	4.50%	4.50%	4.50%
Prescription drugs	4.50%	4.50%	4.50%
Year that the rate reaches the ultimate trend rate:			
Medical: Pre-65	2027	2027	2026
Prescription drugs	2027	2027	2026

Increases in the post-65 medical plan premium for the Marathon Petroleum Health Plan and the Marathon Petroleum Retiree Health Plan are the lower of the trend rate or four percent.

Assumed health care cost trend rates effect the amounts reported for defined benefit retiree health care plans. A one percentage point change in assumed health care cost trend rates would have the following effects:

<i>(In millions)</i>	1-Percentage-Point Increase	1-Percentage-Point Decrease
Effect on total of service and interest cost components	\$ 6	\$ (5)
Effect on other postretirement benefit obligations	52	(45)

Plan Investment Policies and Strategies

The investment policies for our pension plan assets reflect the funded status of the plans and expectations regarding our future ability to make further contributions. Long-term investment goals are to: (1) manage the assets in accordance with the legal requirements of all applicable laws; (2) diversify plan investments across asset classes to achieve an optimal balance between risk and return and between income and growth of assets through capital appreciation; and (3) source benefit payments primarily through existing plan assets and anticipated future returns.

The investment goals are implemented to manage the plans' funded status volatility and minimize future cash contributions. The asset allocation strategy will change over time in response to changes primarily in funded status, which is dictated by current and anticipated market conditions, the independent actions of our investment committee, required cash flows to and from the plans and other factors deemed appropriate. Such changes in asset allocation are intended to allocate additional assets to the fixed income asset class should the funded status improve. The fixed income asset class shall be invested in such a manner that its interest rate sensitivity correlates highly with that of the plans' liabilities. Other asset classes are intended to provide additional return with associated higher levels of risk. Investment performance and risk is measured and monitored on an ongoing basis through quarterly investment meetings and periodic asset and liability studies. At December 31, 2019, the primary plan's targeted asset allocation was 42 percent equity, private equity, real estate, and timber securities and 58 percent fixed income securities.

Fair Value Measurements

Plan assets are measured at fair value. The following provides a description of the valuation techniques employed for each major plan asset category at December 31, 2019 and 2018.

Cash and cash equivalents – Cash and cash equivalents include a collective fund serving as the investment vehicle for the cash reserves and cash held by third-party investment managers. The collective fund is valued at net asset value (“NAV”) on a scheduled basis using a cost approach, and is considered a Level 2 asset. Cash and cash equivalents held by third-party investment managers are valued using a cost approach and are considered Level 2.

Equity – Equity investments includes common stock, mutual and pooled funds. Common stock investments are valued using a market approach, which are priced daily in active markets and are considered Level 1. Mutual and pooled equity funds are well diversified portfolios, representing a mix of strategies in domestic, international and emerging market strategies. Mutual funds are publicly registered, valued at NAV on a daily basis using a market approach and are considered Level 1 assets. Pooled funds are valued at NAV using a market approach and are considered Level 2.

Fixed Income – Fixed income investments include corporate bonds, U.S. dollar treasury bonds and municipal bonds. These securities are priced on observable inputs using a combination of market, income and cost approaches. These securities are considered Level 2 assets. Fixed income also includes a well diversified bond portfolio structured as a pooled fund. This fund is valued at NAV on a daily basis using a market approach and is considered Level 2. Other investments classified as Level 1 include mutual funds that are publicly registered, valued at NAV on a daily basis using a market approach.

Private Equity – Private equity investments include interests in limited partnerships which are valued using information provided by external managers for each individual investment held in the fund. These holdings are considered Level 3.

Real Estate – Real estate investments consist of interests in limited partnerships. These holdings are either appraised or valued using the investment manager's assessment of assets held. These holdings are considered Level 3.

Other – Other investments include two limited liability companies (“LLCs”) with no public market. The LLCs were formed to acquire timberland in the northwest U.S. These holdings are either appraised or valued using the investment manager's assessment of assets held. These holdings are considered Level 3. Other investments classified as Level 1 include publicly traded depository receipts.

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The following tables present the fair values of our defined benefit pension plans' assets, by level within the fair value hierarchy, as of December 31, 2019 and 2018.

<i>(In millions)</i>	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	\$ —	\$ 22	\$ —	\$ 22
Equity:				
Common stocks	125	135	—	260
Mutual funds	188	—	—	188
Pooled funds	—	442	—	442
Fixed income:				
Corporate	160	815	—	975
Government	113	217	—	330
Pooled funds	—	229	—	229
Private equity	—	—	30	30
Real estate	—	—	24	24
Other	58	(46)	19	31
Total investments, at fair value	\$ 644	\$ 1,814	\$ 73	\$ 2,531

<i>(In millions)</i>	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	\$ —	\$ 25	\$ —	\$ 25
Equity:				
Common stocks	89	86	—	175
Mutual funds	159	—	—	159
Pooled funds	—	297	—	297
Fixed income:				
Corporate	176	684	—	860
Government	98	141	—	239
Pooled funds	—	201	—	201
Private equity	—	—	41	41
Real estate	—	—	29	29
Other	45	—	18	63
Total investments, at fair value	\$ 567	\$ 1,434	\$ 88	\$ 2,089

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The following is a reconciliation of the beginning and ending balances recorded for plan assets classified as Level 3 in the fair value hierarchy:

<i>(In millions)</i>	2019			
	Private Equity	Real Estate	Other	Total
Beginning balance	\$ 41	\$ 29	\$ 18	\$ 88
Actual return on plan assets:				
Realized	5	2	—	7
Unrealized	(3)	(2)	1	(4)
Purchases	1	1	—	2
Sales	(14)	(6)	—	(20)
Ending balance	\$ 30	\$ 24	\$ 19	\$ 73

<i>(In millions)</i>	2018			
	Private Equity	Real Estate	Other	Total
Beginning balance	\$ 51	\$ 34	\$ 20	\$ 105
Actual return on plan assets:				
Realized	9	2	—	11
Unrealized	2	(1)	—	1
Purchases	1	1	—	2
Sales	(22)	(7)	(2)	(31)
Ending balance	\$ 41	\$ 29	\$ 18	\$ 88

Cash Flows

Contributions to defined benefit plans – Our funding policy with respect to the funded pension plans is to contribute amounts necessary to satisfy minimum pension funding requirements, including requirements of the Pension Protection Act of 2006, plus such additional, discretionary, amounts from time to time as determined appropriate by management. In 2019, we made contributions totaling \$270 million to our funded pension plans. For 2020, we have an immaterial amount of required funding, but we may also make voluntary contributions to our funded pension plans at our discretion. Cash contributions to be paid from our general assets for the unfunded pension and postretirement plans are estimated to be approximately \$49 million and \$47 million, respectively, in 2020.

Estimated future benefit payments – The following gross benefit payments, which reflect expected future service, as appropriate, are expected to be paid in the years indicated.

<i>(In millions)</i>	Pension Benefits	Other Benefits
2020	\$ 248	\$ 47
2021	216	49
2022	218	50
2023	220	51
2024	233	52
2025 through 2029	1,187	283

Contributions to defined contribution plans – We also contribute to several defined contribution plans for eligible employees. Contributions to these plans totaled \$217 million, \$144 million and \$116 million in 2019, 2018 and 2017, respectively.

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Multiemployer Pension Plan

We contribute to one multiemployer defined benefit pension plan under the terms of a collective-bargaining agreement that covers some of our union-represented employees. The risks of participating in this multiemployer plan are different from single-employer plans in the following aspects:

- Assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers.
- If a participating employer stops contributing to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers.
- If we choose to stop participating in the multiemployer plan, we may be required to pay that plan an amount based on the underfunded status of the plan, referred to as a withdrawal liability.

Our participation in this plan for 2019, 2018 and 2017 is outlined in the table below. The “EIN” column provides the Employee Identification Number for the plan. The most recent Pension Protection Act zone status available in 2019 and 2018 is for the plan’s year ended December 31, 2018 and December 31, 2017, respectively. The zone status is based on information that we received from the plan and is certified by the plan’s actuary. Among other factors, plans in the red zone are generally less than 65 percent funded. The “FIP/RP Status Pending/Implemented” column indicates a financial improvement plan or a rehabilitation plan has been implemented. The last column lists the expiration date of the collective-bargaining agreement to which the plan is subject. There have been no significant changes that affect the comparability of 2019, 2018 and 2017 contributions. Our portion of the contributions does not make up more than five percent of total contributions to the plan.

Pension Fund	EIN	Pension Protection Act Zone Status		FIP/RP Status Pending/Implemented	MPC Contributions (In millions)			Surcharge Imposed	Expiration Date of Collective – Bargaining Agreement
		2019	2018		2019	2018	2017		
Central States, Southeast and Southwest Areas Pension Plan ^(a)	366044243	Red	Red	Implemented	\$ 4	\$ 4	\$ 4	No	January 31, 2024

^(a) This agreement has a minimum contribution requirement of \$328 per week per employee for 2020. A total of 263 employees participated in the plan as of December 31, 2019.

Multiemployer Health and Welfare Plan

We contribute to one multiemployer health and welfare plan that covers both active employees and retirees. Through the health and welfare plan employees receive medical, dental, vision, prescription and disability coverage. Our contributions to this plan totaled \$6 million, \$6 million and \$7 million for 2019, 2018 and 2017, respectively.

24. STOCK-BASED COMPENSATION

Description of the Plans

Effective April 26, 2012, our employees and non-employee directors became eligible to receive equity awards under the Amended and Restated Marathon Petroleum Corporation 2012 Incentive Compensation Plan (“MPC 2012 Plan”). The MPC 2012 Plan authorizes the Compensation Committee of our board of directors (“Committee”) to grant non-qualified or incentive stock options, stock appreciation rights, stock awards (including restricted stock and restricted stock unit awards), cash awards and performance awards to our employees and non-employee directors. Under the MPC 2012 Plan, no more than 50 million shares of our common stock may be delivered and no more than 20 million shares of our common stock may be the subject of awards that are not stock options or stock appreciation rights. In the sole discretion of the Committee, 20 million shares of our common stock may be granted as incentive stock options. Shares issued as a result of awards granted under these plans are funded through the issuance of new MPC common shares.

Prior to April 26, 2012, our employees and non-employee directors were eligible to receive equity awards under the Marathon Petroleum Corporation 2011 Second Amended and Restated Incentive Compensation Plan (“MPC 2011 Plan”).

In connection with the Andeavor acquisition in October of 2018, we converted the outstanding option and equity incentive awards (other than awards held by non-employee directors of Andeavor, which awards were paid out in connection with the acquisition) under the Andeavor plans to awards that provide for rights to

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acquire (in the case of options) or be settled in or otherwise determined in reference to shares of MPC common stock in place of shares of Andeavor common stock (in the case of equity incentive awards). As part of that conversion, we used an exchange ratio for the respective share prices of Andeavor common stock and MPC common stock to ensure that the award holders' economic opportunity remained constant, and for converted awards, which included a performance component, performance was determined at the time of the conversion and the awards became subject to a time-based vesting only design. The converted awards otherwise continue to be subject to the terms and conditions of their award agreements and the applicable Andeavor plan under which such awards were granted.

Stock-Based Awards under the Plans

We expense all share-based payments to employees and non-employee directors based on the grant date fair value of the awards over the requisite service period, adjusted for estimated forfeitures.

Stock Options – We grant stock options to certain officer and non-officer employees. All of the stock options granted in 2019 were granted under the MPC 2012 Plan. Stock options awarded under the MPC 2011 Plan and the MPC 2012 Plan represent the right to purchase shares of our common stock at its fair market value, which is the closing price of MPC's common stock on the date of grant. Stock options have a maximum term of ten years from the date they are granted, and vest over a requisite service period of three years. We use the Black Scholes option-pricing model to estimate the fair value of stock options granted, which requires the input of subjective assumptions.

Restricted Stock and Restricted Stock Units – We grant restricted stock and restricted stock units to employees and non-employee directors. In general, restricted stock and restricted stock units granted to employees vest over a requisite service period of three years. Restricted stock and restricted stock unit awards granted after 2011 to officers are subject to an additional one year holding period after the three-year vesting period. Restricted stock recipients who received grants in 2012 and after have the right to vote such stock; however, dividends are accrued and will be paid upon vesting. Restricted stock units granted to non-employee directors are considered to vest immediately at the time of the grant for accounting purposes, as they are non-forfeitable, but are not issued until the director's departure from the board of directors. Restricted stock unit recipients do not have the right to vote such shares and receive dividend equivalents payable upon vesting. The non-vested shares are not transferable and are held by our transfer agent. The fair values of restricted stock are equal to the market price of our common stock on the grant date.

Performance Units – We grant performance unit awards to certain officer employees. Performance units are dollar denominated. The target value of all performance units is \$1.00, with actual payout up to \$2.00 per unit (up to 200 percent of target). Performance units issued under the MPC 2012 Plan have a 36-month requisite service period. The payout value of these awards will be determined by the relative ranking of the total shareholder return ("TSR") of MPC common stock compared to the TSR of a select group of peer companies, as well as the Standard & Poor's 500 Energy Index fund over an average of four measurement periods. These awards will be settled 25 percent in MPC common stock and 75 percent in cash. The number of shares actually distributed will be determined by dividing 25 percent of the final payout by the closing price of MPC common stock on the day the Committee certifies the final TSR rankings, or the next trading day if the certification is made outside of normal trading hours. The performance units paying out in cash are accounted for as liability awards and recorded at fair value with a mark-to-market adjustment made each quarter. The performance units that settle in shares are accounted for as equity awards and do not receive dividend equivalents.

Total Stock-Based Compensation Expense

The following table reflects activity related to our stock-based compensation arrangements, including the converted awards related to the acquisition of Andeavor:

<i>(In millions)</i>	2019	2018	2017
Stock-based compensation expense	\$ 161	\$ 133	\$ 51
Tax benefit recognized on stock-based compensation expense	37	32	19
Cash received by MPC upon exercise of stock option awards	10	24	46
Tax (expense)/benefit received for tax deductions for stock awards exercised	(3)	14	25

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Stock Option Awards

The Black Scholes option-pricing model values used to value stock option awards granted were determined based on the following weighted average assumptions:

	2019	2018	2017
Weighted average exercise price per share	\$ 61.92	\$ 67.71	\$ 50.57
Expected life in years	6.0	6.2	6.3
Expected volatility	32%	34%	35%
Expected dividend yield	3.4%	3.0%	3.0%
Risk-free interest rate	2.4%	2.7%	2.1%
Weighted average grant date fair value of stock option awards granted	\$ 13.65	\$ 17.21	\$ 13.42

The expected life of stock options granted is based on historical data and represents the period of time that options granted are expected to be held prior to exercise. The 2019 assumption for expected volatility of our stock price reflects a weighting of 50 percent of our common stock implied volatility and 50 percent of our common stock historical volatility. The risk-free interest rate for periods within the expected life of the option is based on the U.S. Treasury yield curve in effect at the time of the grant.

The following is a summary of our common stock option activity in 2019:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2018	8,724,595	\$ 37.07		
Granted	1,952,324	61.92		
Exercised	(529,706)	19.12		
Forfeited or expired	(128,846)	61.29		
Outstanding at December 31, 2019	10,018,367	42.55		
Vested and expected to vest at December 31, 2019	9,987,326	26.84	5.2	\$ 187
Exercisable at December 31, 2019	7,404,952	35.85	4.0	183

The intrinsic value of options exercised by MPC employees during 2019, 2018 and 2017 was \$23 million, \$44 million and \$75 million, respectively.

As of December 31, 2019, unrecognized compensation cost related to stock option awards was \$14 million, which is expected to be recognized over a weighted average period of 1.4 years.

Restricted Stock and Restricted Stock Unit Awards

The following is a summary of restricted stock award activity of our common stock in 2019:

	Restricted Stock		Restricted Stock Units	
	Number of Shares	Weighted Average Grant Date Fair Value	Number of Units	Weighted Average Grant Date Fair Value
Unvested at December 31, 2018	989,019	\$ 57.19	3,120,116	\$ 82.40
Granted	1,059,837	61.14	36,391	58.30
Vested	(595,440)	52.16	(1,527,145)	81.84
Forfeited	(103,618)	61.20	(147,616)	82.37
Unvested at December 31, 2019	1,349,798	62.20	1,481,746	82.39

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The following is a summary of the values related to restricted stock and restricted stock unit awards held by MPC employees and non-employee directors:

	Restricted Stock		Restricted Stock Units	
	Intrinsic Value of Awards Vested During the Period (in millions)	Weighted Average Grant Date Fair Value of Awards Granted During the Period	Intrinsic Value of Awards Vested During the Period (in millions)	Weighted Average Grant Date Fair Value of Awards Granted During the Period
2019	\$ 32	\$ 61.14	\$ 120	\$ 58.30
2018	49	71.19	39	72.43
2017	28	50.25	5	53.19

As of December 31, 2019, unrecognized compensation cost related to restricted stock awards was \$56 million, which is expected to be recognized over a weighted average period of 1.46 years. Unrecognized compensation cost related to restricted stock unit awards was \$28 million, which is expected to be recognized over a weighted average period of 0.66 years.

Performance Unit Awards

The following table presents a summary of the 2019 activity for performance unit awards to be settled in shares:

	Number of Units	Weighted Average Grant Date Fair Value
Unvested at December 31, 2018	8,607,250	\$ 0.79
Granted	6,256,250	0.72
Vested	(3,494,000)	0.62
Forfeited	(170,000)	0.81
Unvested at December 31, 2019	11,199,500	0.80

The number of shares that would be issued upon target vesting, using the closing price of our common stock on December 31, 2019 would be 206,216 shares.

As of December 31, 2019, unrecognized compensation cost related to equity-classified performance unit awards was \$2 million, which is expected to be recognized over a weighted average period of 0.82 years.

Performance units to be settled in MPC shares have a grant date fair value calculated using a Monte Carlo valuation model, which requires the input of subjective assumptions. The following table provides a summary of these assumptions:

	2019	2018	2017
Risk-free interest rate	2.5%	2.3%	1.5%
Look-back period (in years)	2.8	2.8	2.8
Expected volatility	29.7%	34.0%	36.1%
Grant date fair value of performance units granted	\$ 0.72	\$ 0.83	\$ 0.92

The risk-free interest rate for the remaining performance period as of the grant date is based on the U.S. Treasury yield curve in effect at the time of the grant. The look-back period reflects the remaining performance period at the grant date. The assumption for the expected volatility of our stock price reflects the average MPC common stock historical volatility.

MPLX and ANDX Awards

Compensation expense for awards of MPLX and ANDX units are not material to our consolidated financial statements for 2019.

[Table of Contents](#)**25. LEASES**

For further information regarding the adoption of ASC 842, including the method of adoption and practical expedients elected, see Note 3.

Lessee

We lease a wide variety of facilities and equipment including land and building space, office and field equipment, storage facilities and transportation equipment. Our remaining lease terms range from less than one year to 59 years. Most long-term leases include renewal options ranging from less than one year to 50 years and, in certain leases, also include purchase options. The lease term included in the measurement of right of use assets and lease liabilities includes options to extend or terminate our leases that we are reasonably certain to exercise. Options were included in the lease term primarily for retail store sites where we constructed property, plant and equipment on leased land that is expected to exist beyond the initial lease term.

Under ASC 842, the components of lease cost were as follows:

<i>(In millions)</i>	2019
Finance lease cost:	
Amortization of right of use assets	\$ 64
Interest on lease liabilities	43
Operating lease cost	793
Variable lease cost	91
Short-term lease cost	746
Total lease cost	<u>\$ 1,737</u>

Supplemental balance sheet data related to leases were as follows:

<i>(In millions)</i>	December 31, 2019
Operating leases	
Assets	
Right of use assets	\$ 2,459
Liabilities	
Operating lease liabilities	\$ 604
Long-term operating lease liabilities	1,875
Total operating lease liabilities	<u>\$ 2,479</u>
Weighted average remaining lease term (in years)	6.2
Weighted average discount rate	4.02%
Finance leases	
Assets	
Property, plant and equipment, gross	\$ 807
Accumulated depreciation	227
Property, plant and equipment, net	<u>\$ 580</u>
Liabilities	
Debt due within one year	\$ 62
Long-term debt	636
Total finance lease liabilities	<u>\$ 698</u>
Weighted average remaining lease term (in years)	11.9
Weighted average discount rate	6.50%

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As of December 31, 2019, maturities of lease liabilities for operating lease obligations and finance lease obligations having initial or remaining non-cancellable lease terms in excess of one year are as follows:

<i>(In millions)</i>	Operating	Finance
2020	\$ 698	\$ 96
2021	590	87
2022	402	95
2023	287	98
2024	222	84
2025 and thereafter	634	527
Gross lease payments	2,833	987
Less: imputed interest	354	289
Total lease liabilities	\$ 2,479	\$ 698

Presented in accordance with ASC 840, future minimum commitments as of December 31, 2018 for operating lease obligations and capital lease obligations having initial or remaining non-cancellable lease terms in excess of one year were as follows:

<i>(In millions)</i>	Operating	Capital
2019	\$ 709	\$ 70
2020	619	71
2021	553	66
2022	389	75
2023	295	82
2024 and thereafter	858	586
Total minimum lease payments	\$ 3,423	950
Less: imputed interest costs		301
Present value of net minimum lease payments		\$ 649

Lessor

MPLX has certain natural gas gathering, transportation and processing agreements in which it is considered to be the lessor under several operating lease arrangements in accordance with GAAP. MPLX's primary natural gas lease operations relate to a natural gas gathering agreement in the Marcellus region for which it earns a fixed-fee for providing gathering services to a single producer using a dedicated gathering system. As the gathering system is expanded, the fixed-fee charged to the producer is adjusted to include the additional gathering assets in the lease. The primary term of the natural gas gathering arrangement expires in 2038 and will continue thereafter on a year-to-year basis until terminated by either party. Other significant natural gas implicit leases relate to a natural gas processing agreement in the Marcellus region and a natural gas processing agreement in the Southern Appalachia region for which MPLX earns minimum monthly fees for providing processing services to a single producer using a dedicated processing plant. The primary terms of these natural gas processing agreements expire during 2023 and 2033 and will continue thereafter on a year-to-year basis until terminated by either party.

MPLX did not elect to use the practical expedient to combine lease and non-lease components for lessor arrangements. The tables below represent the portion of the contract allocated to the lease component based on relative standalone selling price. Lessor agreements are currently deemed operating, as MPLX elected the practical expedient to carry forward historical classification conclusions. If and when a modification of an existing agreement occurs and the agreement is required to be assessed under ASC 842, MPLX assesses the amended agreement and makes a determination as to whether a reclassification of the lease is required.

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Under ASC 840, our revenue from implicit lease arrangements, excluding executory costs, totaled approximately \$254 million, \$221 million and \$218 million in 2019, 2018 and 2017, respectively. The following is a schedule of minimum future rentals on the non-cancellable operating leases as of December 31, 2019:

(In millions)

2020	\$	186
2021		179
2022		177
2023		170
2024		167
2025 and thereafter		1,072
Total minimum future rentals	\$	<u>1,951</u>

The following schedule summarizes our investment in assets held for operating lease by major classes as of December 31, 2019:

(In millions)

Natural gas gathering and NGL transportation pipelines and facilities	\$	1,121
Natural gas processing facilities		686
Terminals and related assets		83
Land, building, office equipment and other		45
Property, plant and equipment		<u>1,935</u>
Less accumulated depreciation		327
Total property, plant and equipment, net	\$	<u>1,608</u>

26. COMMITMENTS AND CONTINGENCIES

We are the subject of, or a party to, a number of pending or threatened legal actions, contingencies and commitments involving a variety of matters, including laws and regulations relating to the environment. Some of these matters are discussed below. For matters for which we have not recorded an accrued liability, we are unable to estimate a range of possible loss because the issues involved have not been fully developed through pleadings and discovery. However, the ultimate resolution of some of these contingencies could, individually or in the aggregate, be material.

Environmental Matters

We are subject to federal, state, local and foreign laws and regulations relating to the environment. These laws generally provide for control of pollutants released into the environment and require responsible parties to undertake remediation of hazardous waste disposal sites and certain other locations including presently or formerly owned or operated retail marketing sites. Penalties may be imposed for noncompliance.

At December 31, 2019 and 2018, accrued liabilities for remediation totaled \$433 million and \$455 million, respectively. It is not presently possible to estimate the ultimate amount of all remediation costs that might be incurred or the penalties if any that may be imposed. Recoverables for recoverable costs from certain states, under programs to assist companies in clean-up efforts related to underground storage tanks at presently or formerly owned or operated retail marketing sites, were \$29 million and \$35 million at December 31, 2019 and 2018, respectively.

Governmental and other entities in California, New York, Maryland and Rhode Island have filed lawsuits against coal, gas, oil and petroleum companies, including the Company. The lawsuits allege damages as a result of climate change and the plaintiffs are seeking unspecified damages and abatement under various tort theories. Similar lawsuits may be filed in other jurisdictions. At this early stage, the ultimate outcome of these matters remain uncertain, and neither the likelihood of an unfavorable outcome nor the ultimate liability, if any, can be determined.

We are involved in a number of environmental enforcement matters arising in the ordinary course of business. While the outcome and impact on us cannot be predicted with certainty, management believes the resolution

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of these environmental matters will not, individually or collectively, have a material adverse effect on our consolidated results of operations, financial position or cash flows.

Asset Retirement Obligations

Our short-term asset retirement obligations were \$24 million and \$30 million at December 31, 2019 and 2018, respectively, which are included in other current liabilities in our consolidated balance sheets. Our long-term asset retirement obligations were \$206 million and \$222 million at December 31, 2019 and 2018, respectively, which are included in deferred credits and other liabilities in our consolidated balance sheets.

Lawsuits

In May 2015, the Kentucky attorney general filed a lawsuit against our wholly-owned subsidiary, MPC LP, in the United States District Court for the Western District of Kentucky asserting claims under federal and state antitrust statutes, the Kentucky Consumer Protection Act, and state common law. The complaint, as amended in July 2015, alleges that MPC LP used deed restrictions, supply agreements with customers and exchange agreements with competitors to unreasonably restrain trade in areas within Kentucky and seeks declaratory relief, unspecified damages, civil penalties, restitution and disgorgement of profits. At this stage, the ultimate outcome of this litigation remains uncertain, and neither the likelihood of an unfavorable outcome nor the ultimate liability, if any, can be determined, and we are unable to estimate a reasonably possible loss (or range of loss) for this matter. We intend to vigorously defend ourselves in this matter.

We are also a party to a number of other lawsuits and other proceedings arising in the ordinary course of business. While the ultimate outcome and impact to us cannot be predicted with certainty, we believe that the resolution of these other lawsuits and proceedings will not have a material adverse effect on our consolidated financial position, results of operations or cash flows.

Guarantees

We have provided certain guarantees, direct and indirect, of the indebtedness of other companies. Under the terms of most of these guarantee arrangements, we would be required to perform should the guaranteed party fail to fulfill its obligations under the specified arrangements. In addition to these financial guarantees, we also have various performance guarantees related to specific agreements.

Guarantees related to indebtedness of equity method investees – MPC and MPLX hold interests in an offshore oil port, LOOP, and MPLX holds an interest in a crude oil pipeline system, LOCAP. Both LOOP and LOCAP have secured various project financings with throughput and deficiency agreements. Under the agreements, MPC, as a shipper, is required to advance funds if the investees are unable to service their debt. Any such advances are considered prepayments of future transportation charges. The duration of the agreements vary but tend to follow the terms of the underlying debt, which extend through 2037. Our maximum potential undiscounted payments under these agreements for the debt principal totaled \$171 million as of December 31, 2019.

In connection with our 25 percent interest in Gray Oak Pipeline, LLC (“Gray Oak Pipeline”), we have entered into an Equity Contribution Agreement obligating us to make certain equity contributions to Gray Oak Pipeline to support its obligations under a construction loan facility. Gray Oak oil pipeline is a crude oil transportation system from West Texas and the Eagle Ford formation to destinations in the Ingleside, Corpus Christi and Sweeney, Texas markets. Gray Oak Pipeline entered into the construction loan facility with a syndicate of banks to finance a portion of the construction costs of the pipeline project.

The Equity Contribution Agreement requires us to contribute our pro rata share of any amounts necessary to allow Gray Oak Pipeline to cure any payment defaults under the construction loan facility or to repay all amounts outstanding under the facility, including principal, accrued interest, fees and expenses, in certain circumstances, including the failure of Gray Oak Pipeline to repay or refinance the construction loan facility prior to its scheduled maturity date of June 3, 2022. Gray Oak may borrow up to \$1.43 billion under the construction loan facility (after giving effect to the exercise of all options to increase its borrowing capacity). As of December 31, 2019, our maximum potential undiscounted payments under the Equity Contribution Agreement for the debt principal totaled \$292 million.

In connection with MPLX’s approximate 9 percent indirect interest in a joint venture that owns and operates the Dakota Access Pipeline and Energy Transfer Crude Oil Pipeline projects, collectively referred to as the Bakken Pipeline system, MPLX entered into a Contingent Equity Contribution Agreement. MPLX, along with the other joint venture owners in the Bakken Pipeline system, have agreed to make equity contributions to the

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joint venture upon certain events occurring to allow the entities that own and operate the Bakken Pipeline system to satisfy their senior note payment obligations. The senior notes were issued to repay amounts owed by the pipeline companies to fund the cost of construction of the Bakken Pipeline system. As of December 31, 2019, our maximum potential undiscounted payments under the Contingent Equity Contribution Agreement was approximately \$230 million.

In connection with our 50 percent ownership in Crowley Ocean Partners, we have agreed to conditionally guarantee our portion of the obligations of the joint venture and its subsidiaries under a senior secured term loan agreement. The term loan agreement provides for loans of up to \$325 million to finance the acquisition of four product tankers. MPC's liability under the guarantee for each vessel is conditioned upon the occurrence of certain events, including if we cease to maintain an investment-grade credit rating or the charter for the relevant product tanker ceases to be in effect and is not replaced by a charter with an investment-grade company on certain defined commercial terms. As of December 31, 2019, our maximum potential undiscounted payments under this agreement for debt principal totaled \$130 million.

In connection with our 50 percent indirect interest in Crowley Blue Water Partners, we have agreed to provide a conditional guarantee of up to 50 percent of its outstanding debt balance in the event there is no charter agreement in place with an investment-grade customer for the entity's three vessels as well as other financial support in certain circumstances. As of December 31, 2019, our maximum potential undiscounted payments under this arrangement was \$122 million.

Marathon Oil indemnifications – The separation and distribution agreement and other agreements with Marathon Oil to effect our spinoff provide for cross-indemnities between Marathon Oil and us. In general, Marathon Oil is required to indemnify us for any liabilities relating to Marathon Oil's historical oil and gas exploration and production operations, oil sands mining operations and integrated gas operations, and we are required to indemnify Marathon Oil for any liabilities relating to Marathon Oil's historical refining, marketing and transportation operations. The terms of these indemnifications are indefinite and the amounts are not capped.

Other guarantees – We have entered into other guarantees with maximum potential undiscounted payments totaling \$121 million as of December 31, 2019, which consist primarily of a commitment to contribute cash to an equity method investee for certain catastrophic events in lieu of procuring insurance coverage, a commitment to fund a share of the bonds issued by a government entity for construction of public utilities in the event that other industrial users of the facility default on their utility payments and leases of assets containing general lease indemnities and guaranteed residual values.

General guarantees associated with dispositions – Over the years, we have sold various assets in the normal course of our business. Certain of the related agreements contain performance and general guarantees, including guarantees regarding inaccuracies in representations, warranties, covenants and agreements, and environmental and general indemnifications that require us to perform upon the occurrence of a triggering event or condition. These guarantees and indemnifications are part of the normal course of selling assets. We are typically not able to calculate the maximum potential amount of future payments that could be made under such contractual provisions because of the variability inherent in the guarantees and indemnities. Most often, the nature of the guarantees and indemnities is such that there is no appropriate method for quantifying the exposure because the underlying triggering event has little or no past experience upon which a reasonable prediction of the outcome can be based.

Contractual Commitments and Contingencies

At December 31, 2019 and 2018, our contractual commitments to acquire property, plant and equipment and advance funds to equity method investees totaled \$1.6 billion and \$1.8 billion, respectively.

Certain natural gas processing and gathering arrangements require us to construct natural gas processing plants, natural gas gathering pipelines and NGL pipelines and contain certain fees and charges if specified construction milestones are not achieved for reasons other than force majeure. In certain cases, certain producer customers may have the right to cancel the processing arrangements if there are significant delays that are not due to force majeure.

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SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

<i>(In millions, except per share data)</i>	2019			
	Quarter Ended			
	March 31	June 30	September 30	December 31
Sales and other operating revenues ^(a)	\$ 28,267	\$ 33,547	\$ 31,043	\$ 31,092
Income from operations	669	2,042	2,024	841
Net income	259	1,367	1,367	262
Net income (loss) attributable to MPC	(7)	1,106	1,095	443
Net income (loss) attributable to MPC per share ^(b) :				
Basic	\$ (0.01)	\$ 1.67	\$ 1.67	\$ 0.68
Diluted	(0.01)	1.66	1.66	0.68

<i>(In millions, except per share data)</i>	2018			
	Quarter Ended			
	March 31	June 30	September 30	December 31
Sales and other operating revenues ^(a)	\$ 18,866	\$ 22,317	\$ 22,988	\$ 32,333
Income from operations	440	1,711	1,403	2,017
Net income	235	1,235	941	1,195
Net income attributable to MPC	37	1,055	737	951
Net income attributable to MPC per share ^(b) :				
Basic	\$ 0.08	\$ 2.30	\$ 1.63	\$ 1.38
Diluted	0.08	2.27	1.62	1.35

^(a) Includes sales to related parties.

^(b) The sum of the per-share amounts for the four quarters may not always equal the annual per-share amounts due to differences in the average number of shares outstanding during the respective periods.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

An evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) under the Securities Exchange Act of 1934, as amended, was carried out under the supervision and with the participation of our management, including our chief executive officer and chief financial officer. Based upon that evaluation, the chief executive officer and chief financial officer concluded that the design and operation of these disclosure controls and procedures were effective as of December 31, 2019, the end of the period covered by this Annual Report on Form 10-K.

Internal Control over Financial Reporting and Changes in Internal Control over Financial Reporting

During the quarter ended December 31, 2019, we completed the integration of Andeavor into our internal control environment. See Item 8. Financial Statements and Supplementary Data – Management’s Report on Internal Control over Financial Reporting and – Report of Independent Registered Public Accounting Firm, which reports are incorporated herein by reference. During the quarter ended December 31, 2019, there have been no other changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information concerning our executive officers is included in Part I, Item 1 of this Annual Report on Form 10-K. Information concerning our directors is incorporated by reference to “Corporate Governance—Proposal 2. Election of Directors” in our Proxy Statement for the 2020 Annual Meeting of Shareholders, to be filed with the SEC within 120 days of December 31, 2019 (the “Proxy Statement”).

Our Code of Business Conduct, which applies to all of our directors, officers and employees, defines our expectations for ethical decision-making, accountability and responsibility. Our Code of Ethics for Senior Financial Officers, which is specifically applicable to our Chief Executive Officer, Chief Financial Officer, Vice President and Controller, Treasurer, and other leaders performing similar roles, affirms the principle that the honesty, integrity and sound judgment of our senior executives with responsibility for preparation and certification of our financial statements is essential to the proper functioning and success of our company. These codes are available on our website at www.marathonpetroleum.com/Investors/Corporate-Governance/. We will post on our website any amendments to, or waivers from, either of these codes requiring disclosure under applicable rules within four business days following the amendment or waiver.

The other information required by this Item is incorporated by reference to “Corporate Governance—How the Board Conducts Its Business—Board Committees” and “Other Information—Stock Ownership Information—Delinquent Section 16(a) Reports” in our Proxy Statement.

ITEM 11. EXECUTIVE COMPENSATION

Information required by this Item is incorporated by reference to “Executive Compensation Discussion and Analysis,” “Executive Compensation Tables” and “Corporate Governance—Director Compensation” in our Proxy Statement.

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

Information concerning security ownership of certain beneficial owners and management required by this Item is incorporated by reference to “Other Information—Stock Ownership Information” in our Proxy Statement.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information as of December 31, 2019 with respect to shares of our common stock that may be issued under the MPC 2012 Plan, the MPC 2011 Plan and the Andeavor Plans:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights ^(a)	Weighted-average exercise price of outstanding options, warrants and rights ^(b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column) ^(c)
Equity compensation plans approved by stockholders	10,325,230	\$ 43.63	36,951,244
Equity compensation plan not approved by stockholders	—	—	—
Total	10,325,230	N/A	36,951,244

^(a) Includes the following:

- 1) 9,721,013 stock options granted pursuant to the MPC 2012 Plan and the MPC 2011 Plan and not forfeited, cancelled or expired as of December 31, 2019. The amounts in column (a) do not include 297,354 stock options granted under the Andeavor Plans and not forfeited, cancelled or expired as of December 31, 2019.
- 2) 191,785 restricted stock units granted pursuant to the MPC 2012 Plan and the MPC 2011 Plan for shares unissued and not forfeited, cancelled or expired as of December 31, 2019. The amounts in column (a) do not include 1,984,657 restricted stock units granted under the Andeavor Plans and not forfeited, cancelled or expired as of December 31, 2019.
- 3) 412,432 shares as the maximum potential number of shares that could be issued in settlement of performance units outstanding as of December 31, 2019 pursuant to the MPC 2012 Plan, based on the closing price of our common stock on December 31, 2019 of \$60.25 per share. The number of shares reported for this award vehicle may overstate dilution. See Note 24 for more information on performance unit awards granted under the MPC 2012 Plan.

^(b) Restricted stock, restricted stock units and performance units are not taken into account in the weighted-average exercise price as such awards have no exercise price. Further, the outstanding stock options granted under the Andeavor Plans were not taken into account in the weighted-average exercise price.

^(c) Reflects the shares available for issuance pursuant to the MPC 2012 Plan. All granting authority under the MPC 2011 Plan was revoked following the approval of the MPC 2012 Plan by shareholders on April 25, 2012, and all granting power under the Andeavor Plans was revoked at the time of the Andeavor Merger. No more than 14,981,042 of the shares reported in this column may be issued for awards other than stock options or stock appreciation rights. The number of shares reported in this column assumes 412,432 as the maximum potential number of shares that could be issued pursuant to the MPC 2012 Plan in settlement of performance units outstanding as of December 31, 2019, based on the closing price of our common stock on December 31, 2019, of \$60.25 per share. The number of shares assumed for this award vehicle may understate the number of shares available for issuance pursuant to the MPC 2012 Plan. See Note 24 for more information on performance unit awards granted pursuant to the MPC 2012 Plan. Shares related to grants made pursuant to the MPC 2012 Plan that are forfeited, cancelled or expire unexercised become immediately available for issuance under the MPC 2012 Plan.

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

Information required by this Item is incorporated by reference to “Other Information—Related Party Transactions” and “Corporate Governance—Board Composition and Director Selection—Director Independence” in our Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required by this Item is incorporated by reference to “Audit Matters—Auditor Fees and Services” in our Proxy Statement.

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PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

A. Documents Filed as Part of the Report

1. Financial Statements (see Part II, Item 8. of this Annual Report on Form 10-K regarding financial statements)
2. Financial Statement Schedules

Financial statement schedules required under SEC rules but not included in this Annual Report on Form 10-K are omitted because they are not applicable or the required information is contained in the consolidated financial statements or notes thereto.

3. Exhibits:

Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
2	Plan of Acquisition, Reorganization, Arrangement, Liquidation or Succession						
2.1 †	Separation and Distribution Agreement, dated as of May 25, 2011, among Marathon Oil Corporation, Marathon Oil Company and Marathon Petroleum Corporation	10	2.1	5/26/2011	001-35054		
2.2 †	Agreement and Plan of Merger, dated as of July 11, 2015, by and among MPLX LP, Sapphire Holdco LLC, MPLX GP LLC, MarkWest Energy Partners, L.P. and, for certain limited purposes set forth therein, Marathon Petroleum Corporation.	8-K	2.1	7/16/2015	001-35054		
2.3	Amendment to Agreement and Plan of Merger, dated as of November 10, 2015, by and among MPLX LP, Sapphire Holdco LLC, MPLX GP LLC, MarkWest Energy Partners, L.P. and Marathon Petroleum Corporation.	8-K	2.1	11/12/2015	001-35054		
2.4	Amendment Number 2 to Agreement and Plan of Merger, dated as of November 16, 2015, by and among MPLX LP, Sapphire Holdco LLC, MPLX GP LLC, MarkWest Energy Partners, L.P. and Marathon Petroleum Corporation.	8-K	2.1	11/17/2015	001-35054		
2.5 †	Agreement and Plan of Merger, dated as of April 29, 2018, by and among Marathon Petroleum Corporation, Andeavor, Mahi Inc. and Mahi LLC	8-K	2.1	4/30/2018	001-35054		
2.6	Amendment to Agreement and Plan of Merger, dated as of July 3, 2018, by and among Andeavor, Marathon Petroleum Corporation, Mahi Inc. and Mahi LLC.	S-4/A	2.2	7/5/2018	333-225244		
2.7	Second Amendment to Agreement and Plan of Merger, dated as of September 18, 2018, by and among Andeavor, Marathon Petroleum Corporation, Mahi Inc. and Mahi LLC.	8-K	2.1	9/18/2018	001-35054		
2.8 †	Agreement and Plan of Merger, dated as of May 7, 2019, by and among Andeavor Logistics LP, Tesoro Logistics GP, LLC, MPLX LP, MPLX GP LLC and MPLX MAX LLC.	8-K	2.1	5/8/2019	001-35054		
3	Articles of Incorporation and Bylaws						
3.1	Restated Certificate of Incorporation of Marathon Petroleum Corporation, dated October 1, 2018.	8-K	3.2	10/1/2018	001-35054		
3.2	Amended and Restated Bylaws of Marathon Petroleum Corporation dated as of February 27, 2019	10-K	3.2	2/28/2019	001-35054		
4	Instruments Defining the Rights of Security Holders, Including Indentures						

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
4.1	Indenture dated as of February 1, 2011 between Marathon Petroleum Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee	10	4.1	3/29/2011	001-35054		
4.2	Form of the terms of the 3 1/2% Senior Notes due 2016, 5 1/8% Senior Notes due 2021 and 6 1/2% Senior Notes due 2041 of Marathon Petroleum Corporation (including Form of Notes)	10	4.2	3/29/2011	001-35054		
4.3	First Supplemental Indenture, dated as of September 5, 2014, by and between Marathon Petroleum Corporation and The Bank of New York Mellon Trust Company, N.A., as trustee (including Form of Notes)	10-Q	4.1	11/3/2014	001-35054		
4.4	Second Supplemental Indenture, dated as of December 14, 2015, by and between Marathon Petroleum Corporation and the Bank of New York Mellon Trust Company, N.A., as trustee (including Form of Notes)	8-K	4.1	12/14/2015	001-35054		
4.5	Indenture, dated February 12, 2015, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee	8-K	4.1	2/12/2015	001-35714		
4.6	First Supplemental Indenture, dated February 12, 2015, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee (including Form of Notes)	8-K	4.2	2/12/2015	001-35714		
4.7	Third Supplemental Indenture, dated as of December 22, 2015, by and between MPLX LP and the Bank of New York Mellon Trust Company, N.A. (including Form of Note)	8-K	4.3	12/22/2015	001-35714		
4.8	Fourth Supplemental Indenture, dated as of December 22, 2015, by and between MPLX LP and the Bank of New York Mellon Trust Company, N.A. (including Form of Note)	8-K	4.4	12/22/2015	001-35714		
4.9	Fifth Supplemental Indenture, dated as of December 22, 2015, by and between MPLX LP and the Bank of New York Mellon Trust Company, N.A. (including Form of Note)	8-K	4.5	12/22/2015	001-35714		
4.10	Sixth Supplemental Indenture, dated as of February 10, 2017, by and between MPLX LP and the Bank of New York Mellon Trust Company, N.A. (including Form of Note)	8-K	4.1	2/10/2017	001-35714		
4.11	Seventh Supplemental Indenture, dated as of February 10, 2017, by and between MPLX LP and the Bank of New York Mellon Trust Company, N.A. (including Form of Note)	8-K	4.2	2/10/2017	001-35714		
4.12	Eighth Supplemental Indenture, dated as of February 8, 2018, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee (including Form of Note)	8-K	4.1	2/8/2018	001-35714		
4.13	Ninth Supplemental Indenture, dated as of February 8, 2018, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee (including Form of Note)	8-K	4.2	2/8/2018	001-35714		
4.14	Tenth Supplemental Indenture, dated as of February 8, 2018, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee (including Form of Note)	8-K	4.3	2/8/2018	001-35714		

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
4.15	Eleventh Supplemental Indenture, dated as of February 8, 2018, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee (including Form of Note)	8-K	4.4	2/8/2018	001-35714		
4.16	Twelfth Supplemental Indenture, dated as of February 8, 2018, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee (including Form of Note)	8-K	4.5	2/8/2018	001-35714		
4.17	Third Supplemental Indenture, dated as of October 2, 2018, by and between MPC and the Bank of New York Mellon Trust Company, N.A. (including Form of Note).	8-K	4.1	10/5/2018	001-35054		
4.18	Fourth Supplemental Indenture, dated as of October 2, 2018, by and between MPC and the Bank of New York Mellon Trust Company, N.A. (including Form of Note).	8-K	4.2	10/5/2018	001-35054		
4.19	Fifth Supplemental Indenture, dated as of October 2, 2018, by and between MPC and the Bank of New York Mellon Trust Company, N.A. (including Form of Note).	8-K	4.3	10/5/2018	001-35054		
4.20	Sixth Supplemental Indenture, dated as of October 2, 2018, by and between MPC and the Bank of New York Mellon Trust Company, N.A. (including Form of Note).	8-K	4.4	10/5/2018	001-35054		
4.21	Seventh Supplemental Indenture, dated as of October 2, 2018, by and between MPC and the Bank of New York Mellon Trust Company, N.A. (including Form of Note).	8-K	4.5	10/5/2018	001-35054		
4.22	Eighth Supplemental Indenture, dated as of October 2, 2018, by and between MPC and the Bank of New York Mellon Trust Company, N.A. (including Form of Note).	8-K	4.6	10/5/2018	001-35054		
4.23	Indenture (including form of note), dated as of September 27, 2012, among Tesoro Corporation, the guarantors named therein and U.S. Bank National Association, as trustee, relating to the 4.250% Senior Notes due 2017 and the 5.375% Senior Notes due 2022	8-K	4.1	10/2/2012	001-03473 (Andeavor)		
4.24	Indenture (including form of note), dated as of March 18, 2014, among Tesoro Corporation, the guarantors named therein and U.S. Bank National Association, as trustee, relating to the 5.125% Senior Notes due 2024	8-K	4.1	3/18/2014	001-03473 (Andeavor)		
4.25	Indenture (including form of Notes), dated as of December 22, 2016, among Tesoro Corporation, the guarantors named therein and U.S. Bank National Association, as trustee, relating to the 4.750% Senior Notes due 2023 and the 5.125% Senior Notes due 2026	8-K	4.1	12/22/2016	001-03473 (Andeavor)		
4.26	Indenture, dated as of December 21, 2017 among Andeavor and U.S. Bank National Association, as trustee, relating to the 3.800% Senior Notes due 2028 and the 4.500% Senior Notes due 2048	8-K	4.1	12/21/2017	001-03473 (Andeavor)		
4.27	First Supplemental Indenture, dated as of December 21, 2017 among Andeavor and U.S. Bank National Association, as trustee, relating to the 3.800% Senior Notes due 2028 and the 4.500% Senior Notes due 2048	8-K	4.2	12/21/2017	001-03473 (Andeavor)		
4.28	Indenture, dated as of October 29, 2014, among Tesoro Logistics LP, Tesoro Logistics Finance Corp., the guarantors named therein and U.S. Bank National Association, as trustee, relating to the 5.50% Senior Notes due 2019 and the 6.25% Senior Notes due 2022	10-Q	4.3	10/31/2014	001-03473 (Andeavor)		

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
4.29	Indenture, dated as of May 12, 2016, among Tesoro Logistics LP, Tesoro Logistics Finance Corp., the guarantors named therein and U.S. Bank National Association, as trustee, relating to the 6.375% Senior Notes due 2024	10-K	4.33	2/21/2017	001-03473 (Andeavor)		
4.30	Indenture, dated as of December 2, 2016, among Tesoro Logistics LP, Tesoro Logistics Finance Corp., the guarantors named therein and U.S. Bank National Association, as trustee, relating to the 5.25% Senior Notes due 2025	10-K	4.34	2/21/2017	001-03473 (Andeavor)		
4.31	Indenture, dated as of November 28, 2017, among Tesoro Logistics LP, Tesoro Logistics Finance Corp., the guarantors named therein and U.S. Bank National Association, as trustee, relating to the 3.500% Senior Notes due 2022, 4.250% Senior Notes due 2027 and 5.200% Senior Notes due 2047	8-K	4.1	11/28/2017	001-35143 (Andeavor Logistics LP)		
4.32	Supplemental Indenture, dated as of September 13, 2018, to Indenture dated as of September 27, 2012 between Andeavor and U.S. Bank National Association, as trustee.	8-K	4.1	9/14/2018	001-03473 (Andeavor)		
4.33	Supplemental Indenture, dated as of September 13, 2018, to Indenture, dated as of March 18, 2014 between Andeavor and U.S. Bank National Association, as trustee.	8-K	4.2	9/14/2018	001-03473 (Andeavor)		
4.34	First Supplemental Indenture, dated as of September 13, 2018, to Indenture, dated as of December 22, 2016 between Andeavor and U.S. Bank National Association, as trustee.	8-K	4.3	9/14/2018	001-03473 (Andeavor)		
4.35	Second Supplemental Indenture, dated as of September 13, 2018, to Indenture, dated as of December 21, 2017 between Andeavor and U.S. Bank National Association, as trustee.	8-K	4.4	9/14/2018	001-03473 (Andeavor)		
4.36	Thirteenth Supplemental Indenture, dated as of November 15, 2018, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee (including form of note)	8-K	4.1	11/15/2018	001-35714		
4.37	Fourteenth Supplemental Indenture, dated as of November 15, 2018, between MPLX LP and The Bank of New York Mellon Trust Company, N.A., as Trustee (including form of note)	8-K	4.2	11/15/2018	001-35714		
4.38	Fifteenth Supplemental Indenture, dated as of September 9, 2019, between the Issuer and The Bank of New York Mellon Trust Company, N.A., as Trustee (including form of note)	8-K	4.5	9/9/2019	001-35714		
4.39	Sixteenth Supplemental Indenture, dated as of September 9, 2019, between the Issuer and The Bank of New York Mellon Trust Company, N.A., as Trustee (including form of note)	8-K	4.6	9/9/2019	001-35714		
4.40	Seventeenth Supplemental Indenture, dated as of September 23, 2019, between MPLX LP and the Bank of New York Mellon Trust Company, N.A.	8-K	4.1	9/27/2019	001-35714		
4.41	Eighteenth Supplemental Indenture, dated as of September 23, 2019, between MPLX LP and the Bank of New York Mellon Trust Company, N.A.	8-K	4.2	9/27/2019	001-35714		
4.42	Nineteenth Supplemental Indenture, dated as of September 23, 2019, between MPLX LP and the Bank of New York Mellon Trust Company, N.A.	8-K	4.3	9/27/2019	001-35714		

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
4.43	Twentieth Supplemental Indenture, dated as of September 23, 2019, between MPLX LP and the Bank of New York Mellon Trust Company, N.A.	8-K	4.4	9/27/2019	001-35714		
4.44	Twenty-First Supplemental Indenture, dated as of September 23, 2019, between MPLX LP and the Bank of New York Mellon Trust Company, N.A.	8-K	4.5	9/27/2019	001-35714		
4.45	Twenty-Second Supplemental Indenture, dated as of September 23, 2019, between MPLX LP and the Bank of New York Mellon Trust Company, N.A.	8-K	4.6	9/27/2019	001-35714		
4.46	Sixth Supplemental Indenture, dated as of September 6, 2019, to Indenture dated as of October 29, 2014, among Andeavor Logistics LP (f/k/a Tesoro Logistics LP), Tesoro Logistics Finance Corp. and U.S. Bank National Association, as Trustee	8-K	4.1	9/9/2019	001-35714		
4.47	Fourth Supplemental Indenture, dated as of September 6, 2019, to Indenture dated as of May 12, 2016, among Andeavor Logistics LP (f/k/a Tesoro Logistics LP), Tesoro Logistics Finance Corp. and U.S. Bank National Association, as Trustee	8-K	4.2	9/9/2019	001-35714		
4.48	Fourth Supplemental Indenture, dated as of September 6, 2019, to Indenture dated as of December 2, 2016, among Andeavor Logistics LP (f/k/a Tesoro Logistics LP), Tesoro Logistics Finance Corp. and U.S. Bank National Association, as Trustee	8-K	4.3	9/9/2019	001-35714		
4.49	Second Supplemental Indenture, dated as of September 6, 2019, to Indenture dated as of November 28, 2017, among Andeavor Logistics LP (f/k/a Tesoro Logistics LP), Tesoro Logistics Finance Corp. and U.S. Bank National Association, as Trustee	8-K	4.4	9/9/2019	001-35714		
4.50	Description of Securities						X
10	Material Contracts						
10.1	Receivables Purchase Agreement, dated as of December 18, 2013, by and among MPC Trade Receivables Company, LLC, Marathon Petroleum Company LP, The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrative agent and sole lead arranger, certain committed purchasers and conduit purchasers that are parties thereto from time to time and certain other parties thereto from time to time as managing agents and letter of credit issuers.	8-K	10.1	12/23/2013	001-35054		
10.2	Second Amended and Restated Receivables Sale Agreement, dated as of December 18, 2013, by and between Marathon Petroleum Company LP and MPC Trade Receivables Company LLC	8-K	10.2	12/23/2013	001-35054		
10.3	Contribution, Conveyance and Assumption Agreement, dated as of October 31, 2012, among MPLX LP, MPLX GP LLC, MPLX Operations LLC, MPC Investment LLC, MPLX Logistics Holdings LLC, Marathon Pipe Line LLC, MPL Investment LLC, MPLX Pipe Line Holdings LP and Ohio River Pipe Line LLC.	8-K	10.1	11/6/2012	001-35054		
10.4	Omnibus Agreement, dated as of October 31, 2012, among Marathon Petroleum Corporation, Marathon Petroleum Company LP, MPL Investment LLC, MPLX Operations LLC, MPLX Terminal and Storage LLC, MPLX Pipe Line Holdings LP, Marathon Pipe Line LLC, Ohio River Pipe Line LLC, MPLX LP and MPLX GP LLC.	8-K	10.2	11/6/2012	001-35054		

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
10.5 *	Marathon Petroleum Corporation Second Amended and Restated 2011 Incentive Compensation Plan	S-3	4.3	12/7/2011	333-175286		
10.6 *	Marathon Petroleum Corporation Policy for Recoupment of Annual Cash Bonus Amounts	10-K	10.10	2/29/2012	001-35054		
10.7 *	Marathon Petroleum Corporation Deferred Compensation Plan for Non-Employee Directors	10-K	10.13	2/28/2013	001-35054		
10.8 *	Marathon Petroleum Amended and Restated Excess Benefit Plan	10-K	10.14	2/24/2017	001-35054		
10.9 *	Marathon Petroleum Amended and Restated Deferred Compensation Plan	10-K	10.13	2/29/2012	001-35054		
10.10 *	Marathon Petroleum Corporation Executive Tax, Estate, and Financial Planning Program	10-K	10.14	2/29/2012	001-35054		
10.11 *	Speedway Excess Benefit Plan	10-K	10.15	2/29/2012	001-35054		
10.12 *	Speedway Deferred Compensation Plan	10-K	10.16	2/29/2012	001-35054		
10.13 *	Form of Marathon Petroleum Corporation Amended and Restated 2011 Incentive Compensation Plan Nonqualified Stock Option Award Agreement – Section 16 Officer	8-K	10.6	7/7/2011	001-35054		
10.14 *	Form of Marathon Petroleum Corporation 2011 Incentive Compensation Plan Supplemental Nonqualified Stock Option Award Agreement – Section 16 Officer	8-K	10.2	12/7/2011	001-35054		
10.15 *	Form of Marathon Petroleum Corporation 2011 Incentive Compensation Plan Supplemental Restricted Stock Unit Award Agreement – Non-Employee Director	10-K	10.22	2/29/2012	001-35054		
10.16 *	Marathon Petroleum Corporation Amended and Restated Executive Change in Control Severance Benefits Plan	10-K	10.21	2/28/2018	001-35054		
10.17 *	Form of Marathon Petroleum Corporation Restricted Stock Award Agreement – Officer	10-Q	10.4	5/9/2012	001-35054		
10.18 *	Form of Marathon Petroleum Corporation Nonqualified Stock Option Award Agreement – Officer	10-Q	10.5	5/9/2012	001-35054		
10.19 *	Amended and Restated Marathon Petroleum Corporation 2012 Incentive Compensation Plan	10-Q	10.1	5/1/2017	001-35054		
10.20 *	MPC Non-Employee Director Phantom Unit Award Policy	10-K	10.32	2/28/2013	001-35054		
10.21 *	Form of Marathon Petroleum Corporation Restricted Stock Award Agreement – Officer	10-Q	10.2	5/9/2013	001-35054		
10.22 *	Form of Marathon Petroleum Corporation Nonqualified Stock Option Award Agreement – Officer	10-Q	10.3	5/9/2013	001-35054		
10.23 *	MPLX LP – Form of MPC Officer Phantom Unit Award Agreement	10-Q	10.4	5/9/2013	001-35054		
10.24 *	MPLX LP – Form of MPC Officer Performance Unit Award Agreement – 2013-2015 Performance Cycle	10-Q	10.5	5/9/2013	001-35054		
10.25 *	First Amendment to the Marathon Petroleum Corporation Amended and Restated 2011 Incentive Compensation Plan	10-Q	10.1	8/3/2015	001-35054		
10.26 *	First Amendment to the Marathon Petroleum Corporation 2012 Incentive Compensation Plan	10-Q	10.2	8/3/2015	001-35054		
10.27 *	Form of Modification to Performance Unit Award Agreements for the 2016-2018 and 2017-2019 Performance Cycles	10-K	10.33	2/28/2018	001-35054		

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
10.28 *	Marathon Petroleum Thrift Plan	10-K	10.45	2/24/2017	001-35054		
10.29	First Amendment to Receivables Purchase Agreement, dated July 20, 2016, by and among MPC Trade Receivables Company LLC, Marathon Petroleum Company LP, The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrative agent and sole lead arranger, certain committed purchasers and conduit purchasers that are parties thereto from time to time and certain other parties thereto from time to time as managing agents and letter of credit issuers.	8-K	10.3	7/26/2016	001-35054		
10.30 *	Form of Marathon Petroleum Corporation Performance Unit Award Agreement	10-Q	10.1	5/2/2016	001-35054		
10.31 *	Form of Marathon Petroleum Corporation Restricted Stock Award Agreement - Officer	10-Q	10.2	5/2/2016	001-35054		
10.32 *	Form of Marathon Petroleum Corporation Nonqualified Stock Option Award Agreement - Officer	10-Q	10.3	5/2/2016	001-35054		
10.33 *	Form of MPLX LP Performance Unit Award Agreement - Marathon Petroleum Corporation Officer	10-Q	10.3	5/1/2017	001-35054		
10.34 *	Form of MPLX LP Phantom Unit Award Agreement - Marathon Petroleum Corporation Officer	10-Q	10.5	5/2/2016	001-35054		
10.35 *	Form of MPLX LP Performance Unit Award Agreement	10-Q	10.2	5/1/2017	001-35054		
10.36 *	MPLX LP Executive Change in Control Severance Benefits Plan	10-Q	10.4	10/30/2017	001-35054		
10.37	Partnership Interests Restructuring Agreement, dated as of December 15, 2017, among MPLX GP LLC and MPLX LP	8-K	10.1	12/19/2017	001-35054		
10.38	MPLX LP 2018 Incentive Compensation Plan	8-K	10.1	3/5/2018	001-35714		
10.39	Form of Marathon Petroleum Corporation Performance Unit Award Agreement	10-Q	10.3	4/30/2018	001-35054		
10.40	Form of Marathon Petroleum Corporation Restricted Stock Award Agreement - Officer	10-Q	10.4	4/30/2018	001-35054		
10.41	Form of MPLX LP Performance Unit Award Agreement - Marathon Petroleum Corporation Officer	10-Q	10.5	4/30/2018	001-35054		
10.42	Form of MPLX LP Phantom Unit Award Agreement - Marathon Petroleum Corporation Officer	10-Q	10.6	4/30/2018	001-35054		
10.43	Form of MPLX LP Performance Unit Award Agreement	10-Q	10.7	4/30/2018	001-35054		
10.44	Form of MPLX LP Phantom Unit Award Agreement - Officer	10-Q	10.8	4/30/2018	001-35054		
10.45	Form of MPLX LP Phantom Unit Award Agreement - Officer - Three Year Cliff Vesting	10-Q	10.9	4/30/2018	001-35054		
10.46	Voting and Support Agreement, dated as of April 29, 2018, by and among Marathon Petroleum Corporation, Andeavor, Mahi Inc. Mahi LLC, Paul L. Foster and Franklin Mountain Investments, LP.	8-K	10.1	4/30/2018	001-35054		

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
10.47	Five Year Revolving Credit Agreement, dated as of August 28, 2018, among MPC, as borrower, JPMorgan Chase Bank, N.A., as administrative agent, each of JPMorgan Chase Bank, N.A., Wells Fargo Securities, LLC, Barclays Bank PLC, Citibank, Merrill Lynch, Pierce, Fenner & Smith Incorporated, Mizuho Bank, Ltd., MUFG Bank, Ltd. and RBC Capital Markets, as joint lead arrangers and joint bookrunners, Wells Fargo Bank, National Association, as syndication agent, each of Bank of America, N.A., Barclays Bank PLC, Citibank N.A., Mizuho Bank, Ltd., MUFG Bank, Ltd., and Royal Bank of Canada, as documentation agents, and the other lenders and issuing banks that are parties thereto.	8-K	10.1	8/31/2018	001-35054		
10.48 *	Letter Agreement between Marathon Petroleum Corporation and Gregory J. Goff, dated as of April 29, 2018 and effective as of October 1, 2018.	8-K	10.1	10/1/2018	001-35054		
10.49 *	Tesoro Corporation 2006 Long-Term Incentive Plan (as amended and restated)	8-K	10.4	12/18/2008	001-03473 (Andeavor)		
10.50 *	Andeavor 2011 Long-Term Incentive Plan (as amended and restated)	10-K	10.68	2/21/2018	001-03473 (Andeavor)		
10.51 *	Andeavor 2018 Long-Term Incentive Plan	S-8	99.1	5/4/2018	333-224688 (Andeavor)		
10.52 *	Amended and Restated Northern Tier Energy LP 2012 Long Term Incentive Plan	S-8	99.1	6/1/2017	333-218424 (Andeavor)		
10.53 *	Nonqualified stock option inducement award letters, dated as of May 6, 2010, by and between Tesoro Corporation and Gregory J. Goff	S-8	99.2	5/11/2011	333-174132 (Andeavor)		
10.54 *	Marathon Petroleum Annual Cash Bonus Program	10-K	10.59	2/28/2019	001-35054		
10.55 *	Form of Executive Officer Synergy Incentive Award Agreement	8-K	10.1	1/30/2019	001-35054		
10.56 *	Form of Chief Executive Officer Synergy Incentive Award Agreement	8-K	10.2	1/30/2019	001-35054		
10.57 *	Tesoro Corporation 2016 Performance Share Award Grant Letter	8-K	10.4	2/3/2016	001-03473 (Andeavor)		
10.58 *	Tesoro Corporation 2017 Performance Share Grant Letter	8-K	10.1	2/21/2017	001-03473 (Andeavor)		
10.59 *	Tesoro Corporation 2016 Market Stock Unit Award Grant Letter	8-K	10.5	2/3/2016	001-03473 (Andeavor)		
10.60 *	Tesoro Corporation 2017 Market Stock Unit Grant Letter	8-K	10.3	2/21/2017	001-03473 (Andeavor)		
10.61 *	Tesoro Corporation Performance Share Awards Granted in 2016 Summary of Key Provisions	8-K	10.6	2/3/2016	001-03473 (Andeavor)		
10.62 *	Tesoro Corporation Performance Share Awards Granted in 2017 Summary of Key Provisions	8-K	10.2	2/21/2017	001-03473 (Andeavor)		
10.63 *	Tesoro Corporation Market Stock Unit Awards Granted in 2016 Summary of Key Provisions	8-K	10.7	2/3/2016	001-03473 (Andeavor)		
10.64 *	Tesoro Corporation Market Stock Unit Awards Granted in 2017 Summary of Key Provisions	8-K	10.4	2/21/2017	001-03473 (Andeavor)		

10.65 *

[Andeavor 2018 Performance Share Award Grant Letter](#)

8-K

10.1

2/20/2018

001-03473
(Andeavor)

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
10.66 *	Andeavor Performance Share Awards Granted in 2018 Summary of Key Provisions	8-K	10.2	2/20/2018	001-03473 (Andeavor)		
10.67 *	Andeavor 2018 Market Stock Unit Award Grant Letter	8-K	10.3	2/20/2018	001-03473 (Andeavor)		
10.68 *	Andeavor Market Stock Unit Awards Granted in 2018 Summary of Key Provisions	8-K	10.4	2/20/2018	001-03473 (Andeavor)		
10.69	Term Loan Agreement, dated as of January 2, 2018, by and among MPLX LP, as borrower, Mizuho Bank, Ltd., as administrative agent, each of Mizuho Bank, Ltd., Merrill Lynch, Pierce, Fenner & Smith Incorporated, The Bank of Tokyo-Mitsubishi UFJ, Ltd., Barclays Bank PLC, JPMorgan Chase Bank, N.A. and Wells Fargo Securities, LLC, as joint lead arrangers and joint bookrunners, each of Bank of America, N.A., The Bank of Tokyo-Mitsubishi UFJ, Ltd., Barclays Bank PLC, JPMorgan Chase Bank, N.A. and Wells Fargo Bank, National Association, as syndication agents, and the lenders that are parties thereto	8-K	10.1	1/4/2018	001-35054		
10.70	Marathon Petroleum Corporation Deferred Compensation Plan for Non-Employee Directors, as amended and restated January 1, 2019	10-K	10.75	2/28/2019	001-35054		
10.71 *	Conversion Notice for Andeavor Awards	10-K	10.76	2/28/2019	001-35054		
10.72	First Amendment to Fourth Amended and Restated Omnibus Agreement, dated as of January 30, 2019, among Andeavor LLC, Marathon Petroleum Company LP, Tesoro Refining & Marketing Company LLC, Tesoro Companies, Inc., Tesoro Alaska Company LLC, Andeavor Logistics LP and Tesoro Logistics GP, LLC	10-K	10.77	2/28/2019	001-35054		
10.73	Fourth Amended and Restated Omnibus Agreement, dated as of October 30, 2017, among Andeavor, Tesoro Refining & Marketing Company LLC, Tesoro Companies, Inc., Tesoro Alaska Company LLC, Tesoro Logistics LP and Tesoro Logistics GP, LLC	8-K	10.2	10/31/2017	001-35143 (ANDX)		
10.74	Third Amended and Restated Schedules to Fourth Amended and Restated Omnibus Agreement, effective August 6, 2018, by and among Andeavor, Tesoro Refining & Marketing Company LLC, Tesoro Companies, Inc., Tesoro Alaska Company LLC, Andeavor Logistics LP and Tesoro Logistics GP, LLC	10-Q	10.2	11/17/2018	001-35143 (ANDX)		
10.75	Third Amended and Restated Senior Secured Revolving Credit Agreement, dated as of January 29, 2016, among Tesoro Logistics LP, Bank of America, N.A., as administrative agent, and the other lenders party thereto	8-K	10.1	2/3/2016	001-35143 (ANDX)		
10.76	Senior Secured Revolving Credit Agreement, dated as of January 29, 2016, among Tesoro Logistics LP, Bank of America, N.A., as administrative agent, and the other lenders party thereto	8-K	10.2	2/3/2016	001-35143 (ANDX)		
10.77	Amendment No. 1 to Third Amended and Restated Credit Agreement, dated as of January 5, 2018, among Andeavor Logistics LP, certain subsidiaries of Andeavor Logistics LP party thereto, the lenders party thereto, and Bank of America, N.A.	8-K	10.1	1/5/2018	001-35143 (ANDX)		

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			Exhibit	Filing Date	SEC File No.		
10.78	Amendment No. 1 to Credit Agreement, dated as of January 5, 2018, among Andeavor Logistics LP, certain subsidiaries of Andeavor Logistics LP party thereto, the lenders party thereto, and Bank of America, N.A.	8-K	10.2	1/5/2018	001-35143 (ANDX)		
10.79	Amendment No. 2 to Third Amended and Restated Credit Agreement, dated as of December 20, 2018, among Andeavor Logistics LP, as borrower, certain of its subsidiaries party thereto, as guarantors, the lenders party thereto, and Bank of America, N.A., as administrative agent	8-K	10.1	12/27/2018	001-35143 (ANDX)		
10.80	Amendment No. 2 to the Credit Agreement, dated as of December 20, 2018, among Andeavor Logistics LP, as borrower, certain of its subsidiaries party thereto, as guarantors, the lenders party thereto, and Bank of America, N.A., as administrative agent	8-K	10.2	12/27/2018	001-35143 (ANDX)		
10.81	MPLX LP 2018 Incentive Compensation Plan MPC Non-Employee Director Phantom Unit Award Policy	10-K	10.86	2/28/2019	001-35054		
10.82 *	Amended and Restated Marathon Petroleum Corporation 2012 Incentive Compensation Plan	10-K	10.87	2/28/2019	001-35054		
10.83	Support Agreement, dated as of May 7, 2019, by and among MPLX LP, Andeavor Logistics LP, Tesoro Logistics GP, LLC, Western Refining Southwest, Inc. and Marathon Petroleum Corporation.	8-K	10.1	5/8/2019	001-35054		
10.84	First Amendment to the Amended and Restated Marathon Petroleum Corporation 2012 Incentive Compensation Plan						X
10.85	Cooperation Agreement, dated as of December 15, 2019, by and among Marathon Petroleum Corporation, MPLX LP, Elliott Associates, L.P., Elliott International, L.P. and Elliott International Capital Advisors Inc.	8-K	10.1	12/16/2019	001-35054		
10.86	Restricted Stock Award Agreement - Officer	10-Q	10.1	5/9/2019	001-35054		
10.87	Nonqualified Stock Option Award Agreement - Officer	10-Q	10.2	5/9/2019	001-35054		
10.88	Performance Unit Award Agreement 2019 - 2021 Performance Cycle	10-Q	10.3	5/9/2019	001-35054		
10.89	Second Amendment to Receivables Purchase Agreement, dated July 19, 2019, by and among MPC Trade Receivables Company LLC, as seller, Marathon Petroleum Company LP, as servicer, MUFG Bank, Ltd., as administrative agent, certain committed purchasers and conduit purchasers that are parties thereto from time to time and certain other parties thereto from time to time as managing agents and letter of credit issuers.	8-K	10.1	7/25/2019	001-35054		
10.90	364-Day Revolving Credit Agreement, dated as of July 26, 2019, among MPC, as borrower, JPMorgan Chase Bank, N.A., as administrative agent, each of JPMorgan Chase Bank, N.A., Wells Fargo Securities, LLC, Barclays Bank PLC, Citibank, N.A., BofA Securities, Mizuho Bank, Ltd., MUFG Bank, Ltd. and Royal Bank of Canada, as joint lead arrangers and joint bookrunners, Wells Fargo Bank, National Association, as syndication agent, each of Bank of America, N.A., Barclays Bank PLC, Citibank, N.A., Mizuho Bank, Ltd., MUFG Bank, Ltd., and Royal Bank of Canada, as documentation agents, and the other lenders and issuing banks that are parties thereto.	8-K	10.1	8/1/2019	001-35054		

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
10.91	Amended and Restated Credit Agreement, dated as of July 26, 2019, by and among MPLX, as borrower, Wells Fargo Bank, National Association, as administrative agent, each of Wells Fargo Securities, LLC, JPMorgan Chase Bank, N.A., Barclays Bank PLC, BofA Securities, Inc., Citigroup Global Markets Inc., Mizuho Bank, Ltd., MUFG Bank, Ltd. and Royal Bank of Canada, as joint lead arrangers and joint bookrunners, JPMorgan Chase Bank, N.A., as syndication agent, each of Bank of America, N.A., Barclays Bank PLC, Citigroup Global Markets Inc., Mizuho Bank, Ltd., MUFG Bank, Ltd. and Royal Bank of Canada, as documentation agents, and the other lenders and issuing banks that are parties thereto.	8-K	10.2	8/1/2019	001-35054		
10.92	Waiver and Second Amendment to Fourth Amended and Restated Omnibus Agreement, dated as of July 29, 2019, by and among MPC, Andeavor Logistics LP, Tesoro Logistics GP, LLC, Tesoro Refining & Marketing Company LLC, Tesoro Companies, Inc., Tesoro Alaska Company LLC and Marathon Petroleum Company LP.	8-K	10.3	8/1/2019	001-35054		
10.93	Term Loan Agreement, dated as of September 26, 2019, by and among MPLX LP, as borrower, Wells Fargo Bank, National Association, as administrative agent, each of Wells Fargo Securities, LLC, BofA Securities, Inc. and Mizuho Bank, Ltd., as joint lead arrangers and joint bookrunners, and the syndication agents, documentation agents and lenders that are parties thereto	8-K	10.1	9/27/2019	001-35714		
14.1	Code of Ethics for Senior Financial Officers	10-K	14.1	2/24/2017	001-35054		
21.1	List of Subsidiaries					X	
23.1	Consent of Independent Registered Public Accounting Firm					X	
24.1	Power of Attorney of Directors and Officers of Marathon Petroleum Corporation					X	
31.1	Certification of Chief Executive Officer pursuant to Rule 13(a)-14 and 15(d)-14 under the Securities Exchange Act of 1934.					X	
31.2	Certification of Chief Financial Officer pursuant to Rule 13(a)-14 and 15(d)-14 under the Securities Exchange Act of 1934.					X	
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350.						X
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350.						X
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded with the Inline XBRL document.					X	
101.SCH	Inline XBRL Taxonomy Extension Schema Document.					X	
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.					X	
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.					X	
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.					X	

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Exhibit Number	Exhibit Description	Form	Incorporated by Reference			Filed Herewith	Furnished Herewith
			Exhibit	Filing Date	SEC File No.		
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.					X	
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).						

† The exhibits and schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K and will be provided to the Securities and Exchange Commission upon request.

* Indicates management contract or compensatory plan, contract or arrangement in which one or more directors or executive officers of the Registrant may be participants.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

February 28, 2020

MARATHON PETROLEUM CORPORATION

By: /s/ John J. Quaid

John J. Quaid
Vice President and Controller

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Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on February 28, 2020 on behalf of the registrant and in the capacities indicated.

<u>Signature</u>	<u>Title</u>
_____ /s/ Gary R. Heminger Gary R. Heminger	Chairman of the Board and Chief Executive Officer (principal executive officer)
_____ /s/ Donald C. Templin Donald C. Templin	Executive Vice President and Chief Financial Officer (principal financial officer)
_____ /s/ John J. Quaid John J. Quaid	Vice President and Controller (principal accounting officer)
_____ * Abdulaziz F. Alkhayyal	Director
_____ * Evan Bayh	Director
_____ * Charles E. Bunch	Director
_____ * Jonathan Z. Cohen	Director
_____ * Steven A. Davis	Director
_____ * Edward G. Galante	Director
_____ * James E. Rohr	Director
_____ * Kim K.W. Rucker	Director
_____ * J. Michael Stice	Director
_____ * John P. Surma	Director
_____ * Susan Tomasky	Director

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* The undersigned, by signing his name hereto, does sign and execute this report pursuant to the Power of Attorney executed by the above-named directors and officers of the registrant, which is being filed herewith on behalf of such directors and officers.

By: /s/ Gary R. Heminger

February 28, 2020

Gary R. Heminger
Attorney-in-Fact

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Section 2: EX-4.50 (EXHIBIT 4.50)

Exhibit 4.50

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

As of February 28, 2020, Marathon Petroleum Corporation, a Delaware corporation ("MPC"), had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: common stock, par value \$0.01 per share ("common stock"). References to the "Company," "we," "our" and "us" refer to MPC, unless the context otherwise requires. References to "stockholders" refer to holders of our common stock, unless the context otherwise requires.

DESCRIPTION OF COMMON STOCK

In the text that follows, we have summarized the material provisions of our certificate of incorporation (the "certificate of incorporation") and our bylaws (the "bylaws") relating to our capital stock. This discussion is qualified in its entirety by our certificate of incorporation, bylaws and applicable Delaware law. You should read the provisions of the certificate of incorporation and bylaws as currently in effect for more details regarding the provisions described below and for other provisions that may be important to you.

Authorized Capital Stock

The Company is authorized to issue 2,030,000,000 shares of capital stock, of which 2,000,000,000 shares are classified as common stock, par value \$.01 per share ("common stock"), and 30,000,000 shares are classified as preferred stock, par value \$.01 per share ("preferred stock"). All of the outstanding shares of the Company's common stock are fully paid and nonassessable.

Voting Rights

Each share of our common stock entitles its holder to one vote in the election of each director and on all other matters voted on generally by our stockholders. No share of our common stock affords any cumulative voting rights.

Under our bylaws, unless otherwise provided by law, our certificate of incorporation or our bylaws, the authorization of any action or the transaction of any business at any meeting of our stockholders at which a quorum is present (other than the election of directors) shall be decided by the affirmative vote of the majority of shares present in person or represented by proxy and entitled to vote on the matter. As described below, the affirmative vote of the holders of at least 80% of the voting power of all of the then outstanding shares of capital stock present in person or represented by proxy and generally entitled to vote in the election of directors, voting together as a single class ("voting stock"), is required to take certain actions, including amending certain provisions of the certificate of incorporation. Please read the section entitled "*—Anti-Takeover Effects of Provisions of our Certificate of Incorporation and Bylaws.*"

Under our bylaws, in connection with an election of directors, each nominee for election in an uncontested election is elected by the vote of the majority of votes cast with respect to such director at any meeting of our stockholders at which a quorum is present, meaning that the number of shares voted for such director must exceed the number of shares voted against such director; provided, however, that, if the number of nominees exceeds the number of directors to be elected as of a date that is ten (10) days in advance of the date we mail the notice for such meeting to stockholders entitled to vote at such meeting, the directors shall be elected by the affirmative vote of a plurality of the shares of voting stock present in person or represented by proxy at any such meeting and entitled to vote on the election of directors.

Dividends

The holders of shares of common stock are entitled to receive such dividends, if any, as may be declared from time to time by the board of directors in its discretion from funds legally available therefor. The declaration and amount of future dividends is at the discretion of our board of directors and will depend on our financial condition, results of operations, cash flows, prospects, industry conditions, capital requirements and other factors and restrictions our board of directors deems relevant. In addition, the terms of the loan agreements, indentures and other agreements we may enter into from time to time may contain covenants or other provisions that could limit our ability to pay, or otherwise restrict the payment of, cash dividends.

Right to Receive Liquidation Distributions

Upon liquidation, dissolution or winding-up of the Company's business, the holders of our common stock will share ratably in all assets available for distribution to stockholders after our creditors are paid in full and the holders of all series of our outstanding preferred stock, if any, receive their liquidation preferences in full.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights and is not subject to conversion or sinking fund provisions. Under certain circumstances, as described more fully below in the section entitled "*—Restrictions on Stock Ownership by Non-U.S. Citizens,*" the Company shall have the power, but not the obligation, to redeem shares of common stock held by certain stockholders in excess of ownership thresholds set forth in the certificate of incorporation.

The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Anti-Takeover Effects of Provisions of our Certificate of Incorporation and Bylaws

Certain provisions of our certificate of incorporation and bylaws discussed below may have the effect, either alone or in combination with the provisions of our certificate of incorporation discussed above and Section 203 of the General Corporation Law of the State of Delaware (the "DGCL"), of making more difficult or discouraging a tender offer, proxy contest, merger or other takeover attempt that our board of directors opposes but that a stockholder might consider to be in its best interest.

Our certificate of incorporation provides that our stockholders may act only at an annual or special meeting of stockholders and may not act by written consent. Our bylaws provide that a special meeting of our stockholders may only be called by (i) the chairman of our board of directors, (ii) the chief executive officer, (iii) the majority of our board of directors or (iv) the board of directors upon the written request of stockholders owning at least 25%, in the aggregate, of the voting power of the voting stock, subject to the requirements of Section 1.2(b) of our bylaws.

Our certificate of incorporation provides for a classified board of directors. Except for directors that our preferred stockholders may elect, our board of directors is divided into three classes, with the directors of each class as nearly equal in number as possible. At each annual meeting of our stockholders, the term of a different class of our directors will expire. As a result, we contemplate that our stockholders will elect approximately one-third of our board of directors each year.

Our certificate of incorporation provides that the number of directors will be fixed exclusively by, and may be increased or decreased exclusively by, our board of directors from time to time, but will not be less than three nor more than twelve. Our certificate of incorporation provides that directors may be removed only by the Delaware Chancery Court under Section 225(c) of the DGCL or for cause (as such term is defined in our certificate of incorporation) as determined by a vote of at least 80% of the voting power of our outstanding voting stock. A vacancy on our board of directors may be filled by a vote of a majority of the directors in office, and a director appointed to fill a vacancy serves for the remainder of the term of the class of directors in which the vacancy occurred.

Our bylaws contain advance-notice and other procedural requirements that provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner, and also specify requirements as to the form and content of a stockholder's notice. Our certificate of incorporation and bylaws also confer on our board of directors the power to adopt, amend or repeal our bylaws with the affirmative vote of a majority of the directors then in office.

Our bylaws provide that a stockholder, or group of up to 20 stockholders, that has owned continuously for at least three years shares of common stock representing an aggregate of at least 3% of the Company's outstanding shares of common stock, may nominate and include in the Company's proxy materials director nominees constituting up to 20% of the Company's board of directors, provided that the stockholder(s) and nominee(s) satisfy the requirements in the bylaws.

Our certificate of incorporation provides that a vote of at least 80% of the voting power of our outstanding voting stock at any regular or special meeting of the stockholders is required to adopt, amend or repeal certain provisions of our certificate of incorporation.

Our certificate of incorporation provides that the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for: (i) any derivative action or proceeding brought on behalf of MPC; (ii) any action asserting a claim of breach of a fiduciary duty owed by any director or officer of MPC to MPC or the stockholders; (iii) any action asserting a claim arising pursuant to any provision of the DGCL, our certificate of incorporation, any preferred stock designation or our bylaws; or (iv) any other action asserting a claim against MPC or any director or officer of MPC that is governed by or subject to the internal affairs doctrine for choice of law purposes. Any person or entity purchasing or otherwise acquiring any interest in shares of our stock will be deemed to have notice of and consented to the provisions of our certificate of incorporation and bylaws, including the exclusive forum provisions in our certificate of incorporation.

Our certificate of incorporation authorizes our board of directors, without the approval of our stockholders, to provide for the issuance of all or any shares of our preferred stock in one or more series and to determine the designation, powers, preferences and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions applicable to any of those rights, including dividend rights, voting rights, conversion or exchange rights, terms of redemption and liquidation preferences, of each series.

Statutory Business Combination Provision

We are a Delaware corporation and are subject to Section 203 of the DGCL. In general, Section 203 prevents an “interested stockholder,” which is defined generally as a person owning 15% or more of a Delaware corporation’s outstanding voting stock or any affiliate or associate of that person, from engaging in a broad range of “business combinations” with the corporation for three years following the date that person became an interested stockholder unless:

- before that person became an interested stockholder, the board of directors of the corporation approved the transaction in which that person became an interested stockholder or approved the business combination;
- on completion of the transaction that resulted in that person’s becoming an interested stockholder, that person owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, other than stock held by (1) directors who are also officers of the corporation or (2) any employee stock plan that does not provide employees with the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- following the transaction in which that person became an interested stockholder, both the board of directors of the corporation and the holders of at least two-thirds of the outstanding voting stock of the corporation not owned by that person approve the business combination.

Under Section 203, the restrictions described above also do not apply to specific business combinations proposed by an interested stockholder following the announcement or notification of designated extraordinary transactions involving the corporation and a person who had not been an interested stockholder during the previous three years or who became an interested stockholder with the approval of a majority of the corporation’s directors, if a majority of the directors who were directors prior to any person’s becoming an interested stockholder during the previous three years, or were recommended for election or elected to succeed those directors by a majority of those directors, approve or do not oppose that extraordinary transaction.

Restrictions on Stock Ownership by Non-U.S. Citizens

We are subject to a variety of U.S. federal statutes and regulations, including the Shipping Act of 1916, as amended, and the Merchant Marine Act of 1920, as amended, that govern the ownership and operation of vessels used to carry cargo between U.S. ports (the “Maritime Laws”).

To ensure that ownership by non-U.S. citizens of our stock will not exceed the 25% maximum permitted by the Maritime Laws, our certificate of incorporation limits the aggregate percentage ownership by non-U.S. citizens of our stock to 23% of the outstanding shares. We may prohibit transfers that would cause ownership of our stock by non-U.S. citizens to exceed

23%. Our certificate of incorporation authorizes us to effect any and all measures necessary or desirable to monitor and limit foreign ownership of our stock.

If, despite such measures, the number of shares of our stock that are owned by non-U.S. citizens exceeds 23%, we may suspend the voting, dividend and other distribution rights of the shares owned by non-U.S. citizens in excess of 23%. The determination of which shares will be deemed in excess of the 23% limitation will be made by reference to the dates the shares were acquired by non-U.S. citizens. Our determination of which shares are deemed to be in excess will be conclusive. We will have the power but are under no obligation to redeem any such excess shares at a redemption price per share equal to the fair market value of the shares on the date it calls for redemption plus any dividend or other distribution declared with respect to such shares prior to the date we call for redemption and remaining unpaid.

Listing

The Company's common stock is listed on The New York Stock Exchange under the trading symbol "MPC."

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Section 3: EX-10.84 (EXHIBIT 10.84)

Exhibit 10.84

FIRST AMENDMENT TO THE AMENDED AND RESTATED MARATHON PETROLEUM CORPORATION 2012 INCENTIVE COMPENSATION PLAN

WHEREAS, Marathon Petroleum Corporation, a Delaware corporation (the "Corporation"), sponsors and maintains the Amended and Restated Marathon Petroleum Corporation 2012 Incentive Compensation Plan, as originally effective April 25, 2012 (the "Plan");

WHEREAS, pursuant to Paragraph 12 of the Plan, the Committee has the authority to amend the Plan as it shall deem advisable, provided that no amendment of the Plan shall adversely affect any right of any Participant with respect to any award previously granted without such Participant's written consent; and

WHEREAS, by action taken on October 29, 2019 (the "Approval"), the Committee approved and authorized the amendment of certain awards made under the Plan in 2017, 2018 and 2019 to certain officers of the Corporation and its affiliates, such that, for the purpose of retention and stability of the officers, each such officer will vest in his or her awards if the officer remains employed with the Corporation or an affiliate through December 31, 2020, and will likewise vest in his or her awards if the officer's employment is involuntarily terminated prior to that date (the "Approved Modification");

WHEREAS, pursuant to the Approval, the Committee delegated to any officer of the Corporation the authority to act for and on behalf of the Corporation and its Board of Directors to do and perform all such acts and things and to enter into, amend, execute and deliver all agreements, guarantees, documents, instruments and certificates that, in the judgement of the officer taking such action, are necessary or appropriate to effectuate and carry out the purpose and intent of the Approved Modification; and

WHEREAS, the undersigned officer of the Corporation has determined it to be necessary and appropriate to amend the Plan to accommodate certain aspects of the Approved Modification, and that such amendment is not a material amendment to the Plan requiring the approval of the Corporation's shareholders.

ACCORDINGLY, effective as of October 29, 2019, the Plan is amended as follows:

1. The second sentence of paragraph 7(a)(iii) of the Plan is amended to read as follows:

"Any Restricted Stock awarded which is not a Performance Award shall have a minimum Restriction Period of three years from the Grant Date, provided that: (i) the Committee (or its designee) may provide for earlier vesting following a change of control or other specified events involving the Corporation or upon an Employee's termination of employment by reason of

death, Disability or Retirement; (ii) vesting of a Restricted Stock Award may occur incrementally over the three-year minimum

* Andeavor Logistics Rio Pipeline LLC	Delaware
* Andeavor Midstream Partners GP LLC	Delaware
* Andeavor Midstream Partners LP	Delaware
* Andeavor Midstream Partners Operating LLC	Delaware
* Andeavor MPL Holdings LLC	Delaware
Andeavor Rio Holdings LLC	Delaware
Andeavor Servicios de Mexico, S. de R.L. de C.V.	Mexico
Ascarate Group LLC	Delaware
* Ascension Pipeline Company, LLC	Delaware
* Asphalt Terminals LLC	Delaware
* Bakken Pipeline Investments LLC	Delaware
BEH Holding LLC	Delaware
Blanchard Holdings Company LLC	Delaware
Blanchard Pipe Line Company LLC	Delaware
Blanchard Refining Company LLC	Delaware
* Blanchard Terminal Company LLC	Delaware
Bonded Oil Company	Delaware
Buckeye Assurance Corporation	Vermont
Buffalo Terminal LLC	Delaware
* Canton Refining Logistics LLC	Delaware
* Capline Pipeline Company LLC	Delaware
Carson Cogeneration LLC	Delaware
* Catlettsburg Refining Logistics LLC	Delaware
Catlettsburg Refining, LLC	Delaware
* Centennial Pipeline LLC	Delaware
* Centrahoma Processing LLC	Delaware
Cincinnati BioRefining Corp.	Delaware
Cincinnati Renewable Fuels LLC	Delaware
Ciniza Production Company	New Mexico
* CISPRI Services LLC	Delaware
* Combustibles Playa Rosarito, S.A. de C.V.	Mexico
* Crowley Blue Water Partners LLC	Delaware
* Crowley Coastal Partners, LLC	Delaware
* Crowley Ocean Partners LLC	Delaware
* Crowley Tanker Charters III, LLC	Delaware
* Crowley Tankers II, LLC	Delaware
* Crowley Tankers IV, LLC	Delaware

* Crowley Tankers V, LLC	Delaware
* Dakota Access Holdings LLC	Delaware
* Dakota Access Truck Terminals, LLC	Delaware
* Dakota Access, LLC	Delaware
Dakota Prairie Refining, LLC	Delaware
* Delaware Basin Residue, LLC	Delaware
* Detroit Refining Logistics LLC	Delaware
Dial Oil Co., LLC	New Mexico
* Eastern Gulf Crude Access, LLC	Delaware
Empire Oil Co.	California
* Enchi Corporation	Delaware
* Energy Transfer Crude Oil Company, LLC	Delaware
* ETCO Holdings LLC	Delaware
* Explorer Pipeline Company	Delaware
* Galveston Bay Refining Logistics LLC	Delaware
* Garyville Refining Logistics LLC	Delaware
Giant Four Corners, LLC	Delaware
Giant Industries, Inc.	Delaware
Giant Stop-N-Go of New Mexico, LLC	New Mexico
Gold Star Maritime Company	Delaware
* Gravcap, Inc.	Delaware
Gray Oak Gateway Holdings LLC	Delaware
* Gray Oak Pipeline, LLC	Delaware
* Green River Processing, LLC	Delaware
* Guilford County Terminal Company, LLC	North Carolina
Hardin Street Holdings LLC	Delaware
* Hardin Street Marine LLC	Delaware
* Hardin Street Transportation LLC	Delaware
* Illinois Extension Pipeline Company, L.L.C.	Delaware
Interior Fuels Company	Alaska
* Jefferson Gas Gathering Company, L.L.C.	Delaware
Kenai LNG LLC	Delaware
Kenai Pipe Line Company	Delaware
* Las Animas Minerals, LTD.	Colorado
* Lincoln Pipeline LLC	Delaware
* LOCAP LLC	Delaware
* LOOP LLC	Delaware
Marathon Canada Marketing, Ltd.	Delaware
Marathon Carbon Management LLC	Delaware
Marathon Petroleum Company Canada, Ltd.	Alberta
Marathon Petroleum Company LP	Delaware
* Marathon Petroleum Foundation, Inc.	Texas
Marathon Petroleum Logistics Services LLC	Delaware
Marathon Petroleum Service Company	Delaware
Marathon Petroleum Supply LLC	Delaware
Marathon Petroleum Trading Canada LLC	Delaware
Marathon Pipe Line Company	Nevada
* Marathon Pipe Line LLC	Delaware
Marathon PrePaid Card LLC	Ohio
Marathon Refining Logistics Services LLC	Delaware
Marathon Renewable Fuels Corp.	Delaware
Marathon Renewable Supply LLC	Delaware
* MarEn Bakken Company LLC	Delaware

* MarkWest Agua Blanca Pipeline, L.L.C.	Delaware
* MarkWest Blackhawk, L.L.C.	Texas
* MarkWest Bluestone Ethane Pipeline, L.L.C.	Delaware
* MarkWest Delaware Basin Gas Company, L.L.C.	Delaware
* MarkWest EMG Jefferson Dry Gas Gathering Company, L.L.C.	Delaware
* MarkWest Energy East Texas Gas Company, L.L.C.	Delaware
* MarkWest Energy Finance Corporation	Delaware
* MarkWest Energy Operating Company, L.L.C.	Delaware
* MarkWest Energy Partners, L.P.	Delaware
* MarkWest Energy South Texas Gas Company, L.L.C.	Delaware
* MarkWest Energy West Texas Gas Company, L.L.C.	Delaware
* MarkWest Gas Services, L.L.C.	Texas
* MarkWest Hydrocarbon, L.L.C.	Delaware
* MarkWest Javelina Company, L.L.C.	Texas
* MarkWest Javelina Pipeline Company, L.L.C.	Texas
* MarkWest Liberty Bluestone, L.L.C.	Delaware
* MarkWest Liberty Ethane Pipeline, L.L.C.	Delaware
* MarkWest Liberty Gas Gathering, L.L.C.	Delaware
* MarkWest Liberty Midstream & Resources, L.L.C.	Delaware
* MarkWest Liberty NGL Pipeline, L.L.C.	Delaware
* MarkWest Mariner Pipeline, L.L.C.	Delaware
* MarkWest New Mexico, L.L.C.	Texas
* MarkWest Ohio Fractionation Company, L.L.C.	Delaware
* MarkWest Oklahoma Gas Company, L.L.C.	Oklahoma
* MarkWest Panola Pipeline, L.L.C.	Texas
* MarkWest Pinnacle, L.L.C.	Texas
* MarkWest Pioneer, L.L.C.	Delaware
* MarkWest Pipeline Company, L.L.C.	Texas
* MarkWest PNG Utility, L.L.C.	Texas
* MarkWest POET, L.L.C.	Delaware
* MarkWest Power Tex, L.L.C.	Texas
* MarkWest Ranger Pipeline Company, L.L.C.	Delaware
* MarkWest Texas PNG Utility, L.L.C.	Texas
* MarkWest Tornado GP, L.L.C.	Delaware
* MarkWest Utica EMG, L.L.C.	Delaware
* MarkWest Utica Operating Company, L.L.C.	Delaware
* Midwest Connector Capital Company LLC	Delaware
* Minnesota Pipe Line Company, LLC	Delaware
MPC Alaska Terminal Company LLC	Delaware
MPC Finance Co.	Delaware
MPC Investment Fund, Inc.	Delaware
MPC Investment LLC	Delaware
MPC Trade Receivables Company LLC	Delaware
MPL Investment LLC	Delaware
* MPL Investments, Inc.	Delaware
* MPL Louisiana Holdings LLC	Delaware
* MPLX Alaska LLC	Delaware
* MPLX Alaska Logistics LLC	Delaware
* MPLX DAPLETCO Holdings LLC	Delaware
* MPLX Delaware Basin NGL LLC	Delaware
* MPLX Fuels Distribution LLC	Delaware
MPLX GP LLC	Delaware
MPLX Logistics Holdings LLC	Delaware

* MPLX LP	Delaware
* MPLX Operations LLC	Delaware
* MPLX Ozark Pipe Line LLC	Delaware
* MPLX Pipe Line Holdings LLC	Delaware
* MPLX Refining Logistics LLC	Delaware
* MPLX Terminal and Storage LLC	Delaware
* MPLX Terminals LLC	Delaware
* MPLX W2W Pipeline Holdings LLC	Delaware
* MPLXIF LLC	Delaware
* Mt. Airy Terminal LLC	Delaware
* Mule Sidetracks, L.L.C.	Delaware
* Mule Tracts, L.L.C.	Delaware
* Muskegon Pipeline LLC	Delaware
MW Logistics Services LLC	Delaware
* MWE GP LLC	Delaware
* Navajo Convenient Stores Co., LLC	New Mexico
Niles Properties LLC	Delaware
Northern Tier Bakery LLC	Delaware
Northern Tier Energy GP LLC	Delaware
Northern Tier Energy LLC	Delaware
Northern Tier Energy LP	Delaware
Northern Tier Finance Corporation	Delaware
Northern Tier Oil Transport LLC	Delaware
Northern Tier Retail Holdings LLC	Delaware
Northern Tier Retail LLC	Delaware
Ocean Tankers LLC	Delaware
* Ohio Condensate Company, L.L.C.	Delaware
* Ohio Gathering Company, L.L.C.	Delaware
* Ohio River Pipe Line LLC	Delaware
* Oil Insurance Limited	Bermuda
* Panola Pipeline Company, LLC	Texas
* PFJ Southeast LLC	Delaware
* PNAC, LLC	Nevada
* Port Everglades Environmental Corp.	Florida
* Prairie Minerals, LTD.	Colorado
Redland Vision, LLC	Delaware
* Rendezvous Gas Services, L.L.C.	Wyoming
* Rendezvous Pipeline Company, LLC	Colorado
* Resource Environmental, L.L.C.	Delaware
* Ridgewood Association	Texas
Rio Hub LLC	Delaware
* Robinson Refining Logistics LLC	Delaware
RW Land Company	Delaware
* Sakakawea Area Spill Response LLC	Delaware
San Juan Refining Company, LLC	New Mexico
* Sherwood Midstream Holdings LLC	Delaware
* Sherwood Midstream LLC	Delaware
South Houston Green Power, LLC	Delaware
* South Texas Gateway Terminal LLC	Delaware
Speedway LLC	Delaware
Speedway of Massachusetts LLC	Massachusetts
Speedway Petroleum Corporation	Delaware
Speedway Prepaid Card LLC	Ohio

Speedway.com LLC	Delaware
Speedy Prepaid Services Inc.	New Hampshire
St. Paul Park Refining Co. LLC	Delaware
Starvin Marvin, Inc.	Delaware
SuperAmerica Franchising LLC	Delaware
SWTO LLC	Delaware
Tahoe Merger Sub 2, LLC	Delaware
Tesoro Alaska Company LLC	Delaware
* Tesoro Alaska Pipeline Company LLC	Delaware
* Tesoro Alaska Terminals LLC	Delaware
Tesoro Aviation Company	Delaware
Tesoro Canada Supply & Distribution Ltd.	British Columbia
Tesoro Companies, Inc.	Delaware
Tesoro Environmental Resources Company	Delaware
Tesoro Far East Maritime Company	Delaware
* Tesoro Great Plains Gathering & Marketing LLC	Delaware
Tesoro Great Plains Holdings Company LLC	Delaware
* Tesoro Great Plains Midstream LLC	Delaware
* Tesoro High Plains Pipeline Company LLC	Delaware
Tesoro Insurance Holding Company	Delaware
* Tesoro Logistics Finance Corp.	Delaware
Tesoro Logistics GP, LLC	Delaware
* Tesoro Logistics Northwest Pipeline LLC	Delaware
* Tesoro Logistics Operations LLC	Delaware
* Tesoro Logistics Pipelines LLC	Delaware
Tesoro Maritime Company	Delaware
Tesoro Mexico Supply & Marketing, S. de R.L. de C.V.	Mexico
Tesoro Northstore Company	Alaska
Tesoro Panama Company, S.A.	Panama/Delaware
Tesoro Petroleum (Singapore) Pte. Ltd.	Singapore
Tesoro Refining & Marketing Company LLC	Delaware
Tesoro Renewables Company LLC	Delaware
Tesoro Sierra Properties, LLC	Delaware
Tesoro SoCal Cogen Company LLC	Delaware
* Tesoro SoCal Pipeline Company LLC	Delaware
Tesoro South Coast Company, LLC	Delaware
Tesoro Trading Company	Delaware
Tesoro Wasatch, LLC	Delaware
Tesoro West Coast Company, LLC	Delaware
* The Andersons Marathon Holdings LLC	Delaware
* Three Rivers Gathering, LLC	Delaware
Trans-Foreland Pipeline Company LLC	Delaware
Treasure Card Company LLC	Arizona
Treasure Franchise Company LLC	Delaware
Uinta Express Pipeline Company LLC	Delaware
* Uintah Basin Field Services, L.L.C.	Delaware
Virent Renewables Holding Company LLC	Delaware
Virent Renewables LLC	Delaware
Virent, Inc.	Delaware
* W2W Finance LLC	Delaware
* W2W Holdings LLC	Delaware
* Watson Cogeneration Company	California
* West Relay Gathering Company, L.L.C.	Delaware

Western Refining Company, L.P.	Delaware
Western Refining Conan Gathering Holdings, LLC	Delaware
* Western Refining Conan Gathering, LLC	Delaware
Western Refining de Mexico, S. de R.L. de C.V.	Mexico
* Western Refining Delaware Basin Storage, LLC	Delaware
Western Refining GP, LLC	Delaware
* Western Refining Logistics GP, LLC	Delaware
* Western Refining Logistics, LP	Delaware
Western Refining LP, LLC	Delaware
* Western Refining Pipeline, LLC	New Mexico
* Western Refining Product Transport, LLC	Delaware
Western Refining Retail, LLC	Delaware
Western Refining Southwest, Inc.	Arizona
* Western Refining Terminals, LLC	Delaware
Western Refining Texas Retail Services, LLC	Texas
Western Refining TRS I, LLC	Texas
Western Refining TRS II, LLC	Texas
* Western Refining Wholesale, LLC	Delaware
Western Refining Yorktown Holding Company	Delaware
Western Refining Yorktown, Inc.	Delaware
Western Refining, Inc.	Delaware
* Whistler Pipeline LLC	Delaware
Williston Basin Pipe Line LLC	Delaware
* Wink to Webster Pipeline LLC	Delaware
* WIP, LLC	Indiana
WNR Mexico 1, LLC	Delaware
WNR Mexico 2, LLC	Delaware
* WNRL Energy GP, LLC	Delaware
* WNRL Energy, LLC	Delaware
* WNRL Finance Corp.	Delaware
* Wolverine Pipe Line Company	Delaware
* Woodhaven Cavern LLC	Delaware
York River Fuels, LLC	Delaware

* Indicates a company that is not wholly owned directly or indirectly by Marathon Petroleum Corporation.

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Section 5: EX-23.1 (EXHIBIT 23.1)

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-227623, 333-217560 and 333-217543) and Form S-8 (No. 333-227621, 333-212956, 333-181007, 333-175245, 333-175244) of Marathon Petroleum Corporation of our report dated February 28, 2020 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/PricewaterhouseCoopers LLP

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Section 6: EX-24.1 (EXHIBIT 24.1)

Exhibit 24.1

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each of the undersigned officers and directors of Marathon Petroleum Corporation, a Delaware corporation, hereby constitutes and appoints Gary R. Heminger, Donald C. Templin and John J. Quaid, and each of them, as his or her true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for each of the undersigned and in the name, place, and stead of each of the undersigned, to sign on behalf of each of the undersigned an Annual Report on Form 10-K for the fiscal year ended December 31, 2019 pursuant to Section 13 of the Securities Exchange Act of 1934 and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith including, without limitation, a Form 12b-25 with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes may lawfully do or cause to be done by virtue thereof.

This power of attorney may be executed in multiple counterparts, each of which shall be deemed an original with respect to the person executing it.

IN WITNESS WHEREOF, the undersigned have hereunto set their hands as of the 28th day of February 2020.

/s/ Gary R. Heminger

Gary R. Heminger
Chairman of the Board and Chief Executive Officer
(principal executive officer)

/s/ James E. Rohr

James E. Rohr
Director

/s/ Donald C. Templin

Donald C. Templin
Executive Vice President and Chief Financial Officer
(principal financial officer)

/s/ John J. Quaid

John J. Quaid
Vice President and Controller
(principal accounting officer)

/s/ Abdulaziz F. Alkhayyal

Abdulaziz F. Alkhayyal
Director

/s/ Evan Bayh

Evan Bayh
Director

/s/ Charles E. Bunch

Charles E. Bunch
Director

/s/ Jonathan Z. Cohen

Jonathan Z. Cohen
Director

/s/ Steven A. Davis

Steven A. Davis
Director

/s/ Edward G. Galante

Edward G. Galante
Director

/s/ Kim K.W. Rucker

Kim K.W. Rucker
Director

/s/ J. Michael Stice

J. Michael Stice
Director

/s/ John P. Surma

John P. Surma
Director

/s/ Susan Tomasky

Susan Tomasky
Director

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Section 7: EX-31.1 (EXHIBIT 31.1)

Exhibit 31.1

MARATHON PETROLEUM CORPORATION
CERTIFICATION PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Gary R. Heminger, certify that:

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

Date: February 28, 2020

/s/ Gary R. Heminger

Gary R. Heminger

Chairman of the Board and Chief Executive Officer

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Section 8: EX-31.2 (EXHIBIT 31.2)

Exhibit 31.2

MARATHON PETROLEUM CORPORATION

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

I, Donald C. Templin, certify that:

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

Date: February 28, 2020

/s/ Donald C. Templin

Donald C. Templin

Executive Vice President and Chief Financial Officer

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Section 9: EX-32.1 (EXHIBIT 32.1)

Exhibit 32.1

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

In connection with the Annual Report of Marathon Petroleum Corporation (the "Company") on Form 10-K for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Gary R. Heminger, Chairman of the Board and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

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

February 28, 2020

/s/ Gary R. Heminger

Gary R. Heminger

Chairman of the Board and Chief Executive Officer

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Section 10: EX-32.2 (EXHIBIT 32.2)

Exhibit 32.2

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

In connection with the Annual Report of Marathon Petroleum Corporation (the “Company”) on Form 10-K for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Donald C. Templin, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

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

February 28, 2020

/s/ Donald C. Templin

Donald C. Templin

Executive Vice President and Chief Financial Officer

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