
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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 12 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission File Number: 1-11607

DTE Energy Company

Michigan

(State or other jurisdiction of incorporation or organization)

38-3217752

(I.R.S Employer Identification No.)

Commission File Number: 1-2198

DTE Electric Company

Michigan

(State or other jurisdiction of incorporation or organization)

38-0478650

(I.R.S Employer Identification No.)

Registrants address of principal executive offices: One Energy Plaza, Detroit, Michigan 48226-1279

Registrants telephone number, including area code: (313) 235-4000

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

Registrant	Title of Each Class	Trading Symbol(s)	Name of Exchange on which Registered
DTE Energy Company (DTE Energy)	Common stock, without par value	DTE	New York Stock Exchange
DTE Energy	2012 Series C 5.25% Junior Subordinated Debentures due 2062	DTQ	New York Stock Exchange
DTE Energy	2016 Series B 5.375% Junior Subordinated Debentures due 2076	DTJ	New York Stock Exchange
DTE Energy	2016 Series F 6.00% Junior Subordinated Debentures due 2076	DTY	New York Stock Exchange
DTE Energy	2017 Series E 5.25% Junior Subordinated Debentures due 2077	DTW	New York Stock Exchange
DTE Energy	2019 6.25% Corporate Units	DTP	New York Stock Exchange
DTE Electric Company (DTE Electric)	None		None

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

DTE Energy None **DTE Electric** None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

DTE Energy Yes **No** **DTE Electric** 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.

DTE Energy Yes **No** **DTE Electric** Yes **No**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

DTE Energy Yes **No** **DTE Electric** Yes **No**

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TABLE OF CONTENTS

	<u>Page</u>
Definitions	1
Filing Format	4
Forward-Looking Statements	5
<u>PART I</u>	
Items 1. & 2. Business and Properties	7
Item 1A. Risk Factors	20
Item 1B. Unresolved Staff Comments	25
Item 3. Legal Proceedings	25
Item 4. Mine Safety Disclosures	25
<u>PART II</u>	
Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities	26
Item 6. Selected Financial Data	28
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations	28
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	50
Item 8. Financial Statements and Supplementary Data	54
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	149
Item 9A. Controls and Procedures	149
Item 9B. Other Information	149
<u>PART III</u>	
Item 10. Directors, Executive Officers, and Corporate Governance	149
Item 11. Executive Compensation	149
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	149
Item 13. Certain Relationships and Related Transactions, and Director Independence	149
Item 14. Principal Accountant Fees and Services	149
<u>PART IV</u>	
Item 15. Exhibits and Financial Statement Schedules	151
Item 16. Form 10-K Summary	162
Signatures	164

DEFINITIONS

ACE	Affordable Clean Energy
AFUDC	Allowance for Funds Used During Construction
AGS	Appalachia Gathering System is a midstream natural gas asset located in Pennsylvania and West Virginia. DTE Energy purchased 100% of AGS in October 2016, and this asset is part of DTE Energy's Gas Storage and Pipelines segment
AMV	Applicable Market Value
ARO	Asset Retirement Obligation
ASU	Accounting Standards Update issued by the FASB
Blue Union	Blue Union gathering system is a midstream natural gas asset located in the Haynesville shale formation of Louisiana. DTE Energy purchased 100% of Blue Union in December 2019 and this asset is part of DTE Energy's Gas Storage and Pipelines segment
CAD	Canadian Dollar (C\$)
CCR	Coal Combustion Residuals
CFTC	U.S. Commodity Futures Trading Commission
DOE	U.S. Department of Energy
DTE Electric	DTE Electric Company (an indirect wholly-owned subsidiary of DTE Energy) and subsidiary companies
DTE Energy	DTE Energy Company, directly or indirectly the parent of DTE Electric, DTE Gas, and numerous non-utility subsidiaries
DTE Gas	DTE Gas Company (an indirect wholly-owned subsidiary of DTE Energy) and subsidiary companies
DTE Sustainable Generation	DTE Sustainable Generation Holdings, LLC (an indirect wholly-owned subsidiary of DTE Energy) and subsidiary companies
EGLE	Michigan Department of Environment, Great Lakes, and Energy, formerly known as Michigan Department of Environmental Quality
EGU	Electric Generating Unit
ELG	Effluent Limitations Guidelines
EPA	U.S. Environmental Protection Agency
Equity units	DTE Energy's equity units issued in October 2016 and November 2019, which were used to finance the respective Gas Storage and Pipelines acquisitions on October 1, 2016 and December 4, 2019
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
FOV	Finding of Violation
FTRs	Financial Transmission Rights are financial instruments that entitle the holder to receive payments related to costs incurred for congestion on the transmission grid
GCR	A Gas Cost Recovery mechanism authorized by the MPSC that allows DTE Gas to recover through rates its natural gas costs
GHGs	Greenhouse gases
Green Bonds	A financing option to fund projects that have a positive environmental impact based upon a specified set of criteria. The proceeds are required to be used for eligible green expenditures
IRS	Internal Revenue Service
ISO	Independent System Operator

DEFINITIONS

LEAP	Louisiana Energy Access Project gathering pipeline is a midstream natural gas asset located in the Haynesville shale formation of Louisiana. DTE Energy purchased 100% of LEAP in December 2019 and this asset is part of DTE Energy's Gas Storage and Pipelines segment
LIBOR	London Inter-Bank Offered Rates
LLC	DTE Energy Corporate Services, LLC, a subsidiary of DTE Energy
MGP	Manufactured Gas Plant
MISO	Midcontinent Independent System Operator, Inc.
MPSC	Michigan Public Service Commission
MTM	Mark-to-market
NAV	Net Asset Value
NEIL	Nuclear Electric Insurance Limited
NEXUS	NEXUS Gas Transmission, LLC, a joint venture in which DTE Energy owns a 50% partnership interest
Non-utility	An entity that is not a public utility. Its conditions of service, prices of goods and services, and other operating related matters are not directly regulated by the MPSC
NOV	Notice of Violation
NO _x	Nitrogen Oxides
NRC	U.S. Nuclear Regulatory Commission
PG&E	Pacific Gas and Electric Corporation
PLD	City of Detroit's Public Lighting Department
Production tax credits	Tax credits as authorized under Sections 45K and 45 of the Internal Revenue Code that are designed to stimulate investment in and development of alternate fuel sources. The amount of a production tax credit can vary each year as determined by the IRS
PSCR	A Power Supply Cost Recovery mechanism authorized by the MPSC that allows DTE Electric to recover through rates its fuel, fuel-related, and purchased power costs
RDM	A Revenue Decoupling Mechanism authorized by the MPSC that is designed to minimize the impact on revenues of changes in average customer usage
REC	Renewable Energy Credit
REF	Reduced Emissions Fuel
Registrants	DTE Energy and DTE Electric
Retail access	Michigan legislation provided customers the option of access to alternative suppliers for electricity and natural gas
RNG	Renewable Natural Gas
RPS	A Renewable Portfolio Standards mechanism authorized by the MPSC that allows DTE Electric to recover through rates its renewable energy costs
RSN	Remarketable Senior Notes
RTO	Regional Transmission Organization
SEC	Securities and Exchange Commission
SGG	Stonewall Gas Gathering is a midstream natural gas asset located in West Virginia. DTE Energy purchased 55% of SGG in October 2016 and an additional 30% in May 2019, bringing its ownership to 85%. SGG is part of DTE Energy's Gas Storage and Pipelines segment

DEFINITIONS

SO ₂	Sulfur Dioxide
TCJA	Tax Cuts and Jobs Act of 2017
TCJA rate reduction liability	Due to the change in the corporate tax rate, from January 1, 2018 to June 30, 2018 for DTE Gas and from January 1, 2018 to July 31, 2018 for DTE Electric, the utilities have reduced revenue and recorded an offsetting regulatory liability
Topic 606	FASB issued ASU No. 2014-09, Revenue from Contracts with Customers, as amended
Topic 840	FASB issued ASC 840, Leases
Topic 842	FASB issued ASU No. 2016-02, Leases, as amended, which replaced Topic 840
TRIA	Terrorism Risk Insurance Program Reauthorization Act of 2015
TRM	A Transitional Reconciliation Mechanism authorized by the MPSC that allows DTE Electric to recover through rates the deferred net incremental revenue requirement associated with the transition of PLD customers to DTE Electric's distribution system
USD	United States Dollar (\$)
VEBA	Voluntary Employees Beneficiary Association
VIE	Variable Interest Entity

Units of Measurement

Bcf	Billion cubic feet of natural gas
BTU	British thermal unit, heat value (energy content) of fuel
kWh	Kilowatthour of electricity
MDth/d	Million dekatherms per day
MMBtu	One million BTU
MW	Megawatt of electricity
MWh	Megawatt-hour of electricity

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FILING FORMAT

This combined Form 10-K is separately filed by DTE Energy and DTE Electric. Information in this combined Form 10-K relating to each individual Registrant is filed by such Registrant on its own behalf. DTE Electric makes no representation regarding information relating to any other companies affiliated with DTE Energy other than its own subsidiaries. Neither DTE Energy, nor any of DTE Energy's other subsidiaries (other than DTE Electric), has any obligation in respect of DTE Electric's debt securities, and holders of such debt securities should not consider the financial resources or results of operations of DTE Energy nor any of DTE Energy's other subsidiaries (other than DTE Electric and its own subsidiaries (in relevant circumstances)) in making a decision with respect to DTE Electric's debt securities. Similarly, none of DTE Electric nor any other subsidiary of DTE Energy has any obligation with respect to debt securities of DTE Energy. This combined Form 10-K should be read in its entirety. No one section of this combined Form 10-K deals with all aspects of the subject matter of this combined Form 10-K.

FORWARD-LOOKING STATEMENTS

Certain information presented herein includes "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 with respect to the financial condition, results of operations, and businesses of the Registrants. Words such as "anticipate," "believe," "expect," "may," "could," "projected," "aspiration," "plans," and "goals" signify forward-looking statements. Forward-looking statements are not guarantees of future results and conditions, but rather are subject to numerous assumptions, risks, and uncertainties that may cause actual future results to be materially different from those contemplated, projected, estimated, or budgeted. Many factors may impact forward-looking statements of the Registrants including, but not limited to, the following:

- impact of regulation by the EPA, the FERC, the MPSC, the NRC, and for DTE Energy, the CFTC, as well as other applicable governmental proceedings and regulations, including any associated impact on rate structures;
- the amount and timing of cost recovery allowed as a result of regulatory proceedings, related appeals, or new legislation, including legislative amendments and retail access programs;
- economic conditions and population changes in the Registrants' geographic area resulting in changes in demand, customer conservation, and thefts of electricity and, for DTE Energy, natural gas;
- the operational failure of electric or gas distribution systems or infrastructure;
- impact of volatility of prices in the oil and gas markets on DTE Energy's gas storage and pipelines operations;
- impact of volatility in prices in the international steel markets on DTE Energy's power and industrial projects operations;
- the risk of a major safety incident;
- environmental issues, laws, regulations, and the increasing costs of remediation and compliance, including actual and potential new federal and state requirements;
- the cost of protecting assets against, or damage due to, cyber incidents and terrorism;
- health, safety, financial, environmental, and regulatory risks associated with ownership and operation of nuclear facilities;
- volatility in the short-term natural gas storage markets impacting third-party storage revenues related to DTE Energy;
- volatility in commodity markets, deviations in weather, and related risks impacting the results of DTE Energy's energy trading operations;
- changes in the cost and availability of coal and other raw materials, purchased power, and natural gas;
- advances in technology that produce power, store power, or reduce power consumption;
- changes in the financial condition of significant customers and strategic partners;

- the potential for losses on investments, including nuclear decommissioning and benefit plan assets and the related increases in future expense and contributions;
- access to capital markets and the results of other financing efforts which can be affected by credit agency ratings;
- instability in capital markets which could impact availability of short and long-term financing;
- the timing and extent of changes in interest rates;
- the level of borrowings;
- the potential for increased costs or delays in completion of significant capital projects;
- changes in, and application of, federal, state, and local tax laws and their interpretations, including the Internal Revenue Code, regulations, rulings, court proceedings, and audits;
- the effects of weather and other natural phenomena on operations and sales to customers, and purchases from suppliers;
- unplanned outages;
- employee relations and the impact of collective bargaining agreements;
- the availability, cost, coverage, and terms of insurance and stability of insurance providers;
- cost reduction efforts and the maximization of plant and distribution system performance;
- the effects of competition;
- changes in and application of accounting standards and financial reporting regulations;
- changes in federal or state laws and their interpretation with respect to regulation, energy policy, and other business issues;
- contract disputes, binding arbitration, litigation, and related appeals; and
- the risks discussed in the Registrants' public filings with the Securities and Exchange Commission.

New factors emerge from time to time. The Registrants cannot predict what factors may arise or how such factors may cause results to differ materially from those contained in any forward-looking statement. Any forward-looking statements speak only as of the date on which such statements are made. The Registrants undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events.

Part I

Items 1. and 2. *Business and Properties*

General

In 1995, DTE Energy incorporated in the State of Michigan. DTE Energy's utility operations consist primarily of DTE Electric and DTE Gas. DTE Energy also has three other segments that are engaged in a variety of energy-related businesses.

DTE Electric is a Michigan corporation organized in 1903 and is a wholly-owned subsidiary of DTE Energy. DTE Electric is a public utility engaged in the generation, purchase, distribution, and sale of electricity to approximately 2.2 million customers in southeastern Michigan.

DTE Gas is a Michigan corporation organized in 1898 and is a wholly-owned subsidiary of DTE Energy. DTE Gas is a public utility engaged in the purchase, storage, transportation, distribution, and sale of natural gas to approximately 1.3 million customers throughout Michigan and the sale of storage and transportation capacity.

DTE Energy's other businesses are involved in 1) natural gas pipelines, gathering, and storage; 2) power and industrial projects; and 3) energy marketing and trading operations.

DTE Electric and DTE Gas are regulated by the MPSC. Certain activities of DTE Electric and DTE Gas, as well as various other aspects of businesses under DTE Energy are regulated by the FERC. In addition, the Registrants are regulated by other federal and state regulatory agencies including the NRC, the EPA, EGLE, and for DTE Energy, the CFTC.

The Registrants' annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, and all amendments to such reports are available free of charge through the Investor Relations Reports and Filings page of DTE Energy's website: www.dteenergy.com, as soon as reasonably practicable after they are filed with or furnished to the SEC.

The DTE Energy Code of Ethics and Standards of Behavior, Board of Directors' Mission and Guidelines, Board Committee Charters, and Categorical Standards for Director Independence are also posted on the DTE Energy website. The information on DTE Energy's website is not part of this report or any other report that DTE Energy files with, or furnishes to, the SEC.

Additionally, the public may read and copy any materials the Registrants file electronically with the SEC at www.sec.gov.

Corporate Structure

DTE Energy sets strategic goals, allocates resources, and evaluates performance based on the following structure. For financial information by segment for the last three years, see Note 23 to the Consolidated Financial Statements in Item 8 of this Report, "Segment and Related Information."

Electric

- The Electric segment consists principally of DTE Electric, which is engaged in the generation, purchase, distribution, and sale of electricity to approximately 2.2 million residential, commercial, and industrial customers in southeastern Michigan.

Gas

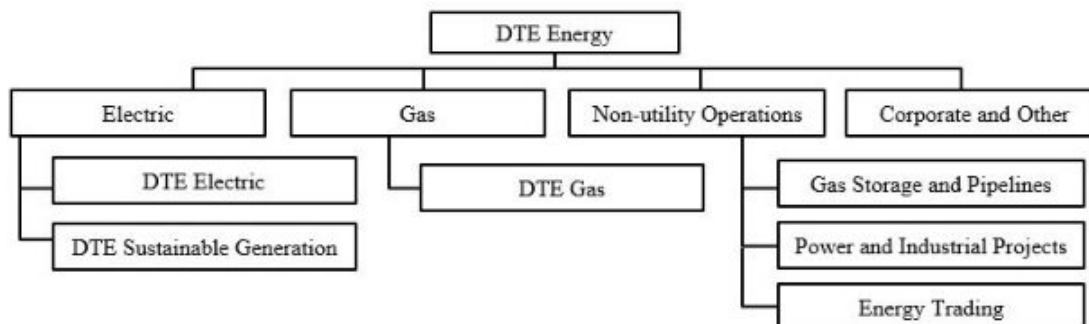
- The Gas segment consists principally of DTE Gas, which is engaged in the purchase, storage, transportation, distribution, and sale of natural gas to approximately 1.3 million residential, commercial, and industrial customers throughout Michigan and the sale of storage and transportation capacity.

Non-utility Operations

- Gas Storage and Pipelines consists of natural gas pipeline, gathering, transportation, and storage businesses.
- Power and Industrial Projects is comprised primarily of projects that deliver energy and utility-type products and services to industrial, commercial, and institutional customers, produce reduced emissions fuel, and sell electricity and pipeline-quality gas from renewable energy projects.
- Energy Trading consists of energy marketing and trading operations.

Corporate and Other

- Corporate and Other includes various holding company activities, holds certain non-utility debt, and holds energy-related investments.



Refer to Management's Discussion and Analysis in Item 7 of this Report for an in-depth analysis of each segment's financial results. A description of each business unit follows.

ELECTRIC

Description

DTE Energy's Electric segment consists principally of DTE Electric, an electric utility engaged in the generation, purchase, distribution, and sale of electricity to approximately 2.2 million customers in southeastern Michigan. DTE Electric is regulated by numerous federal and state governmental agencies, including, but not limited to, the MPSC, the FERC, the NRC, the EPA, and EGLE. Electricity is generated from fossil-fuel plants, a hydroelectric pumped storage plant, a nuclear plant, wind and other renewable assets and is supplemented with purchased power. The electricity is sold, or distributed through the retail access program, to three major classes of customers: residential, commercial, and industrial, throughout southeastern Michigan.

Weather, economic factors, competition, energy waste reduction initiatives, and electricity prices affect sales levels to customers. DTE Electric's peak load and highest total system sales generally occur during the third quarter of the year, driven by air conditioning and other cooling-related demands. DTE Electric's operations are not dependent upon a limited number of customers, and the loss of any one or a few customers would not have a material adverse effect on the results of DTE Electric.

The Electric segment also consists of non-utility operations relating to renewable energy projects at DTE Sustainable Generation. These projects have been acquired in support of DTE Energy's renewable energy goals.

See Note 5 to the Consolidated Financial Statements in Item 8 of the Report, "Revenue."

Fuel Supply and Purchased Power

DTE Electric's power is generated from a variety of fuels and is supplemented with purchased power. DTE Electric expects to have an adequate supply of fuel and purchased power to meet its obligation to serve customers. DTE Electric's generating capability is heavily dependent upon the availability of coal. Coal is purchased from various sources in different geographic areas under agreements that vary in both pricing and terms. DTE Electric expects to obtain the majority of its coal requirements through long-term contracts, with the balance to be obtained through short-term agreements and spot purchases. DTE Electric has long-term and short-term contracts for the purchase of approximately 22 million tons of low-sulfur western coal and approximately 2 million tons of Appalachian coal to be delivered from 2020 to 2021. All of these contracts have pricing schedules. DTE Electric has approximately 99% of the expected coal requirements for 2020 under contract. Given the geographic diversity of supply, DTE Electric believes it can meet its expected generation requirements. DTE Electric leases a fleet of rail cars and has the expected western and eastern coal rail requirements under multi-year contracts. The Company expects to cover all of its vessel transportation requirements for delivery of purchased coal to electric generating facilities through new agreements.

DTE Electric participates in the energy market through MISO. DTE Electric offers its generation in the market on a day-ahead and real-time basis and bids for power in the market to serve its load. DTE Electric is a net purchaser of power that supplements its generation capability to meet customer demand during peak cycles or during major plant outages.

Properties

DTE Electric owns generating facilities that are located in the State of Michigan. Substantially all of DTE Electric's property is subject to the lien of a mortgage.

Generating facilities owned and in service as of December 31, 2019 for the electric segment are shown in the following table:

Facility	Location by Michigan County	Year in Service	Net Generation Capacity ^(a)
			(MW)
Fossil-fueled Steam-Electric			
Belle River ^(b)	St. Clair	1984 and 1985	1,034
Greenwood	St. Clair	1979	785
Monroe ^(c)	Monroe	1971, 1973, and 1974	3,066
River Rouge	Wayne	1958	272
St. Clair ^(d)	St. Clair	1953, 1954, 1961, and 1969	1,065
Trenton Channel	Wayne	1968	495
			<u>6,717</u>
Natural gas and Oil-fueled Peaking Units^(e)	Various	1966-1971, 1981, 1999, 2002, and 2003	2,033
Nuclear-fueled Steam-Electric Fermi 2	Monroe	1988	1,141
Hydroelectric Pumped Storage Ludington^(f)	Mason	1973	1,088
Renewables^(g)			
Wind Utility	Various	2011-2016	612
Wind Non-Utility	Various	2019	88
Solar	Various	2010-2017	64
			<u>764</u>
			<u>11,743</u>

(a) Represents summer net rating for all units with the exception of renewable facilities. The summer net rating is based on operating experience, the physical condition of units, environmental control limitations, and customer requirements for steam, which would otherwise be used for electric generation. Wind and solar facilities reflect name plate capacity measured in alternating current.

(b) Represents DTE Electric's 81% interest in Belle River with a total capability of 1,270 MW. See Note 8 to the Consolidated Financial Statements in Item 8 of this Report, "Jointly-Owned Utility Plant."

(c) The Monroe generating plant provided 39% of DTE Electric's total 2019 power plant generation.

(d) St. Clair unit 1 retired on March 27, 2019.

(e) Two Peaking Units were retired (Hancock 11-2 and 11-4) on December 22, 2019, Dearborn Energy Center became commercial on December 30, 2019.

(f) Represents DTE Electric's 49% interest in Ludington with a total capability of 2,220 MW. See Note 8 to the Consolidated Financial Statements in Item 8 of this Report, "Jointly-Owned Utility Plant."

(g) In addition to the owned renewable facilities described above, DTE Electric has long-term contracts for 481 MW of renewable power generated from wind, solar, and biomass facilities. Of the 481 MW, currently 32 MW are a PPA with the Non-Utility owned wind.

See "Capital Investments" in Management's Discussion and Analysis in Item 7 of this Report for information regarding plant retirements and future capital expenditures.

DTE Electric owns and operates 700 distribution substations with a capacity of approximately 37,025,000 kilovolt-amperes (kVA) and approximately 445,200 line transformers with a capacity of approximately 32,392,000 kVA.

Circuit miles of electric distribution lines owned and in service as of December 31, 2019 are shown in the following table:

Operating Voltage-Kilovolts (kV)	Circuit Miles	
	Overhead	Underground
4.8 kV to 13.2 kV	28,509	15,389
24 kV	181	681
40 kV	2,303	381
120 kV	61	8
	<u>31,054</u>	<u>16,459</u>

There are numerous interconnections that allow the interchange of electricity between DTE Electric and electricity providers external to the DTE Electric service area. These interconnections are generally owned and operated by ITC Transmission, an unrelated company, and connect to neighboring energy companies.

Regulation

DTE Electric is subject to the regulatory jurisdiction of various agencies, including, but not limited to, the MPSC, the FERC, and the NRC. The MPSC issues orders pertaining to rates, recovery of certain costs, including the costs of generating facilities and regulatory assets, conditions of service, accounting, and operating-related matters. DTE Electric's MPSC-approved rates charged to customers have historically been designed to allow for the recovery of costs, plus an authorized rate of return on investments. The FERC regulates DTE Electric with respect to financing authorization and wholesale electric activities. The NRC has regulatory jurisdiction over all phases of the operation, construction, licensing, and decommissioning of DTE Electric's nuclear plant operations. DTE Electric is subject to the requirements of other regulatory agencies with respect to safety, the environment, and health.

See Notes 9, 10, 13, and 19 to the Consolidated Financial Statements in Item 8 of this Report, "Asset Retirement Obligations," "Regulatory Matters," "Fair Value," and "Commitments and Contingencies."

Energy Assistance Programs

Energy assistance programs, funded by the federal government and the State of Michigan, remain critical to DTE Electric's ability to control its uncollectible accounts receivable and collections expenses. DTE Electric's uncollectible accounts receivable expense is directly affected by the level of government-funded assistance that qualifying customers receive. DTE Electric works continuously with the State of Michigan and others to determine whether the share of funding allocated to customers is representative of the number of low-income individuals in the service territory. DTE Electric also partners with federal, state, and local officials to attempt to increase the share of low-income funding allocated to customers.

Strategy and Competition

DTE Electric's electrical generation operations seek to provide the energy needs of customers in a cost effective manner. With potential capacity constraints in the MISO region, there will be increased dependency on DTE Electric's generation to provide reliable service and price stability for customers. This generation will require continuing investments in DTE Electric's primary coal generating units, nuclear generating plant, a natural gas fueled combined cycle generation facility, and renewables.

DTE Electric's distribution operations focus is on distributing energy in a safe, cost effective, and reliable manner to customers. DTE Electric seeks to increase operational efficiencies to increase customer satisfaction at an affordable rate.

The electric retail access program in Michigan gives electric customers the option of retail access to alternative electric suppliers, subject to limits. Customers with retail access to alternative electric suppliers represented approximately 10% of retail sales in 2019, 2018, and 2017 and consisted primarily of industrial and commercial customers. MPSC rate orders and 2008 energy legislation enacted by the State of Michigan have placed a 10% cap on the total retail access related migration, mitigating some of the unfavorable effects of electric retail access on DTE Electric's financial performance and full service customer rates. Energy legislation passed in 2016 retained the 10% retail access cap with some revisions. DTE Electric expects that customers with retail access to alternative electric suppliers will represent approximately 10% of retail sales in 2020.

Competition in the regulated electric distribution business is primarily from the on-site generation of industrial customers and from distributed generation applications by industrial and commercial customers. DTE Electric does not expect significant competition for distribution to any group of customers in the near term.

Revenues from year to year will vary due to weather conditions, economic factors, regulatory events, and other risk factors as discussed in the "Risk Factors" in Item 1A. of this Report.

GAS

Description

DTE Energy's Gas segment consists principally of DTE Gas, a natural gas utility engaged in the purchase, storage, transportation, distribution, and sale of natural gas to approximately 1.3 million residential, commercial, and industrial customers throughout Michigan, and the sale of storage and transportation capacity.

DTE Gas' natural gas sales, end-user transportation, and intermediate transportation volumes, revenues, and Net Income, are impacted by weather. Given the seasonal nature of the business, revenues and Net Income are concentrated in the first and fourth quarters of the calendar year. By the end of the first quarter, the heating season is largely over, and DTE Gas typically realizes substantially reduced revenues and earnings in the second quarter, and losses in the third quarter. The impacts of changes in annual average customer usage are minimized by the RDM.

DTE Gas operations are not dependent upon a limited number of customers, and the loss of any one or a few customers would not have a material adverse effect on the results of DTE Gas.

See Note 5 to the Consolidated Financial Statements in Item 8 of the Report, "Revenue."

Natural Gas Supply

DTE Gas' gas distribution system has a planned maximum daily send-out capacity of 2.5 Bcf, with approximately 68% of the volume coming from underground storage for 2019. Peak-use requirements are met through utilization of storage facilities, pipeline transportation capacity, and purchased gas supplies. Because of the geographic diversity of supply and its pipeline transportation and storage capacity, DTE Gas is able to reliably meet supply requirements. DTE Gas believes natural gas supply and pipeline capacity will be sufficiently available to meet market demands in the foreseeable future.

DTE Gas purchases natural gas supplies in the open market by contracting with producers and marketers and maintains a diversified portfolio of natural gas supply contracts. Supplier, producing region, quantity, and available transportation diversify DTE Gas' natural gas supply base. Natural gas supply is obtained from various sources in different geographic areas (Appalachian, Gulf Coast, Mid-Continent, Canada, and Michigan) under agreements that vary in both pricing and terms. Gas supply pricing is generally tied to the New York Mercantile Exchange and published price indices to approximate current market prices combined with MPSC-approved fixed price supplies with varying terms and volumes through 2022.

DTE Gas is directly connected to interstate pipelines, providing access to most of the major natural gas supply producing regions in the Appalachian, Gulf Coast, Mid-Continent, and Canadian regions. The primary long-term transportation supply contracts at December 31, 2019 are listed below.

	Availability (MDth/d)	Contract Expiration
Great Lakes Gas Transmission L.P.	30	2023
Viking Gas Transmission Company	21	2022
Vector Pipeline L.P. (an affiliate)	20	2022
ANR Pipeline Company	129	2028
Panhandle Eastern Pipeline Company	125	2029
NEXUS Pipeline (an affiliate)	75	2033

Properties

DTE Gas owns distribution, storage, and transportation properties that are located in the State of Michigan. The distribution system includes approximately 20,000 miles of distribution mains, approximately 1,305,000 service pipelines, and approximately 1,285,000 active meters, and DTE Gas owns approximately 2,000 miles of transmission pipelines that deliver natural gas to the distribution districts and interconnect DTE Gas storage fields with the sources of supply and the market areas.

DTE Gas owns storage properties relating to four underground natural gas storage fields with an aggregate working gas storage capacity of approximately 139 Bcf. These facilities are important in providing reliable and cost-effective service to DTE Gas customers. In addition, DTE Gas sells storage services to third parties.

Most of DTE Gas' distribution and transportation property is located on property owned by others and used by DTE Gas through easements, permits, or licenses. Substantially all of DTE Gas' property is subject to the lien of a mortgage.

DTE Gas leases a portion of its pipeline system to the Vector Pipeline Partnership (an affiliate) through a finance lease arrangement. See Note 18 to the Consolidated Financial Statements in Item 8 of the Report, "Leases."

Regulation

DTE Gas is subject to the regulatory jurisdiction of the MPSC, which issues orders pertaining to rates, recovery of certain costs, including the costs of regulatory assets, conditions of service, accounting, and operating-related matters. DTE Gas' MPSC-approved rates charged to customers have historically been designed to allow for the recovery of costs, plus an authorized rate of return on investments. DTE Gas operates natural gas storage and transportation facilities in Michigan as intrastate facilities regulated by the MPSC and provides intrastate storage and transportation services pursuant to a MPSC-approved tariff.

DTE Gas also provides interstate storage and transportation services in accordance with an Operating Statement on file with the FERC. The FERC's jurisdiction is limited and extends to the rates, non-discriminatory requirements, and the terms and conditions applicable to storage and transportation provided by DTE Gas in interstate markets. FERC granted DTE Gas authority to provide storage and related services in interstate commerce at market-based rates. DTE Gas provides transportation services in interstate commerce at cost-based rates approved by the MPSC and filed with the FERC.

DTE Gas is subject to the requirements of other regulatory agencies with respect to safety, the environment, and health.

See Notes 10 and 19 to the Consolidated Financial Statements in Item 8 of this Report, "Regulatory Matters" and "Commitments and Contingencies."

Energy Assistance Program

Energy assistance programs, funded by the federal government and the State of Michigan, remain critical to DTE Gas' ability to control its uncollectible accounts receivable and collections expenses. DTE Gas' uncollectible accounts receivable expense is directly affected by the level of government-funded assistance its qualifying customers receive. DTE Gas works continuously with the State of Michigan and others to determine whether the share of funding allocated to customers is representative of the number of low-income individuals in the service territory. DTE Gas also partners with federal, state, and local officials to attempt to increase the share of low-income funding allocated to DTE Gas customers.

Strategy and Competition

DTE Gas' strategy is to ensure the safe, reliable, and cost effective delivery of natural gas service within its franchised markets in Michigan. In addition, DTE Gas is promoting the extension of its distribution system to underserved markets and the increased use of natural gas furnaces, water heaters, and appliances within its current customer base. DTE Gas continues to focus on the reduction of operating costs and the delivery of energy waste reduction products and services to its customers, making natural gas service the preferred fuel and even more affordable for its customers.

Competition in the gas business primarily involves other natural gas transportation providers, as well as providers of alternative fuels and energy sources. The primary focus of competition for end-user transportation is cost and reliability. Some large commercial and industrial customers have the ability to switch to alternative fuel sources such as coal, electricity, oil, and steam. If these customers were to choose an alternative fuel source, they would not have a need for DTE Gas' end-user transportation service. DTE Gas competes against alternative fuel sources by providing competitive pricing and reliable service, supported by its storage capacity.

Having an extensive transportation pipeline system has enabled marketing of DTE Gas' storage and transportation services to gas producers, marketers, distribution companies, end-user customers, and other pipeline companies. The business operates in a central geographic location with connections to major Midwestern interstate pipelines that extend throughout the Midwest, eastern United States, and eastern Canada.

DTE Gas' storage capacity is used to store natural gas for delivery to its customers and is also sold to third parties under a variety of arrangements. Prices for storage arrangements for shorter periods are generally higher, but more volatile, than for longer periods. Prices are influenced primarily by market conditions, weather, and natural gas pricing.

GAS STORAGE AND PIPELINES

Description

Gas Storage and Pipelines owns natural gas storage fields, lateral and gathering pipeline systems, compression and surface facilities, and has ownership interests in interstate pipelines serving the Gulf Coast, Midwest, Ontario, and Northeast markets. The pipeline and storage assets are primarily supported by long-term, fixed-price revenue contracts.

Properties

Gas Storage and Pipelines holds the following properties:

Property Classification	% Owned	Description	Location
Pipelines			
Appalachia Gathering System	100%	129-mile pipeline delivering Marcellus Shale gas to Texas Eastern Pipeline and Stonewall Gas Gathering system	PA and WV
Birdsboro Pipeline	100%	14-mile pipeline delivering gas supply to the Birdsboro Power Plant	PA
Bluestone Pipeline	100%	65-mile pipeline delivering Marcellus Shale gas to Millennium Pipeline and Tennessee Pipeline	PA and NY
Blue Union / LEAP ^(a)	100%	338-mile gathering system delivering Haynesville Shale gas production to markets in Gulf Coast Region	LA and TX
Generation Pipeline	50%	23-mile pipeline regulated as gas utility by the Public Utilities Commission of Ohio	OH
Michigan gathering systems	100%	590-mile pipeline system in northern Michigan	MI
Millennium Pipeline	26%	263-mile pipeline serving markets in the Northeast	NY
NEXUS Pipeline	50%	256-mile pipeline to transport Utica and Marcellus shale gas to Ohio, Michigan, and Ontario market centers	OH and MI
Stonewall Gas Gathering	85%	68-mile pipeline connecting Appalachia Gathering System to Columbia Pipeline	WV
Susquehanna gathering system	100%	197-mile pipeline delivering Southwestern Energy's Marcellus Shale gas production to Bluestone Pipeline	PA
Tioga Gas Gathering	100%	3-mile pipeline delivering production gas to Dominion Transmission interconnect	PA
Vector Pipeline	40%	348-mile pipeline connecting Chicago, Michigan, and Ontario market centers	IL, IN, MI, and Ontario
Storage			
Washington 10	100%	75 Bcf of storage capacity	MI
Washington 28	50%	16 Bcf of storage capacity	MI

(a) LEAP, a 150-mile pipeline in Louisiana, is currently under construction. DTE Energy is targeting completion in second half of 2020.

The assets of these businesses are well integrated with other DTE Energy operations. Pursuant to an operating agreement, DTE Gas provides physical operations, maintenance, and technical support for the Washington 10 and 28 storage facilities and for the Michigan gathering systems.

Regulation

Gas Storage and Pipelines operates natural gas storage facilities in Michigan as intrastate facilities regulated by the MPSC and provides intrastate storage and related services pursuant to an MPSC-approved tariff. Gas Storage and Pipelines also provides interstate services in accordance with an Operating Statement on file with the FERC. Vector, Millennium, Birdsboro, and NEXUS Pipelines provide interstate transportation services in accordance with their FERC-approved tariffs. In addition, NEXUS and Vector are subject to applicable laws, rules, and regulations in Canada. Gas Storage and Pipelines' gathering and pipeline assets are subject to the rules and regulations of various state utility commissions.

Strategy and Competition

Gas Storage and Pipelines expects to continue its steady growth plan by expanding existing assets and developing new assets that are typically supported with long-term customer commitments, particularly in the following regions:

Midwest to Northeast Region

Gas Storage and Pipelines will focus on opportunities to supply natural gas to meet growing demand and displace less attractive supply from certain regions in North America. Much of the growth in midstream services demand for natural gas is expected to occur in the eastern Canada and the northeast U.S. regions. Gas Storage and Pipelines believes that the Vector, Millennium, and NEXUS Pipelines are well-positioned to provide access routes and low-cost expansion options to these markets due to growth in production from the Marcellus/Utica Shales in Pennsylvania and West Virginia. Gas Storage and Pipelines has agreements with key producers that support its Bluestone Pipeline, Susquehanna gathering, Tioga gathering, AGS,

and SGG businesses. Gas Storage and Pipelines is evaluating new pipeline and storage investment opportunities that could include additional pipeline and gathering expansions, laterals, compression, and other Marcellus/Utica shale midstream development or partnering opportunities.

Gulf Coast Region

In December 2019, Gas Storage and Pipelines completed the acquisition of the Blue Union gathering system and LEAP gathering pipeline in the Haynesville shale formation of Louisiana which provide access to growing Gulf Coast markets. The assets serve multiple markets, including Louisiana, the nation's third largest natural gas consumer, and the Gulf Coast where demand for natural gas is rapidly increasing in the power, industrial and LNG export sectors. Furthermore, they are strategically located to meet this increasing demand given their proximity and access to multiple major downstream pipelines with bi-directional capability. Through this acquisition, Gas Storage and Pipeline invested in economically strong and strategically situated assets that are supported by long-term contracts. Strong credit provisions are also incorporated into the contract with the system's largest customer.

Gas Storage and Pipelines has competition from other pipelines and storage providers. Operations are dependent upon a limited number of customers, and the loss of any one or a few customers could have a material adverse effect on the results of Gas Storage and Pipelines.

POWER AND INDUSTRIAL PROJECTS

Description

Power and Industrial Projects is comprised primarily of projects that deliver energy and utility-type products and services to industrial, commercial, and institutional customers, produce reduced emissions fuel, and sell electricity and gas from renewable energy projects. This business segment provides services using project assets usually located on or near the customers' premises in the steel, automotive, pulp and paper, airport, chemical, and other industries as follows:

Industrial Energy Services

- *Steel and Petroleum Coke* — Power and Industrial Projects produces metallurgical coke from a coke battery with a capacity of 1.0 million tons per year and has an investment in a second coke battery with a capacity of 1.2 million tons per year. Power and Industrial Projects also provides pulverized coal and petroleum coke to the steel, pulp and paper, and other industries.
- *On-Site Energy* — Power and Industrial Projects provides power generation, steam production, chilled water production, wastewater treatment, and compressed air supply to industrial customers. Power and Industrial Projects also provides utility-type services using project assets usually located on or near the customers' premises in the automotive, airport, chemical, and other industries.

Renewable Energy

- *Wholesale Power and Renewables* — Power and Industrial Projects holds ownership interests in, and operates, five renewable generating plants with a capacity of 217 MWs. The electric output is sold under long-term power purchase agreements.
- *Renewable Gas Recovery* — Power and Industrial Projects has ownership interests in, and operates, twenty-three gas recovery sites in nine different states. The sites recover methane from landfills and agricultural businesses and convert the gas to generate electricity, replace fossil fuels in industrial and manufacturing operations, or refine to pipeline-quality gas, which can then be used as vehicle fuel.

Reduced Emissions Fuel

- Reduced Emissions Fuel* — Power and Industrial Projects has constructed and placed in service REF facilities at ten sites including facilities located at seven third-party owned coal-fired power plants. DTE Energy has sold membership interests in five of the facilities and entered into lease arrangements in two of the facilities. The facilities blend a proprietary additive with coal used in coal-fired power plants, resulting in reduced emissions of nitrogen oxide and mercury. Qualifying facilities are eligible to generate tax credits for ten years upon achieving certain criteria. The value of a tax credit is adjusted annually by an inflation factor published by the IRS. The value of the tax credit is reduced if the reference price of coal exceeds certain thresholds. The economic benefit of the REF facilities is dependent upon the generation of production tax credits.

Properties and Other

The following are significant properties operated by Power and Industrial Projects:

Business Areas	Location	Service Type
Industrial Energy Services		
Steel and Petroleum Coke		
Pulverized Coal Operations	MI	Pulverized Coal
Coke Production	MI	Metallurgical Coke Supply
Other Investment in Coke Production and Petroleum Coke	IN and MS	Metallurgical Coke Supply and Pulverized Petroleum Coke
On-Site Energy		
Automotive	IN, MI, NY, and OH	Electric Distribution, Chilled Water, Wastewater, Steam, Cooling Tower Water, Reverse Osmosis Water, Compressed Air, Mist, and Dust Collectors
Airports	MI and PA	Electricity and Hot and Chilled Water
Chemical Manufacturing	KY and OH	Electricity, Steam, Natural Gas, Compressed Air, and Wastewater
Consumer Manufacturing	OH	Electricity, Steam, Wastewater, and Sewer
Business Park	PA	Electricity
Hospital and University	CA and IL	Electricity, Steam, and Chilled Water
Renewable Energy		
Renewables	CA and MN	Electric Generation
Renewable Gas Recovery	AZ, CA, MI, NC, NY, OH, TX, UT, and WI	Electric Generation and Renewable Natural Gas
Reduced Emissions Fuel	MI, OH, IL, PA, TX, and WI	REF Supply

	2019	2018	2017
	(In millions)		
Production Tax Credits Generated (Allocated to DTE Energy)			
REF	\$ 72	\$ 178	\$ 144
Renewables	8	7	6
Renewable Gas Recovery	3	3	3
	<u>\$ 83</u>	<u>\$ 188</u>	<u>\$ 153</u>

Regulation

Certain electric generating facilities within Power and Industrial Projects have market-based rate authority from the FERC to sell power. The facilities are subject to FERC reporting requirements and market behavior rules. Certain projects of Power and Industrial Projects are also subject to the applicable laws, rules, and regulations related to the EPA, U.S. Department of Homeland Security, DOE, and various state utility commissions.

Strategy and Competition

Power and Industrial Projects will continue leveraging its energy-related operating experience and project management capability to develop and grow its steel, on-site energy, and renewable energy businesses, and optimize the REF businesses. Power and Industrial Projects will also continue to pursue opportunities to provide asset management and operations services to third parties. There are limited competitors for Power and Industrial Projects' existing disparate businesses who provide similar products and services. Power and Industrial Projects' operations are dependent upon a limited number of customers, and the loss of any one or a few customers could have a material adverse effect on the results of Power and Industrial Projects.

Power and Industrial Projects anticipates building around its core strengths in the markets where it operates. In determining the markets in which to compete, Power and Industrial Projects examines closely the regulatory and competitive environment, new and pending legislation, the number of competitors, and its ability to achieve sustainable margins. Power and Industrial Projects plans to maximize the effectiveness of its related businesses as it expands.

Power and Industrial Projects intends to focus on the following areas for growth:

- Providing energy and utility-type services to commercial and industrial customers
- Acquiring and developing renewable energy projects and other energy projects.

ENERGY TRADING

Description

Energy Trading focuses on physical and financial power, natural gas and environmental marketing and trading, structured transactions, enhancement of returns from its asset portfolio, and optimization of contracted natural gas pipeline transportation and storage positions. Energy Trading also provides natural gas, power, environmental and related services which may include the management of associated storage and transportation contracts on the customers' behalf and the supply or purchase of environmental attributes to various customers. Energy Trading's customer base is predominantly utilities, local distribution companies, pipelines, producers and generators, and other marketing and trading companies. Energy Trading also provides commodity risk management services to the other businesses within DTE Energy.

Energy Trading enters into derivative financial instruments as part of its marketing and hedging activities. These financial instruments are generally accounted for under the MTM method, which results in the recognition in earnings of unrealized gains and losses from changes in the fair value of the derivatives. Energy Trading utilizes forwards, futures, swaps, and option contracts to mitigate risk associated with marketing and trading activity, as well as for proprietary trading within defined risk guidelines.

Significant portions of the Energy Trading portfolio are economically hedged. Most financial instruments, physical power and natural gas contracts, and certain environmental contracts are deemed derivatives; whereas, natural gas and environmental inventory, contracts for pipeline transportation, storage assets, and some environmental contracts are not derivatives. As a result, this segment will experience earnings volatility as derivatives are marked-to-market without revaluing the underlying non-derivative contracts and assets. The business' strategy is to economically manage the price risk of these underlying non-derivative contracts and assets with futures, forwards, swaps, and options. This results in gains and losses that are recognized in different interim and annual accounting periods.

Regulation

Energy Trading has market-based rate authority from the FERC to sell power and blanket authority from the FERC to sell natural gas at market prices. Energy Trading is subject to FERC reporting requirements and market behavior rules. Energy Trading is also subject to the applicable laws, rules, and regulations related to the CFTC, U.S. Department of Homeland Security, and DOE. In addition, Energy Trading is subject to applicable laws, rules, and regulations in Canada.

Strategy and Competition

DTE Energy's strategy for the Energy Trading business is to deliver value-added services to DTE Energy customers. DTE Energy seeks to manage this business in a manner complementary to the growth of DTE Energy's other business segments. Energy Trading focuses on physical marketing and the optimization of its portfolio of energy assets. The segment competes with electric and gas marketers, financial institutions, traders, utilities, and other energy providers. The Energy Trading business is dependent upon the availability of capital and an investment grade credit rating. DTE Energy believes it has ample available capital capacity to support Energy Trading activities. DTE Energy monitors its use of capital closely to ensure that its commitments do not exceed capacity. A material credit restriction would negatively impact Energy Trading's financial performance. Competitors with greater access to capital, or at a lower cost, may have a competitive advantage. DTE Energy has risk management and credit processes to monitor and mitigate risk.

CORPORATE AND OTHER

Description

Corporate and Other includes various holding company activities, holds certain non-utility debt, and holds energy-related investments.

ENVIRONMENTAL MATTERS

The Registrants are subject to extensive environmental regulation and expect to continue recovering environmental costs related to utility operations through rates charged to customers. The following table summarizes DTE Energy's, including DTE Electric's, estimated significant future environmental expenditures based upon current regulations. Pending or future reconsiderations of current regulations may impact the estimated expenditures summarized in the table below. Actual costs to comply could vary substantially. Additional costs may result as the effects of various substances on the environment are studied and governmental regulations are developed and implemented.

	DTE Electric	DTE Gas	Non-utility	Total
	(In millions)			
Water	\$ 81	\$ —	\$ —	\$ 81
Contaminated and other sites	7	15	—	22
Coal combustion residuals and effluent limitations guidelines	608	—	—	608
Estimated total future expenditures through 2026	\$ 696	\$ 15	\$ —	\$ 711
Estimated 2020 expenditures	\$ 35	\$ 6	\$ —	\$ 41
Estimated 2021 expenditures	\$ 62	\$ 4	\$ —	\$ 66

Water — The EPA finalized regulations on cooling water intake in August 2014. DTE Electric is conducting studies to determine the best technology for reducing the environmental impacts of the cooling water intake structures at each of its facilities. DTE Electric may be required to install technologies to reduce the impacts of the cooling water intakes.

Contaminated and Other Sites — Prior to the construction of major interstate natural gas pipelines, gas for heating and other uses was manufactured locally from processes involving coal, coke, or oil. The facilities, which produced gas, have been designated as MGP sites. DTE Gas owns, or previously owned, 14 such former MGP sites. DTE Electric owns, or previously owned, three former MGP sites. DTE Energy anticipates the cost amortization methodology approved by the MPSC for DTE Gas, which allows DTE Gas to amortize the MGP costs over a ten-year period beginning with the subsequent year the MGP costs were incurred, will prevent the associated investigation and remediation costs from having a material adverse effect on DTE Energy's operations. DTE Electric believes the likelihood of a material change to the accrued amount is remote based on current knowledge of the conditions at each site.

The Registrants are also in the process of cleaning up other sites where contamination is present as a result of historical and ongoing utility operations. These other sites include an engineered ash storage facility, electric distribution substations, gas pipelines, electric generating power plants, and underground and aboveground storage tank locations. Cleanup activities associated with these sites will be conducted over the next several years. Any significant change in assumptions, such as remediation techniques, nature and extent of contamination, and regulatory requirements, could impact the estimate of remedial action costs for these sites and affect the Registrants' financial position and cash flows and the rates charged to their customers.

Coal Combustion Residuals and Effluent Limitations Guidelines — A final EPA rule for the disposal of coal combustion residuals, commonly known as coal ash, became effective in October 2015, and was revised in October 2016 and July 2018. The rule is based on the continued listing of coal ash as a non-hazardous waste and relies on various self-implementation design and performance standards. DTE Electric owns and operates three permitted engineered coal ash storage facilities to dispose of coal ash from coal-fired power plants and operates a number of smaller impoundments at its power plants subject to certain provisions in the CCR rule. At certain facilities, the rule currently requires the installation of monitoring wells, compliance with groundwater standards, and the closure of basins at the end of the useful life of the associated power plant. At other facilities, the rule requires ash laden waters be moved from earthen basins to steel and concrete tanks. DTE Electric has estimated the impact of the current rule to be \$608 million.

On December 2, 2019, a proposed revision to the CCR Rule was published in the Federal Register to address the D.C. Circuit's 2018 decision regarding CCR impoundments that are not lined with an engineered liner system. The rule proposes that all CCR impoundments that do not meet the engineered liner requirements must close by specific dates, and it further confirms that all clay lined impoundments are viewed as unlined. The EPA is also preparing a rule making that is expected to be proposed early in 2020 that will provide mechanisms to determine if certain alternative liner systems may be as protective as the current liners specified in the CCR rule. DTE Electric is currently evaluating options based on the range of outcomes of the current proposed rule and the anticipated proposed rule to determine any changes to DTE Electric's plans in the operation and closure of coal ash impoundments.

In November 2015, the EPA finalized effluent limitations guidelines for the steam electric power generating industry which requires additional controls to be installed between 2018 and 2023. The initial costs to comply with this rule are under development and estimates are included in the Coal Combustion Residual and Effluent Limitations Guidelines amount in the above table.

On April 12, 2017, the EPA granted a petition for reconsideration of the ELG Rule. The EPA also signed an administrative stay of the ELG Rule's compliance deadlines for fly ash transport water, bottom ash transport water, and flue gas desulfurization (FGD) wastewater, among others. On June 6, 2017, the EPA published in the Federal Register a proposed rule to postpone certain applicable deadlines within the ELG rule. The final rule was published on September 18, 2017. The final rule nullified the administrative stay but also extended the earliest compliance deadlines for the FGD wastewater and bottom ash transport water until November 1, 2020 in order for the EPA to propose and finalize a new ruling. On November 22, 2019, the EPA issued a proposed rule to revise the technology-based effluent limitations guidelines and standards applicable to flue gas desulfurization wastewater and bottom ash transport water. The ELG compliance requirements and final deadlines for bottom ash transport water and FGD wastewater, and total ELG related compliance costs will not be known until the EPA completes its reconsideration of the ELG Rule.

Air — DTE Electric is subject to the EPA ozone and fine particulate transport, and acid rain regulations that limit power plant emissions of SO₂ and NO_x. The EPA and the State of Michigan have also issued emission reduction regulations relating to ozone, fine particulate, regional haze, mercury, and other air pollution. These rules have led to emission controls on fossil-fueled power plants to reduce SO₂, NO_x, mercury, and other emissions. These rulemakings could require additional controls for SO₂, NO_x, and other hazardous air pollutants over the next few years. DTE Electric does not anticipate additional capital expenditures will be necessary to comply with air pollution requirements through 2026, subject to the results of future rulemakings.

The EPA has implemented regulatory actions under the Clean Air Act to address emissions of GHGs from the utility sector and other sectors of the economy. Among these actions, the EPA has finalized performance standards for emissions of carbon dioxide from new and existing fossil-fuel EGUs. In 2019 the performance standards for existing EGUs (also known as the Clean Power Plan) were officially repealed and replaced by the ACE Rule. The ACE Rule requires the state of Michigan to submit a plan in 2022 that includes GHG standards for existing coal-fired power plant units in Michigan. These final rules do not impact DTE Energy's revised commitment to reduce carbon emissions 32% by the early 2020s, 50% by 2030, and 80% by 2040, or its goal of net zero emissions by 2050 for DTE Electric, from the 2005 carbon emissions levels.

Pending or future legislation or other regulatory actions could have a material impact on DTE Electric's operations and financial position and the rates charged to its customers. Impacts include expenditures for environmental equipment beyond what is currently planned, financing costs related to additional capital expenditures, the purchase of emission credits from market sources, higher costs of purchased power, and the retirement of facilities where control equipment is not economical. DTE Electric would seek to recover these incremental costs through increased rates charged to its utility customers, as authorized by the MPSC.

See Management's Discussion and Analysis in Item 7 of this Report and Notes 9, 10, and 19 to the Consolidated Financial Statements in Item 8 of this Report, "Asset Retirement Obligations," "Regulatory Matters," and "Commitments and Contingencies."

EMPLOYEES

DTE Energy and its subsidiaries had approximately 10,700 employees as of December 31, 2019, of which approximately 5,300 were represented by unions. DTE Electric had approximately 4,900 employees as of December 31, 2019, of which approximately 2,800 were represented by unions. There are several bargaining units for DTE Energy subsidiaries' represented employees. The majority of represented employees for both DTE Energy and DTE Electric are under contracts that expire in 2021 and 2022.

Item 1A. Risk Factors

There are various risks associated with the operations of the Registrants' utility businesses and DTE Energy's non-utility businesses. To provide a framework to understand the operating environment of the Registrants, below is a brief explanation of the more significant risks associated with their businesses. Although the Registrants have tried to identify and discuss key risk factors, others could emerge in the future. Each of the following risks could affect performance.

The Registrants are subject to rate regulation. Electric and gas rates for the utilities are set by the MPSC and the FERC and cannot be changed without regulatory authorization. The Registrants may be negatively impacted by new regulations or interpretations by the MPSC, the FERC, or other regulatory bodies. The Registrants' ability to recover costs may be impacted by the time lag between the incurrence of costs and the recovery of the costs in customers' rates. Regulators also may decide to disallow recovery of certain costs in customers' rates if they determine that those costs do not meet the standards for recovery under current governing laws and regulations. Regulators may also disagree with the Registrants' rate calculations under the various mechanisms that are intended to mitigate the risk to their utilities related to certain aspects of the business. If the Registrants cannot agree with regulators on an appropriate reconciliation of those mechanisms, it may impact the Registrants' ability to recover certain costs through customer rates. Regulators may also decide to eliminate these mechanisms in future rate cases, which may make it more difficult for the Registrants to recover their costs in the rates charged to customers. The Registrants cannot predict what rates the MPSC will authorize in future rate cases. New legislation, regulations, or interpretations could change how the business operates, impact the Registrants' ability to recover costs through rates or the timing of such recovery, or require the Registrants to incur additional expenses.

Changes to Michigan's electric retail access program could negatively impact the Registrants' financial performance. The State of Michigan currently experiences a hybrid market, where the MPSC continues to regulate electric rates for DTE Electric customers, while alternative electric suppliers charge market-based rates. MPSC rate orders, and energy legislation enacted by the State of Michigan, have placed a 10% cap on the total potential retail access migration. However, even with the legislated 10% cap on participation, there continues to be legislative and financial risk associated with the electric retail access program. Electric retail access migration is sensitive to market price and full service electric price changes. The Registrants are required under current regulation to provide full service to retail access customers that choose to return, potentially resulting in the need for additional generating capacity.

The Registrants' electric distribution system and DTE Energy's gas distribution system are subject to risks from their operation, which could reduce revenues, increase expenses, and have a material adverse effect on their business, financial position, and results of operations. The Registrants' electric distribution and DTE Energy's gas distribution systems are subject to many operational risks. These operational systems and infrastructure have been in service for many years. Equipment, even when maintained in accordance with good utility practices, is subject to operational failure, including events that are beyond the Registrants' control, and could require significant operation and maintenance expense or capital expenditures to operate efficiently. Because the Registrants' distribution systems are interconnected with those of third parties, the operation of the Registrants' systems could be adversely affected by unexpected or uncontrollable events occurring on the systems of such third parties.

DTE Energy's non-utility businesses may not perform to its expectations. DTE Energy relies on non-utility operations for an increasing portion of earnings. If DTE Energy's current and contemplated non-utility investments, including the acquisition of midstream natural gas assets in December 2019, do not perform at expected levels, DTE Energy could experience diminished earnings and a corresponding decline in shareholder value.

DTE Energy relies on cash flows from subsidiaries. DTE Energy is a holding company. Cash flows from the utility and non-utility subsidiaries are required to pay interest expenses and dividends on DTE Energy debt and securities. Should a major subsidiary not be able to pay dividends or transfer cash flows to DTE Energy, its ability to pay interest and dividends would be restricted.

The Registrants' businesses have safety risks. The Registrants' electric distribution system, power plants, renewable energy equipment, and other facilities, and DTE Energy's gas distribution system, gas infrastructure, and other facilities, could be involved in incidents that result in injury, death, or property loss to employees, customers, third parties, or the public. Although the Registrants have insurance coverage for many potential incidents, depending upon the nature and severity of any incident, they could experience financial loss, damage to their reputation, and negative consequences from regulatory agencies or other public authorities.

Environmental laws and liability may be costly. The Registrants are subject to, and affected by, numerous environmental regulations. These regulations govern air emissions, water quality, wastewater discharge, and disposal of solid and hazardous waste. Compliance with these regulations can significantly increase capital spending, operating expenses, and plant down times, and can negatively affect the affordability of the rates charged to customers.

Uncertainty around future environmental regulations creates difficulty planning long-term capital projects in the Registrants' generation fleet and, for DTE Energy's gas distribution businesses. These laws and regulations require the Registrants to seek a variety of environmental licenses, permits, inspections, and other regulatory approvals. The Registrants could be required to install expensive pollution control measures or limit or cease activities, including the retirement of certain generating plants, based on these regulations. Additionally, the Registrants may become a responsible party for environmental cleanup at sites identified by a regulatory body. The Registrants cannot predict with certainty the amount and timing of future expenditures related to environmental matters because of the difficulty of estimating cleanup costs. There is also uncertainty in quantifying liabilities under environmental laws that impose joint and several liability on potentially responsible parties.

The Registrants may also incur liabilities as a result of potential future requirements to address climate change issues. Proposals for voluntary initiatives and mandatory controls are being discussed both in the United States and worldwide to reduce GHGs such as carbon dioxide, a by-product of burning fossil fuels. If increased regulations of GHG emissions are implemented, the operations of DTE Electric's fossil-fueled generation assets may be significantly impacted. Since there can be no assurances that environmental costs may be recovered through the regulatory process, the Registrants' financial performance may be negatively impacted as a result of environmental matters.

For DTE Energy, future environmental regulation of natural gas extraction techniques, including hydraulic fracturing, being discussed both at the United States federal level and by some states may affect the profitability of natural gas extraction businesses which could affect demand for, and profitability of, DTE Energy's gas transportation businesses.

Threats of cyber incidents, physical security, and terrorism could affect the Registrants' business. Issues may threaten the Registrants such as cyber incidents, physical security, or terrorism that may disrupt the Registrants' operations, and could harm the Registrants' operating results.

Information security risks have increased in recent years as a result of the proliferation of new technologies and the increased sophistication and frequency of cyberattacks, and data security breaches. The Registrants' industry requires the continued operation of sophisticated information and control technology systems and network infrastructure. All of the Registrants' technology systems are vulnerable to disability or failures due to cyber incidents, physical security threats, acts of war or terrorism, and other causes, as well as loss of operational control of the Registrants' electric generation and distribution assets and, DTE Energy's gas distribution assets. If the Registrants' information technology systems were to fail and they were unable to recover in a timely way, the Registrants may be unable to fulfill critical business functions, which could have a material adverse effect on the Registrants' business, operating results, and financial condition.

Suppliers, vendors, contractors, and information technology providers have access to systems that support the Registrants' operations and maintain customer and employee data. A breach of these third-party systems could adversely affect the business as if it was a breach of our own system. Also, because the Registrants' generation and distribution systems are part of an interconnected system, a disruption caused by a cyber incident at another utility, electric generator, system operator, or commodity supplier could also adversely affect the Registrants' businesses, operating results, and financial condition.

In addition, the Registrants' generation plants and electrical distribution facilities, and DTE Energy's gas pipeline and storage facilities in particular, may be targets of physical security threats or terrorist activities that could disrupt the Registrants' ability to produce or distribute some portion of their products. The Registrants have increased security as a result of past events and may be required by regulators or by the future threat environment to make investments in security that the Registrants cannot currently predict.

Failure to maintain the security of personally identifiable information could adversely affect the Registrants. In connection with the Registrants' businesses, they collect and retain personally identifiable information of their customers, shareholders, and employees. Customers, shareholders, and employees expect that the Registrants will adequately protect their personal information. The regulatory environment surrounding information security and privacy is increasingly demanding. A significant theft, loss, or fraudulent use of customer, shareholder, employee, or Registrant data by cybercrime or otherwise, could adversely impact the Registrants' reputation, and could result in significant costs, fines, and litigation.

Construction and capital improvements to the Registrants' power facilities, DTE Energy's distribution systems and its Gas Storage and Pipelines business subject them to risk. The Registrants are managing ongoing, and planning future, significant construction and capital improvement projects at the Registrants' multiple power generation and distribution facilities, at DTE Energy's gas distribution system, and at DTE Energy's Gas Storage and Pipelines business. Many factors that could cause delays or increased prices for these complex projects are beyond the Registrants' control, including the cost of materials and labor, subcontractor performance, timing and issuance of necessary permits or approvals (including required certificates from regulatory agencies), construction disputes, impediments to acquiring rights-of-way or land rights on a timely basis and on acceptable terms, cost overruns, and weather conditions. Failure to complete these projects on schedule and on budget for any reason could adversely affect the Registrants' financial performance, operations, or expected investment returns at the affected facilities, businesses and development projects.

Operation of a nuclear facility subjects the Registrants to risk. Ownership of an operating nuclear generating plant subjects the Registrants to significant additional risks. These risks include, among others, plant security, environmental regulation and remediation, changes in federal nuclear regulation, increased capital expenditures to meet industry requirements, and operational factors that can significantly impact the performance and cost of operating a nuclear facility compared to other generation options. A specific example of increased capital expenditures to meet industry requirements is DTE Electric having an open Confirmatory Action Letter with the NRC to complete specific mitigation actions during the next periodic outage in 2020 and that DTE Electric will not bring the plant back on line until it is completed. Insurance maintained by the Registrants for various nuclear-related risks may not be sufficient to cover the Registrants' costs in the event of an accident or business interruption at the nuclear generating plant, which may affect the Registrants' financial performance. In addition, the Registrants' nuclear decommissioning trust fund, to finance the decommissioning of the nuclear generating plant, may not be sufficient to fund the cost of decommissioning. A decline in market value of assets held in decommissioning trust funds due to poor investment performance or other factors may increase the funding requirements for these obligations. Any increase in funding requirements may have a material impact on the Registrants' liquidity, financial position, or results of operations.

The supply and/or price of energy commodities and/or related services may impact the Registrants' financial results. The Registrants are dependent on coal for much of their electrical generating capacity as well as uranium for their nuclear operations. DTE Energy's access to natural gas supplies is critical to ensure reliability of service for utility gas customers. DTE Energy's non-utility businesses are also dependent upon supplies and prices of energy commodities and services. Price fluctuations, fuel supply disruptions, and changes in transportation costs, could have a negative impact on the amounts DTE Electric charges utility customers for electricity and DTE Gas charges utility customers for gas, and on the profitability of DTE Energy's non-utility businesses. The Registrants' hedging strategies and regulatory recovery mechanisms may be insufficient to mitigate the negative fluctuations in commodity supply prices at their utility or DTE Energy's non-utility businesses, and the Registrants' financial performance may therefore be negatively impacted by price fluctuations. The price of energy also impacts the market for DTE Energy's non-utility businesses, particularly those that compete with utilities and alternative electric suppliers as well as midstream services that depend on the demand for natural gas.

The supply and/or price of other industrial raw and finished inputs and/or related services may impact the Registrants' financial results. The Registrants are dependent on supplies of certain commodities, such as copper and limestone, among others, and industrial materials, and services in order to maintain day-to-day operations and maintenance of their facilities. Price fluctuations, or supply interruptions for these commodities and other items, could have a negative impact on the amounts charged to customers for the Registrants' utility products and, for DTE Energy, on the profitability of the non-utility businesses.

Emerging technologies may have a material adverse effect on the Registrants. Advances in technology that produce power or reduce power consumption include cost-effective renewable energy technologies, distributed generation, energy waste reduction technologies, and energy storage devices. Such developments may impact the price of energy, may affect energy deliveries as customer-owned generation becomes more cost-effective, may require further improvements to our distribution systems to address changing load demands, and could make portions of our electric system power supply and/or distribution facilities obsolete prior to the end of their useful lives. Such technologies could also result in further declines in commodity prices or demand for delivered energy. Each of these factors could materially affect the Registrants' results of operations, cash flows, or financial position.

Adverse changes in the Registrants' credit ratings may negatively affect them. Regional and national economic conditions, increased scrutiny of the energy industry and regulatory changes, as well as changes in the Registrants' economic performance, could result in credit agencies reexamining their credit ratings. While credit ratings reflect the opinions of the credit agencies issuing such ratings and may not necessarily reflect actual performance, a downgrade in the Registrants' credit ratings below investment grade could restrict or discontinue their ability to access capital markets and could result in an increase in their borrowing costs, a reduced level of capital expenditures, and could impact future earnings and cash flows. In addition, a reduction in the Registrants' credit ratings may require them to post collateral related to various physical or financially settled contracts for the purchase of energy-related commodities, products, and services, which could impact their liquidity.

Poor investment performance of pension and other postretirement benefit plan assets and other factors impacting benefit plan costs could unfavorably impact the Registrants' liquidity and results of operations. The Registrants' costs of providing non-contributory defined benefit pension plans and other postretirement benefit plans are dependent upon a number of factors, such as the rates of return on plan assets, the level of interest rates used to measure the required minimum funding levels of the plans, future government regulation, and the Registrants' required or voluntary contributions made to the plans. The performance of the debt and equity markets affects the value of assets that are held in trust to satisfy future obligations under the Registrants' plans. The Registrants have significant benefit obligations and hold significant assets in trust to satisfy these obligations. These assets are subject to market fluctuations and will yield uncertain returns, which may fall below the Registrants' projected return rates. A decline in the market value of the pension and other postretirement benefit plan assets will increase the funding requirements under the pension and other postretirement benefit plans if the actual asset returns do not recover these declines in the foreseeable future. Additionally, the pension and other postretirement benefit plan liabilities are sensitive to changes in interest rates. If interest rates decrease, the liabilities increase, resulting in increasing benefit expense and funding requirements. Also, if future increases in pension and other postretirement benefit costs as a result of reduced plan assets are not recoverable from the Registrants' utility customers, the results of operations and financial position of the Registrants could be negatively affected. Without sustained growth in the plan investments over time to increase the value of plan assets, the Registrants could be required to fund these plans with significant amounts of cash. Such cash funding obligations could have a material impact on the Registrants' cash flows, financial position, or results of operations.

The Registrants' ability to access capital markets is important. The Registrants' ability to access capital markets is important to operate their businesses and to fund capital investments. Turmoil in credit markets may constrain the Registrants' ability, as well as the ability of their subsidiaries, to issue new debt, including commercial paper, and refinance existing debt at reasonable interest rates. In addition, the level of borrowing by other energy companies and the market as a whole could limit the Registrants' access to capital markets. The Registrants' long-term revolving credit facilities do not expire until 2024, but the Registrants regularly access capital markets to refinance existing debt or fund new projects at the Registrants' utilities and DTE Energy's non-utility businesses, and the Registrants cannot predict the pricing or demand for those future transactions.

DTE Energy's participation in energy trading markets subjects it to risk. Events in the energy trading industry have increased the level of scrutiny on the energy trading business and the energy industry as a whole. In certain situations, DTE Energy may be required to post collateral to support trading operations, which could be substantial. If access to liquidity to support trading activities is curtailed, DTE Energy could experience decreased earnings potential and cash flows. Energy trading activities take place in volatile markets and expose DTE Energy to risks related to commodity price movements, deviations in weather, and other related risks. DTE Energy's trading business routinely has speculative trading positions in the market, within strict policy guidelines DTE Energy sets, resulting from the management of DTE Energy's business portfolio. To the extent speculative trading positions exist, fluctuating commodity prices can improve or diminish DTE Energy's financial results and financial position. DTE Energy manages its exposure by establishing and enforcing strict risk limits and risk management procedures. During periods of extreme volatility, these risk limits and risk management procedures may not work as planned and cannot eliminate all risks associated with these activities.

Weather significantly affects operations. At both utilities, deviations from normal hot and cold weather conditions affect the Registrants' earnings and cash flows. Mild temperatures can result in decreased utilization of the Registrants' assets, lowering income and cash flows. At DTE Electric, ice storms, tornadoes, or high winds can damage the electric distribution system infrastructure and power generation facilities and require it to perform emergency repairs and incur material unplanned expenses. The expenses of storm restoration efforts may not be fully recoverable through the regulatory process. DTE Gas can experience higher than anticipated expenses from emergency repairs on its gas distribution infrastructure required as a result of weather related issues.

Unplanned power plant outages may be costly. Unforeseen maintenance may be required to safely produce electricity or comply with environmental regulations. As a result of unforeseen maintenance, the Registrants may be required to make spot market purchases of electricity that exceed the costs of generation. The Registrants' financial performance may be negatively affected if unable to recover such increased costs.

Regional, national, and international economic conditions can have an unfavorable impact on the Registrants. The Registrants' utility and DTE Energy's non-utility businesses follow the economic cycles of the customers they serve and credit risk of counterparties they do business with. Should the financial conditions of some of DTE Energy's significant customers deteriorate as a result of regional, national or international economic conditions, reduced volumes of electricity and gas, and demand for energy services DTE Energy supplies, collections of accounts receivable, reductions in federal and state energy assistance funding, and potentially higher levels of lost gas or stolen gas and electricity could result in decreased earnings and cash flows.

Renewable portfolio standards and energy waste reduction may affect the Registrants' business and federal and state fuel standards may affect DTE Energy's non-utility investments. The Registrants are subject to existing Michigan, and potential future, federal legislation and regulation requiring them to secure sources of renewable energy. The Registrants have complied with the existing federal and state legislation, but do not know what requirements may be added by federal or state legislation in the future. In addition, the Registrants expect to comply with new Michigan legislation increasing the percentage of power required to be provided by renewable energy sources. The Registrants cannot predict the financial impact or costs associated with complying with potential future legislation and regulations. Compliance with these requirements can significantly increase capital expenditures and operating expenses and can negatively affect the affordability of the rates charged to customers.

In addition, the Registrants are also required by Michigan legislation to implement energy waste reduction measures and provide energy waste reduction customer awareness and education programs. These requirements necessitate expenditures, and implementation of these programs creates the risk of reducing the Registrants' revenues as customers decrease their energy usage. The Registrants cannot predict how these programs will impact their business and future operating results.

DTE Energy's non-utility renewable natural gas investments are also dependent on the federal Renewable Fuel Standard and California's Low Carbon Fuel Standard. Changes to these standards may affect DTE Energy's business and result in lower earnings.

Failure to attract and retain key executive officers and other skilled professional and technical employees could have an adverse effect on the Registrants' operations. The Registrants' businesses are dependent on their ability to attract and retain skilled employees. Competition for skilled employees in some areas is high, and the inability to attract and retain these employees could adversely affect the Registrants' business and future operating results. In addition, the Registrants have an aging utility workforce, and the failure of a successful transfer of knowledge and expertise could negatively impact their operations.

A work interruption may adversely affect the Registrants. There are several bargaining units for DTE Energy's approximately 5,300 and DTE Electric's approximately 2,800 represented employees. The majority of represented employees are under contracts that expire in 2021 and 2022. A union choosing to strike would have an impact on the Registrants' businesses. The Registrants are unable to predict the effect a work stoppage would have on their costs of operations and financial performance.

DTE Energy's ability to utilize production tax credits may be limited. To reduce U.S. dependence on imported oil, the Internal Revenue Code provides production tax credits as an incentive for taxpayers to produce fuels and electricity from alternative sources. The Registrants generated production tax credits from renewable energy generation and DTE Energy generated production tax credits from renewable gas recovery, reduced emission fuel, and gas production operations. If the Registrants' production tax credits were disallowed in whole or in part as a result of an IRS audit or changes in tax law, there could be additional tax liabilities owed for previously recognized tax credits that could significantly impact the Registrants' earnings and cash flows.

If DTE Energy's goodwill or other intangible assets become impaired, it may be required to record a charge to earnings. DTE Energy annually reviews the carrying value of goodwill associated with acquisitions it has made for impairment. Goodwill and other intangible assets are also reviewed on a quarterly basis whenever events or circumstances indicate that the carrying value of these assets may not be recoverable. Factors that may be considered for purposes of this analysis include a decline in stock price and market capitalization, slower industry growth rates, or material changes with customers or contracts that could negatively impact future cash flows. DTE Energy cannot predict the timing, strength, or duration of such changes or any subsequent recovery. If the carrying value of any goodwill or other intangible assets are determined to be not recoverable, DTE Energy may take a non-cash impairment charge, which could materially impact DTE Energy's results of operations and financial position.

The Registrants may not be fully covered by insurance. The Registrants have a comprehensive insurance program in place to provide coverage for various types of risks, including catastrophic damage as a result of severe weather or other natural disasters, war, terrorism, cyber incidents, or a combination of other significant unforeseen events that could impact the Registrants' operations. Economic losses might not be covered in full by insurance, or the Registrants' insurers may be unable to meet contractual obligations.

Item 1B. Unresolved Staff Comments

None.

Item 3. Legal Proceedings

For more information on legal proceedings and matters related to the Registrants, see Notes 10 and 19 to the Consolidated Financial Statements in Item 8 of this Report, "Regulatory Matters" and "Commitments and Contingencies," respectively.

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

DTE Energy common stock is listed under the ticker symbol "DTE" on the New York Stock Exchange, which is the principal market for such stock.

At December 31, 2019, there were 192,208,533 shares of DTE Energy common stock outstanding. These shares were held by a total of 49,151 shareholders of record.

All of the 138,632,324 issued and outstanding shares of DTE Electric common stock, par value \$10 per share, are indirectly-owned by DTE Energy, and constitute 100% of the voting securities of DTE Electric. Therefore, no market exists for DTE Electric's common stock.

For information on DTE Energy dividend restrictions, see Note 17 to the Consolidated Financial Statements in Item 8 of this Report, "Short-Term Credit Arrangements and Borrowings."

All of DTE Energy's equity compensation plans that provide for the annual awarding of stock-based compensation have been approved by shareholders. For additional detail, see Note 22 to the Consolidated Financial Statements in Item 8 of this Report, "Stock-Based Compensation."

See the following table for information as of December 31, 2019:

	Number of Securities to be Issued Upon Exercise of Outstanding Options	Weighted-Average Exercise Price of Outstanding Options	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Plans approved by shareholders	15,000	\$ 43.95	1,949,254

UNREGISTERED SALES OF DTE ENERGY EQUITY SECURITIES AND USE OF PROCEEDS

Purchases of DTE Energy Equity Securities by the Issuer and Affiliated Purchasers

The following table provides information about DTE Energy's purchases of equity securities that are registered by DTE Energy pursuant to Section 12 of the Exchange Act of 1934 for the quarter ended December 31, 2019:

	Number of Shares Purchased ^(a)	Average Price Paid per Share ^(a)	Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Average Price Paid per Share	Maximum Dollar Value that May Yet Be Purchased Under the Plans or Programs
10/01/2019 — 10/31/2019	2,739	\$ 119.84	—	—	—
11/01/2019 — 11/30/2019	876	\$ 115.52	—	—	—
12/01/2019 — 12/31/2019	—	\$ —	—	—	—
Total	<u>3,615</u>		<u>—</u>		

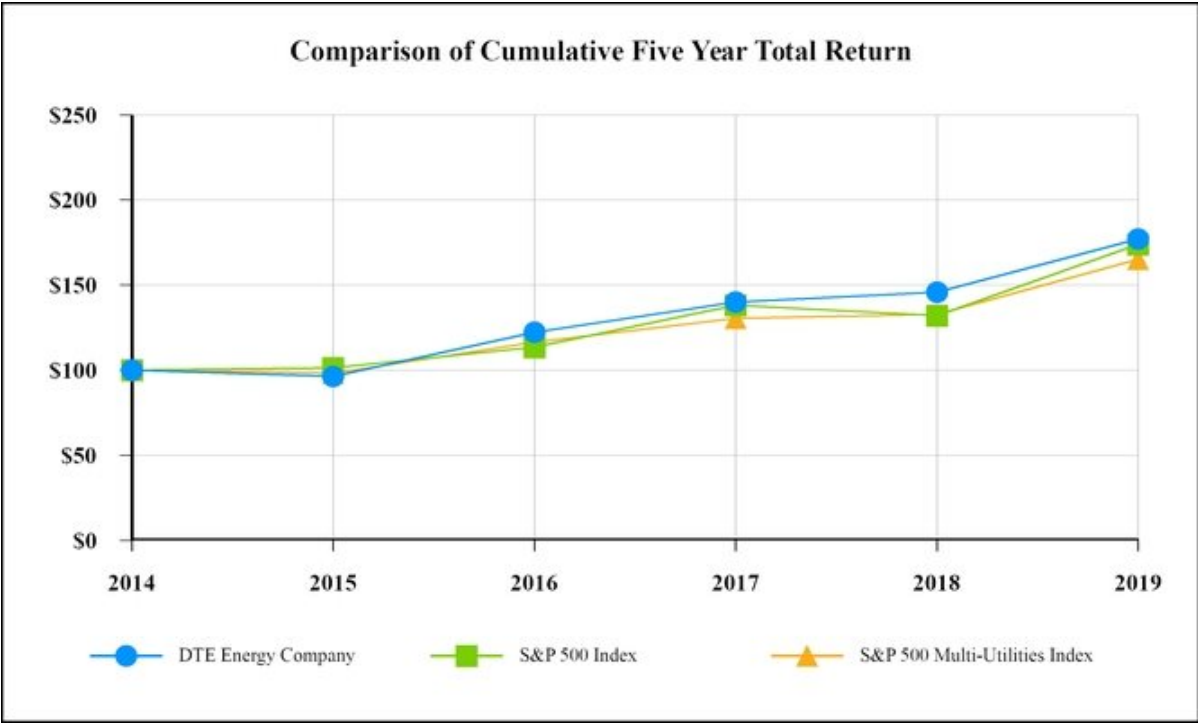
(a) Represents shares of DTE Energy common stock withheld to satisfy income tax obligations upon the vesting of restricted stock based on the price in effect at the grant date.

COMPARISON OF CUMULATIVE FIVE YEAR TOTAL RETURN

**Total Return to DTE Energy Shareholders
(Includes reinvestment of dividends)**

Company/Index	Annual Return Percentage Year Ended December 31,				
	2015	2016	2017	2018	2019
DTE Energy Company	(3.77)	26.93	14.59	4.19	21.36
S&P 500 Index	1.38	11.95	21.82	(4.39)	31.48
S&P 500 Multi-Utilities Index	(1.73)	18.56	12.09	1.77	24.36

Company/Index	Indexed Returns Year Ended December 31,					
	Base Period 2014	2015	2016	2017	2018	2019
DTE Energy Company	100.00	96.23	122.14	139.96	145.83	176.98
S&P 500 Index	100.00	101.38	113.50	138.27	132.19	173.81
S&P 500 Multi-Utilities Index	100.00	98.27	116.51	130.59	132.89	165.27



Item 6. Selected Financial Data

The following selected financial data of DTE Energy should be read in conjunction with the accompanying Management's Discussion and Analysis in Item 7 of this Report and Combined Notes to Consolidated Financial Statements in Item 8 of this Report. This information has been omitted for DTE Electric per General Instruction I (2) (a) of Form 10-K for wholly-owned subsidiaries (reduced disclosure format).

	2019	2018	2017	2016	2015
	(In millions, except per share amounts)				
Operating Revenues	\$ 12,669	\$ 14,212	\$ 12,607	\$ 10,630	\$ 10,337
Net Income Attributable to DTE Energy Company ^(a)	\$ 1,169	\$ 1,120	\$ 1,134	\$ 868	\$ 727
Diluted Earnings Per Common Share	\$ 6.31	\$ 6.17	\$ 6.32	\$ 4.83	\$ 4.05
Financial Information					
Dividends declared per share of common stock	\$ 3.85	\$ 3.60	\$ 3.36	\$ 3.06	\$ 2.84
Total Assets	\$ 41,882	\$ 36,288	\$ 33,767	\$ 32,041	\$ 28,662
Long-Term Debt ^(b)	\$ 15,935	\$ 12,134	\$ 12,185	\$ 11,269	\$ 8,760
Shareholders' equity	\$ 11,672	\$ 10,237	\$ 9,512	\$ 9,011	\$ 8,772

(a) The 2017 results include a \$105 million net income tax benefit related to the enactment of the TCJA.

(b) Long-Term Debt includes Finance lease obligations and excludes debt due within one year.

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

The following combined discussion is separately filed by DTE Energy and DTE Electric. However, DTE Electric does not make any representations as to information related solely to DTE Energy or the subsidiaries of DTE Energy other than itself.

EXECUTIVE OVERVIEW

DTE Energy is a diversified energy company with 2019 Operating Revenues of approximately \$12.7 billion and Total Assets of approximately \$41.9 billion. DTE Energy is the parent company of DTE Electric and DTE Gas, regulated electric and natural gas utilities engaged primarily in the business of providing electricity and natural gas sales, distribution, and storage services throughout Michigan. DTE Energy operates three energy-related non-utility segments with operations throughout the United States.

The following table summarizes DTE Energy's financial results:

	Years Ended December 31,		
	2019	2018	2017
	(In millions, except per share amounts)		
Net Income Attributable to DTE Energy Company	\$ 1,169	\$ 1,120	\$ 1,134
Diluted Earnings per Common Share	\$ 6.31	\$ 6.17	\$ 6.32

The increase in 2019 Net Income Attributable to DTE Energy Company was primarily due to higher earnings in the Electric and Gas segments, partially offset by lower earnings in the Gas Storage and Pipelines and Power and Industrial Projects segments. The decrease in 2018 Net Income Attributable to DTE Energy Company was primarily due to lower earnings in the Gas Storage and Pipelines, Energy Trading, and Corporate and Other segments, partially offset by higher earnings in the Electric, Gas, and Power and Industrial Projects segments. The 2018 decrease was primarily due to higher Income Tax Expense, as 2017 included a one-time net income tax benefit of \$105 million related to the enactment of the TCJA.

Please see detailed explanations of segment performance in the following "Results of Operations" section.

DTE Energy's strategy is to achieve long-term earnings growth, a strong balance sheet, and an attractive dividend yield.

DTE Energy's utilities are investing capital to improve customer reliability through investments in base infrastructure and new generation, and to comply with environmental requirements. DTE Energy expects that planned significant capital investments will result in earnings growth. DTE Energy is focused on executing plans to achieve operational excellence and customer satisfaction with a focus on customer affordability. DTE Energy operates in a constructive regulatory environment and has solid relationships with its regulators.

In March 2019, DTE Energy announced updated plans for accelerating its reduction of carbon emissions to 32% by the early 2020s, 50% by 2030, and 80% by 2040 from the 2005 carbon emissions levels. In September 2019, DTE Energy expanded on its commitment by announcing a net zero carbon emissions goal by 2050 for DTE Electric. To achieve the reduction goals in the near term, DTE Energy will transition away from coal-powered sources and incorporate more renewable energy, energy waste reduction projects, demand response, and natural gas fueled generation. DTE Energy has already begun the transition in the way it produces power through the continued retirement of its aging coal-fired plants. Refer to the "Capital Investments" section below for further discussion.

DTE Energy has significant investments in non-utility businesses. DTE Energy employs disciplined investment criteria when assessing growth opportunities that leverage its assets, skills, and expertise, and provides diversity in earnings and geography. Specifically, DTE Energy invests in targeted energy markets with attractive competitive dynamics where meaningful scale is in alignment with its risk profile. DTE Energy expects growth opportunities in the Gas Storage and Pipelines and Power and Industrial Projects segments.

A key priority for DTE Energy is to maintain a strong balance sheet which facilitates access to capital markets and reasonably priced short-term and long-term financing. Near-term growth will be funded through internally generated cash flows and the issuance of debt and equity. DTE Energy has an enterprise risk management program that, among other things, is designed to monitor and manage exposure to earnings and cash flow volatility related to commodity price changes, interest rates, and counterparty credit risk.

CAPITAL INVESTMENTS

DTE Energy's utility businesses require significant capital investments to maintain and improve the electric generation and electric and natural gas distribution infrastructure and to comply with environmental regulations and renewable energy requirements.

DTE Electric's capital investments over the 2020-2024 period are estimated at \$12.0 billion comprised of \$4.0 billion for capital replacements and other projects, \$5.0 billion for distribution infrastructure, and \$3.0 billion for new generation. DTE Electric has retired five coal-fired generation units at the Trenton Channel, River Rouge, and St. Clair facilities and has announced plans to retire its remaining twelve coal-fired generating units. Six of these coal-fired generating units will be retired through 2022 at the Trenton Channel, River Rouge, and St. Clair facilities. The remaining coal-fired generating units at the Belle River and Monroe facilities are expected to be retired by 2040. The retired facilities will be replaced with renewables, energy waste reduction, demand response, and natural gas fueled generation.

DTE Gas' capital investments over the 2020-2024 period are estimated at \$3.0 billion comprised of \$1.4 billion for base infrastructure, and \$1.6 billion for gas main renewal, meter move out, and pipeline integrity programs.

DTE Electric and DTE Gas plan to seek regulatory approval for capital expenditures consistent with ratemaking treatment.

DTE Energy's non-utility businesses' capital investments are primarily for expansion, growth, and ongoing maintenance. Gas Storage and Pipelines' capital investments over the 2020-2024 period are estimated at \$2.2 billion to \$2.7 billion for gathering and pipeline investments and expansions. Power and Industrial Projects' capital investments over the 2020-2024 period are estimated at \$1.0 billion to \$1.4 billion for industrial energy services and RNG projects.

ENVIRONMENTAL MATTERS

The Registrants are subject to extensive environmental regulations. Additional costs may result as the effects of various substances on the environment are studied and governmental regulations are developed and implemented. Actual costs to comply could vary substantially. The Registrants expect to continue recovering environmental costs related to utility operations through rates charged to customers, as authorized by the MPSC.

Air — DTE Electric is subject to the EPA ozone and fine particulate transport and acid rain regulations that limit power plant emissions of SO₂ and NO_x. The EPA and the State of Michigan have also issued emission reduction regulations relating to ozone, fine particulate, regional haze, mercury, and other air pollution. These rules have led to controls on fossil-fueled power plants to reduce SO₂, NO_x, mercury, and other emissions. Additional rulemakings may occur over the next few years which could require additional controls for SO₂, NO_x, and other hazardous air pollutants. To comply with existing requirements, DTE Electric spent approximately \$2.4 billion through 2019. DTE Electric does not anticipate additional capital expenditures through 2026, pending the results of future rulemakings.

The EPA has implemented regulatory actions under the Clean Air Act to address emissions of GHGs from the utility sector and other sectors of the economy. Among these actions, in 2015 the EPA finalized performance standards for emissions of carbon dioxide from new and existing fossil-fuel EGUs. In 2019 the performance standards for existing EGUs (also known as the Clean Power Plan) were officially repealed and replaced by the ACE Rule. The ACE Rule requires the state of Michigan to submit a plan in 2022 that includes GHG standards for existing coal-fired power plant units in Michigan. It is not possible to determine the potential impact of the EPA's ACE rule on existing sources at this time.

Pending or future legislation or other regulatory actions could have a material impact on DTE Electric's operations and financial position and the rates charged to its customers. Impacts include expenditures for environmental equipment beyond what is currently planned, financing costs related to additional capital expenditures, the purchase of emission credits from market sources, higher costs of purchased power, and the retirement of facilities where control equipment is not economical. DTE Electric would seek to recover these incremental costs through increased rates charged to its utility customers, as authorized by the MPSC.

Increased costs for energy produced from traditional coal-based sources due to recent, pending, and future regulatory initiatives, could also increase the economic viability of energy produced from renewable, natural gas fueled generation, and/or nuclear sources, energy waste reduction initiatives, and the potential development of market-based trading of carbon instruments which could provide new business opportunities for DTE Energy's utility and non-utility segments. At the present time, it is not possible to quantify the financial impacts of these climate related regulatory initiatives on the Registrants or their customers.

See Items 1. and 2. Business and Properties and Note 19 to the Consolidated Financial Statements in Item 8 of this Report, "Commitments and Contingencies," for further discussion of Environmental Matters.

OUTLOOK

The next few years will be a period of rapid change for DTE Energy and for the energy industry. DTE Energy's strong utility base, combined with its integrated non-utility operations, position it well for long-term growth.

Looking forward, DTE Energy will focus on several areas that are expected to improve future performance:

- electric and gas customer satisfaction;
- electric distribution system reliability;
- new electric generation;
- gas distribution system renewal;
- rate competitiveness and affordability;
- regulatory stability and investment recovery for the electric and gas utilities;
- employee safety and engagement;
- cost structure optimization across all business segments;
- cash, capital, and liquidity to maintain or improve financial strength; and
- investments that integrate assets and leverage skills and expertise.

DTE Energy will continue to pursue opportunities to grow its businesses in a disciplined manner if it can secure opportunities that meet its strategic, financial, and risk criteria.

RESULTS OF OPERATIONS

Management's Discussion and Analysis of Financial Condition and Results of Operations includes financial information prepared in accordance with GAAP, as well as the non-GAAP financial measures, Utility Margin and Non-utility Margin, discussed below, which DTE Energy uses as measures of its operational performance. Generally, a non-GAAP financial measure is a numerical measure of financial performance, financial position or cash flows that excludes (or includes) amounts that are included in (or excluded from) the most directly comparable measure calculated and presented in accordance with GAAP.

DTE Energy uses Utility Margin and Non-utility Margin, non-GAAP financial measures, to assess its performance by reportable segment.

Utility Margin includes electric utility and gas utility Operating Revenues net of Fuel, purchased power, and gas expenses. The utilities' fuel, purchased power, and natural gas supply are passed through to customers, and therefore, result in changes to the utilities' revenues that are comparable to changes in such expenses. As such, DTE Energy believes Utility Margin provides a meaningful basis for evaluating the utilities' operations across periods, as it excludes the revenue effect of fluctuations in these expenses. For the Electric segment, non-utility Operating Revenues are reported separately so that Utility Margin can be used to assess utility performance.

The Non-utility Margin relates to the Power and Industrial Projects and Energy Trading segments. For the Power and Industrial Projects segment, Non-utility Margin primarily includes Operating Revenues net of Fuel, purchased power, and gas expenses. Operating Revenues include sales of refined coal to third parties and the affiliated Electric utility, metallurgical coke and related by-products, petroleum coke, renewable natural gas, and electricity, as well as rental income and revenues from utility-type consulting, management, and operational services. For the Energy Trading segment, Non-utility Margin includes revenue and realized and unrealized gains and losses from physical and financial power and gas marketing, optimization, and trading activities, net of Purchased power and gas related to these activities. DTE Energy evaluates its operating performance of these non-utility businesses using the measure of Operating Revenues net of Fuel, purchased power, and gas expenses.

Utility Margin and Non-utility Margin are not measures calculated in accordance with GAAP and should be viewed as a supplement to and not a substitute for the results of operations presented in accordance with GAAP. Utility Margin and Non-utility Margin do not intend to represent operating income, the most comparable GAAP measure, as an indicator of operating performance and are not necessarily comparable to similarly titled measures reported by other companies.

The following sections provide a detailed discussion of the operating performance and future outlook of DTE Energy's segments. Segment information, described below, includes intercompany revenues and expenses, and other income and deductions that are eliminated in the Consolidated Financial Statements.

	2019	2018	2017
	(In millions)		
Net Income (Loss) Attributable to DTE Energy by Segment			
Electric	\$ 714	\$ 664	\$ 606
Gas	185	150	146
Gas Storage and Pipelines	204	235	275
Power and Industrial Projects	133	161	138
Energy Trading	49	39	72
Corporate and Other	(116)	(129)	(103)
Net Income Attributable to DTE Energy Company	<u>\$ 1,169</u>	<u>\$ 1,120</u>	<u>\$ 1,134</u>

ELECTRIC

The Results of Operations discussion for DTE Electric is presented in a reduced disclosure format in accordance with General Instruction I (2) (a) of Form 10-K for wholly-owned subsidiaries.

The Electric segment consists principally of DTE Electric. Electric results are discussed below:

	2019	2018	2017
	(In millions)		
Operating Revenues — Utility operations	\$ 5,224	\$ 5,298	\$ 5,102
Fuel and purchased power — utility	1,387	1,552	1,454
Utility Margin	3,837	3,746	3,648
Operating Revenues — Non-utility operations	5	—	—
Operation and maintenance	1,434	1,437	1,382
Depreciation and amortization	949	836	753
Taxes other than income	311	307	302
Asset (gains) losses and impairments, net	13	(1)	—
Operating Income	1,135	1,167	1,211
Other (Income) and Deductions	284	310	284
Income Tax Expense	137	193	321
Net Income Attributable to DTE Energy Company	\$ 714	\$ 664	\$ 606

See DTE Electric's Consolidated Statements of Operations in Item 8 of this Report for a complete view of its results. Differences between the Electric segment and DTE Electric's Consolidated Statements of Operations are primarily due to the classification of certain benefit costs. Refer to Note 21 to the Consolidated Financial Statements, "Retirement Benefits and Trusteed Assets" for additional information.

Utility Margin increased \$91 million in 2019 and \$98 million in 2018. Revenues associated with certain mechanisms and surcharges are offset by related expenses elsewhere in the Registrants' Consolidated Statements of Operations.

The following table details changes in various Utility Margin components relative to the comparable prior period:

	2019	2018
	(In millions)	
Implementation of new rates	\$ 183	\$ 51
Regulatory mechanism - RPS	27	(4)
Regulatory mechanism - TRM	(11)	40
Base Sales	(23)	(3)
Weather	(109)	152
PSCR disallowance in 2017	—	13
TCJA rate reduction	—	(156)
Other regulatory mechanisms and other	24	5
Increase in Utility Margin	\$ 91	\$ 98

	2019	2018	2017
	(In thousands of MWh)		
DTE Electric Sales			
Residential	15,066	15,959	14,885
Commercial	16,955	17,282	17,283
Industrial	9,826	10,324	9,897
Other	226	221	258
	<u>42,073</u>	<u>43,786</u>	<u>42,323</u>
Interconnection sales ^(a)	3,046	2,796	2,623
Total DTE Electric Sales	<u>45,119</u>	<u>46,582</u>	<u>44,946</u>
DTE Electric Deliveries			
Retail and wholesale	42,073	43,786	42,323
Electric retail access, including self-generators ^(b)	4,550	4,737	4,820
Total DTE Electric Sales and Deliveries	<u>46,623</u>	<u>48,523</u>	<u>47,143</u>

(a) Represents power that is not distributed by DTE Electric.

(b) Represents deliveries for self-generators that have purchased power from alternative energy suppliers to supplement their power requirements.

DTE Electric changes in sales for residential, commercial, and industrial are primarily due to less favorable weather in 2019 compared to 2018.

Operating Revenues — Non-utility operations increased \$5 million in 2019 due to renewable energy projects acquired by DTE Sustainable Generation in September 2019.

Operation and maintenance expense decreased \$3 million in 2019 and increased \$55 million in 2018. The decrease in 2019 was primarily due to decreased uncollectible expense of \$19 million and decreased generation expense of \$3 million, partially offset by higher tree trim expense of \$20 million (tree trim expenses increased by \$63 million but were offset by amounts deferred to a regulatory asset of \$43 million). The increase in 2018 was primarily due to increased uncollectible expense of \$34 million due to customer billing initiatives following implementation of the new billing system, increased power plant generation expense of \$24 million, an increase in energy waste reduction expense of \$10 million to meet higher energy savings targets, partially offset by decreased distribution operations expense of \$13 million.

Depreciation and amortization expense increased \$113 million in 2019 and \$83 million in 2018. In 2019, the increase was primarily due to a \$124 million increase resulting from a higher depreciable base and change in depreciation rates effective May 2019, a \$6 million increase associated with the RPS and a \$4 million increase resulting from new non-utility assets at DTE Sustainable Generation, partially offset by a decrease of \$17 million associated with the TRM. In 2018, the increase was primarily due to an increase to depreciable base of \$46 million and an increase of \$42 million associated with the TRM, partially offset by a decrease in regulatory asset amortization of \$5 million.

Asset (gains) losses and impairments, net increased \$14 million in 2019 and decreased \$1 million in 2018. In 2019, the increase was primarily due to previously recorded capital expenditures of \$13 million that were disallowed in the May 2, 2019 rate order.

Other (Income) and Deductions decreased \$26 million in 2019 and increased \$26 million in 2018. The decrease in 2019 was primarily due to a change in investment earnings (gain of \$37 million in 2019 compared to a loss of \$11 million in 2018) and lower non-operating retirement benefits expense of \$12 million, partially offset by higher interest expense of \$32 million. The increase in 2018 was primarily due to higher interest expense of \$9 million and change in investment earnings (loss of \$11 million in 2018 compared to a gain of \$26 million in 2017), partially offset by decreased non-operating retirement benefits expense of \$13 million and a contribution to the DTE Energy Foundation of \$7 million in 2017.

Income Tax Expense decreased \$56 million in 2019 and \$128 million in 2018. The decrease in 2019 was primarily due to TCJA regulatory liability amortization of \$35 million and higher production tax credits in 2019. The decrease in 2018 was primarily due to the reduction in the federal tax rate in the TCJA that was enacted in December 2017.

Outlook — DTE Electric will continue to move forward in its efforts to achieve operational excellence, sustain strong cash flows, and earn its authorized return on equity. DTE Electric expects that planned significant capital investments will result in earnings growth. DTE Electric will maintain a strong focus on customers by increasing reliability and satisfaction while keeping customer rate increases affordable. Looking forward, additional factors may impact earnings such as weather, the outcome of regulatory proceedings, benefit plan design changes, investment returns and changes in discount rate assumptions in benefit plans and health care costs, uncertainty of legislative or regulatory actions regarding climate change, and effects of energy waste reduction programs.

DTE Electric filed a rate case with the MPSC on July 8, 2019 requesting an increase in base rates of \$351 million based on a projected twelve-month period ending April 30, 2021. The requested increase in base rates is primarily due to an increase in net plant resulting from infrastructure and generation investments. The rate filing also requests an increase in return on equity from 10.0% to 10.5% and includes projected changes in sales and operating and maintenance expenses. A final MPSC order in this case is expected by May 2020. Refer to Note 10 to the Consolidated Financial Statements, "Regulatory Matters" for additional information.

GAS

The Gas segment consists principally of DTE Gas. Gas results are discussed below:

	2019	2018	2017
	(In millions)		
Operating Revenues — Utility operations	\$ 1,482	\$ 1,436	\$ 1,388
Cost of gas — utility	427	446	443
Utility Margin	1,055	990	945
Operation and maintenance	515	502	449
Depreciation and amortization	144	133	123
Taxes other than income	80	73	65
Operating Income	316	282	308
Other (Income) and Deductions	69	65	84
Income Tax Expense	62	67	78
Net Income Attributable to DTE Energy Company	\$ 185	\$ 150	\$ 146

Utility Margin increased \$65 million in 2019 and \$45 million in 2018. Revenues associated with certain mechanisms and surcharges are offset by related expenses elsewhere in DTE Energy's Consolidated Statements of Operations.

The following table details changes in various Utility Margin components relative to the comparable prior period:

	2019	2018
	(In millions)	
Implementation of new rates	\$ 32	\$ 15
Midstream storage and transportation revenues	20	15
Weather	8	46
Regulatory mechanism — RDM	2	(3)
TCJA rate reduction liability	—	(40)
Other regulatory mechanisms and other	3	12
Increase in Utility Margin	\$ 65	\$ 45

	2019	2018	2017
	(In Bcf)		
Gas Markets			
Gas sales	139	135	119
End-user transportation	185	187	165
	324	322	284
Intermediate transportation	497	329	260
Total Gas sales	821	651	544

Operation and maintenance expense increased \$13 million in 2019 and \$53 million in 2018. The increase in 2019 was primarily due to higher gas operations expenses of \$22 million, which included higher pipeline integrity and other operating costs, and higher customer service costs of \$4 million, partially offset by decreased uncollectible expense of \$14 million. The increase in 2018 was primarily due to increased uncollectible expense of \$28 million due to customer billing initiatives following implementation of a new customer billing system and higher gas operations expenses of \$22 million, which included increased investment spending and higher pipeline integrity expenses.

Depreciation and amortization expense increased \$11 million in 2019 and \$10 million in 2018. The increase in both periods was primarily due to increases in depreciable base.

Other (Income) and Deductions increased \$4 million in 2019 and decreased \$19 million in 2018. The increase in 2019 was primarily due to higher interest expense of \$8 million, partially offset by lower contributions to the DTE Energy Foundation and other not-for-profit organizations of \$6 million. The decrease in 2018 was primarily due to lower contributions to the DTE Energy Foundation and other not-for-profit organizations of \$27 million, partially offset by higher interest expense of \$6 million.

Income Tax Expense decreased \$5 million in 2019 and \$11 million in 2018. The decrease in 2019 was primarily due to the absence of a \$10 million TCJA expense recorded in 2018, partially offset by increased tax expense on higher earnings in 2019. The decrease in 2018 was primarily due to the reduction in the federal tax rate in the TCJA that was enacted in December 2017, partially offset by a \$10 million TCJA expense and the absence of the \$7 million favorable depreciation tax benefit that ended in 2017.

Outlook — DTE Gas will continue to move forward in its efforts to achieve operational excellence, sustain strong cash flows, and earn its authorized return on equity. DTE Gas expects that planned significant infrastructure capital investments will result in earnings growth. Looking forward, additional factors may impact earnings such as weather, the outcome of regulatory proceedings, benefit plan design changes, and investment returns and changes in discount rate assumptions in benefit plans and health care costs. DTE Gas expects to continue its efforts to improve productivity and decrease costs while improving customer satisfaction with consideration of customer rate affordability.

DTE Gas filed a rate case with the MPSC on November 25, 2019 requesting an increase in base rates of \$204 million based on a projected twelve-month period ending September 30, 2021. The requested increase in base rates is primarily due to an increase in net plant resulting from infrastructure investments and operating and maintenance expenses. The rate filing also requests an increase in return on equity from 10.0% to 10.5% and includes projected changes in sales and working capital. A final MPSC order in this case is expected by September 2020.

GAS STORAGE AND PIPELINES

The Gas Storage and Pipelines segment consists of the non-utility gas pipelines and storage businesses. Gas Storage and Pipelines results are discussed below:

	2019	2018	2017
	(In millions)		
Operating Revenues — Non-utility operations	\$ 501	\$ 485	\$ 453
Cost of gas — Non-utility	18	22	30
Operation and maintenance	120	103	83
Depreciation and amortization	94	82	76
Taxes other than income	8	8	8
Asset (gains) losses and impairments, net	1	—	2
Operating Income	260	270	254
Other (Income) and Deductions	(34)	(61)	(18)
Income Tax Expense (Benefit)	74	68	(30)
Net Income	220	263	302
Less: Net Income Attributable to Noncontrolling Interests	16	28	27
Net Income Attributable to DTE Energy Company	\$ 204	\$ 235	\$ 275

Operating Revenues — Non-utility operations increased \$16 million in 2019 and \$32 million in 2018. The increase in both periods was primarily due to higher pipeline and gathering revenues, partially offset by lower physical sales of gas from AGS customers and lower storage revenues. The 2019 increase includes the acquisition of Blue Union in December 2019 and the first full year of Birdsboro Pipeline operations.

Cost of gas — Non-utility decreased \$4 million in 2019 and \$8 million in 2018. The decrease in both periods was driven primarily by lower physical purchases of gas from AGS customers.

Operation and maintenance expense increased \$17 million in 2019 and \$20 million in 2018. The 2019 increase was primarily due to transaction costs associated with the Blue Union and LEAP acquisition and higher labor related expenses. The 2018 increase was primarily due to higher labor related expenses and additional compression activity on the Bluestone Pipeline and Susquehanna gathering systems.

Depreciation and amortization expense increased \$12 million in 2019 and \$6 million in 2018. The 2019 increase was primarily due to additional pipeline and gathering assets placed into service during the year.

Other (Income) and Deductions decreased \$27 million in 2019 and increased \$43 million in 2018. The 2019 decrease was primarily due to lower earnings from pipeline investments and higher interest expense. The 2018 increase was primarily due to higher earnings from pipeline investments and a \$16 million net loss on extinguishment of debt within the storage business in 2017, partially offset by higher interest expense.

Income Tax Expense (Benefit) increased \$6 million in 2019 and \$98 million in 2018. The 2018 increase was primarily driven by the \$115 million remeasurement of deferred tax assets and liabilities to reflect the reduction in the corporate tax rate from the enactment of the TCJA in December 2017.

Net Income Attributable to Noncontrolling Interests decreased \$12 million in 2019 and increased \$1 million in 2018. The 2019 decrease was primarily due to the May 2019 purchase of an additional 30% ownership interest in SGG.

See Note 4 to the Consolidated Financial Statements in Item 8 of this Report, "Acquisitions", for discussion of the acquisition of Blue Union and LEAP in December 2019.

Outlook — Significant expansion activities are underway to increase capacity of the Blue Union and LEAP assets, which provide natural gas gathering and other midstream services to producers located primarily in Louisiana.

DTE Energy believes its long-term agreements with producers and the quality of the natural gas reserves in the Marcellus/Utica and Haynesville shale regions soundly position the business for future growth. Gas Storage and Pipelines will continue to execute quality investments, with a focus on continued organic growth from well-positioned existing assets.

POWER AND INDUSTRIAL PROJECTS

The Power and Industrial Projects segment is comprised primarily of projects that deliver energy and utility-type products and services to industrial, commercial, and institutional customers, produce reduced emissions fuel, and sell electricity and pipeline-quality gas from renewable energy projects. Power and Industrial Projects results are discussed below:

	2019	2018	2017
	(In millions)		
Operating Revenues — Non-utility operations	\$ 1,560	\$ 2,204	\$ 2,089
Fuel, purchased power, and gas — non-utility	1,220	1,888	1,813
Non-utility Margin	340	316	276
Operation and maintenance	328	363	342
Depreciation and amortization	69	67	72
Taxes other than income	11	12	11
Asset (gains) losses and impairments, net	1	27	20
Operating Loss	(69)	(153)	(169)
Other (Income) and Deductions	(126)	(89)	(63)
Income Taxes			
Expense (Benefit)	20	(7)	(42)
Production Tax Credits	(83)	(188)	(153)
	(63)	(195)	(195)
Net Income	120	131	89
Less: Net Loss Attributable to Noncontrolling Interests	(13)	(30)	(49)
Net Income Attributable to DTE Energy Company	\$ 133	\$ 161	\$ 138

Operating Revenues — Non-utility operations decreased \$644 million in 2019 and increased \$115 million in 2018. The changes are due to the following:

	2019
	(In millions)
Higher prices in the Steel business	\$ 24
Expired contract in the Renewables business	(17)
Lower revenue due to sale of membership interests and project terminations in the REF business	(645)
Other	(6)
	\$ (644)
	2018
	(In millions)
Higher demand due to improved conditions in the Steel business	\$ 59
Higher production in the Renewables business	25
Higher production, offset by lower coal prices in the REF business	18
Higher sales primarily associated with new contracts in the On-site business	13
	\$ 115

Non-utility Margin increased \$24 million in 2019 and \$40 million in 2018. The changes are due to the following:

	<u>2019</u>	
	(In millions)	
Higher due to sale of membership interests and project terminations in the REF business	\$	22
Higher prices in the Steel business		19
Expired contract in the Renewables business		(18)
Other		1
	<u>\$</u>	<u>24</u>

	<u>2018</u>	
	(In millions)	
Higher production in the Renewables business	\$	20
Higher sales primarily associated with new contracts in the On-site business		12
Higher demand due to improved conditions in the Steel business		8
	<u>\$</u>	<u>40</u>

Operation and maintenance expense decreased \$35 million in 2019 and increased \$21 million in 2018. The 2019 decrease was primarily due to \$33 million associated with the sale of membership interests in the REF business and \$9 million lower spend in the Renewables business primarily due to an expired contract, partially offset by \$7 million higher maintenance spend in the Steel business. The 2018 increase was primarily due to higher production in the REF business of \$11 million and new contracts in the On-site business of \$8 million.

Asset (gains) losses and impairments, net decreased \$26 million in 2019 and increased \$7 million in 2018. The change in both periods was primarily due to higher losses incurred in 2018, including \$15 million of a liability adjustment related to contingent consideration and an \$8 million asset write-off associated with the Renewable business in anticipation of a contract ending in 2020.

Other (Income) and Deductions increased \$37 million in 2019 and \$26 million in 2018. The 2019 increase was primarily due to the sale of membership interests in the REF business and higher equity earnings at various projects. The 2018 increase was primarily due to higher production in the REF business of \$20 million and decreased contributions to the DTE Energy Foundation of \$4 million.

Income Taxes — Expense (Benefit) decreased by \$27 million in 2019 from the net benefit of \$7 million in 2018 and by \$35 million in 2018 from the net benefit of \$42 million in 2017. The 2019 decrease was primarily due to the change in pretax income. The 2018 decrease was primarily due to the 2017 remeasurement of deferred tax assets and liabilities to reflect the reduction in the corporate tax rate from the enactment of the TCJA in December 2017.

Income Taxes — Production Tax Credits decreased by \$105 million in 2019 and increased \$35 million in 2018. The 2019 decrease was primarily due to the sale of membership interests in the REF business. The 2018 increase was primarily due to higher production in the REF business.

Net Loss Attributable to Noncontrolling Interests decreased by \$17 million in 2019 and by \$19 million in 2018. The 2019 decrease was primarily due to the sale of membership interests in the REF business. The 2018 decrease was primarily due to termination of a project in the REF business.

Outlook — In December 2019, Power and Industrial Projects signed an agreement with South Jersey Industries (“SJI”) to purchase an 8 MW combined heat and power generation facility that provides electricity and hot and chilled water to a hotel and casino in Atlantic City, New Jersey. The acquisition had a purchase price of \$100 million and is expected to close in early 2020.

Power and Industrial Projects will continue to leverage its extensive energy-related operating experience and project management capability to develop additional energy and renewable natural gas projects to serve energy intensive industrial customers in addition to optimizing the REF facilities until the phase out at the end of 2021.

ENERGY TRADING

Energy Trading focuses on physical and financial power, natural gas and environmental marketing and trading, structured transactions, enhancement of returns from its asset portfolio, and optimization of contracted natural gas pipeline transportation and storage positions. Energy Trading also provides natural gas, power, environmental and related services, which may include the management of associated storage and transportation contracts on the customers' behalf and the supply or purchase of environmental attributes to various customers. Energy Trading results are discussed below:

	2019	2018	2017
	(In millions)		
Operating Revenues — Non-utility operations	\$ 4,610	\$ 5,557	\$ 4,277
Purchased power and gas — non-utility	4,455	5,417	4,077
Non-utility Margin	155	140	200
Operation and maintenance	75	75	68
Depreciation and amortization	6	5	5
Taxes other than income	4	5	4
Operating Income	70	55	123
Other (Income) and Deductions	4	3	2
Income Tax Expense	17	13	49
Net Income Attributable to DTE Energy Company	<u>\$ 49</u>	<u>\$ 39</u>	<u>\$ 72</u>

Operating Revenues — Non-utility operations and *Purchased power and gas — non-utility* decreased in 2019 primarily due to lower gas prices and increased in 2018 primarily due to higher volumes and higher gas prices, primarily in the gas structured strategy.

Non-utility Margin increased \$15 million in 2019 and decreased \$60 million in 2018. The change in both periods was primarily due to timing from the unrealized and realized margins presented in the following tables:

	2019
	(In millions)
Unrealized Margins^(a)	
Favorable results, primarily in gas structured and gas transportation strategies ^(b)	\$ 104
Unfavorable results, primarily in environmental and gas trading, and power full requirements strategies	(28)
	<u>76</u>
Realized Margins^(a)	
Favorable results, primarily in power full requirements, environmental trading, and gas transportation strategies	74
Unfavorable results, primarily in gas structured and gas full requirements strategies ^(c)	(135)
	<u>(61)</u>
Increase in Non-utility Margin	<u>\$ 15</u>

(a) Natural gas structured transactions typically involve a physical purchase or sale of natural gas in the future and/or natural gas basis financial instruments which are derivatives and a related non-derivative pipeline transportation contract. These gas structured transactions can result in significant earnings volatility as the derivative components are marked-to-market without revaluing the related non-derivative contracts.

(b) Amount includes \$87 million of timing related gains related to gas strategies which will reverse in future periods as the underlying contracts settle.

(c) Amount includes \$61 million of timing related gains related to gas strategies recognized in previous periods that reversed as the underlying contracts settled.

	2018
	(In millions)
Unrealized Margins^(a)	
Favorable results, primarily in the power trading strategy	\$ 20
Unfavorable results, primarily in gas structured, and power full requirements strategies ^(b)	(100)
	(80)
Realized Margins^(a)	
Favorable results, primarily in the gas structured strategy	54
Unfavorable results, primarily in the power full requirements strategy ^(c)	(34)
	20
Decrease in Non-utility Margin	\$ (60)

- (a) Natural gas structured transactions typically involve a physical purchase or sale of natural gas in the future and/or natural gas basis financial instruments which are derivatives and a related non-derivative pipeline transportation contract. These gas structured transactions can result in significant earnings volatility as the derivative components are marked-to-market without revaluing the related non-derivative contracts.
- (b) Amount includes \$74 million of timing related losses related to gas strategies which will reverse in future periods as the underlying contracts settle.
- (c) Amount includes \$11 million of timing related gains related to gas strategies recognized in previous periods that reversed as the underlying contracts settled.

Outlook — In the near-term, Energy Trading expects market conditions to remain challenging. The profitability of this segment may be impacted by the volatility in commodity prices and the uncertainty of impacts associated with regulatory changes, and changes in operating rules of RTOs. Significant portions of the Energy Trading portfolio are economically hedged. Most financial instruments, physical power and natural gas contracts, and certain environmental contracts are deemed derivatives; whereas, natural gas and environmental inventory, contracts for pipeline transportation, storage assets, and some environmental contracts are not derivatives. As a result, Energy Trading will experience earnings volatility as derivatives are marked-to-market without revaluing the underlying non-derivative contracts and assets. Energy Trading's strategy is to economically manage the price risk of these underlying non-derivative contracts and assets with futures, forwards, swaps, and options. This results in gains and losses that are recognized in different interim and annual accounting periods.

See also the "Fair Value" section herein and Notes 13 and 14 to the Consolidated Financial Statements in Item 8 of this Report, "Fair Value" and "Financial and Other Derivative Instruments," respectively.

CORPORATE AND OTHER

Corporate and Other includes various holding company activities, holds certain non-utility debt, and holds energy-related investments. The 2019 net loss of \$116 million represents a decrease of \$13 million from the 2018 net loss of \$129 million primarily due to lower state income taxes and decreased contributions to not-for-profit organizations, partially offset by higher interest expense and impairment of an equity method investment. The 2018 net loss of \$129 million represents an increase of \$26 million from the 2017 net loss of \$103 million primarily due to a reduction in the corporate tax rate from the TCJA in December 2017, higher interest expense and increased contributions to the DTE Energy Foundation and other not-for-profit organizations, partially offset by the remeasurement of deferred tax assets and liabilities to reflect the reduction in the corporate tax rate from the enactment of the TCJA in 2017.

See Note 11 to the Consolidated Financial Statements in Item 8 of this Report, "Income Taxes."

CAPITAL RESOURCES AND LIQUIDITY

Cash Requirements

DTE Energy uses cash to maintain and invest in the electric and natural gas utilities, to grow the non-utility businesses, to retire and pay interest on long-term debt, and to pay dividends. DTE Energy believes it will have sufficient internal and external capital resources to fund anticipated capital and operating requirements. DTE Energy expects that cash from operations in 2020 will be approximately \$3.0 billion. DTE Energy anticipates base level utility capital investments, including environmental, renewable, and energy waste reduction expenditures; expenditures for non-utility businesses; and contributions to equity method investees in 2020 of approximately \$4.5 billion. DTE Energy plans to seek regulatory approval to include utility capital expenditures in regulatory rate base consistent with prior treatment. Capital spending for growth of existing or new non-utility businesses will depend on the existence of opportunities that meet strict risk-return and value creation criteria.

	2019	2018	2017
	(In millions)		
Cash, Cash Equivalents, and Restricted Cash at Beginning of Period	\$ 76	\$ 89	\$ 113
Net cash from operating activities	2,649	2,680	2,117
Net cash used for investing activities	(5,732)	(3,347)	(2,562)
Net cash from financing activities	3,100	654	421
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	17	(13)	(24)
Cash, Cash Equivalents, and Restricted Cash at End of Period	\$ 93	\$ 76	\$ 89

Cash from Operating Activities

A majority of DTE Energy's operating cash flows are provided by the electric and natural gas utilities, which are significantly influenced by factors such as weather, electric retail access, regulatory deferrals, regulatory outcomes, economic conditions, changes in working capital, and operating costs.

Net cash from operations decreased \$31 million in 2019. The reduction is primarily due to a decrease in cash from working capital items, partially offset by an increase in non-cash and non-operating items, primarily Deferred income taxes and Depreciation and amortization.

Net cash from operations increased \$563 million in 2018. The increase in operating cash flows reflects an increase in adjustments for non-cash and non-operating items, primarily Depreciation and amortization and working capital adjustments, partially offset by a decrease to Deferred income taxes.

The change in working capital items in 2019 was primarily related to an increase in cash used for Accounts payable and Other current and noncurrent assets and liabilities, partially offset by cash received related to Accounts receivable, Accrued pension and postretirement costs, and Regulatory assets and liabilities. The change in working capital items in 2018 primarily related to increases in cash from Accounts receivable, Accrued pension liability, Derivative assets and liabilities, and Other current and noncurrent assets and liabilities, partially offset by increases of cash used for Equity earnings of equity method investees, Prepaid postretirement benefit costs, Accrued postretirement liability, and Regulatory assets and liabilities.

Cash used for Investing Activities

Cash inflows associated with investing activities are primarily generated from the sale of assets, while cash outflows are the result of plant and equipment expenditures and acquisitions. In any given year, DTE Energy looks to realize cash from under-performing or non-strategic assets or matured, fully valued assets.

Capital spending within the utility businesses is primarily to maintain and improve electric generation and the electric and natural gas distribution infrastructure, and to comply with environmental regulations and renewable energy requirements.

Capital spending within the non-utility businesses is primarily for ongoing maintenance, expansion, and growth. DTE Energy looks to make growth investments that meet strict criteria in terms of strategy, management skills, risks, and returns. All new investments are analyzed for their rates of return and cash payback on a risk adjusted basis. DTE Energy has been disciplined in how it deploys capital and will not make investments unless they meet the criteria. For new business lines, DTE Energy initially invests based on research and analysis. DTE Energy starts with a limited investment, evaluates the results, and either expands or exits the business based on those results. In any given year, the amount of growth capital will be determined by the underlying cash flows of DTE Energy, with a clear understanding of any potential impact on its credit ratings.

Net cash used for investing activities increased \$2.4 billion in 2019 due primarily to DTE Energy's acquisitions of midstream natural gas assets and renewable energy projects of \$2.5 billion, net of cash acquired of \$62 million as described in Note 4 to the Consolidated Financial Statements in Item 8 of this Report, "Acquisitions," as well as an increase in Plant and equipment expenditures, partially offset by a reduction in Contributions to equity method investees.

Net cash used for investing activities increased \$785 million in 2018 due primarily to an increase in Plant and equipment expenditures and Contributions to equity method investees, principally to NEXUS.

Cash from Financing Activities

DTE Energy relies on both short-term borrowing and long-term financing as a source of funding for capital requirements not satisfied by its operations.

DTE Energy's strategy is to have a targeted debt portfolio blend of fixed and variable interest rates and maturity. DTE Energy targets balance sheet financial metrics to ensure it is consistent with the objective of a strong investment grade debt rating.

Net cash from financing activities increased \$2.4 billion in 2019. The increase was primarily due to an increase in Issuances of long-term debt, equity units, common stock, and Short-term borrowings, partially offset by an increase in Redemptions of long-term debt and Purchases of noncontrolling interests, principally related to SGG. The increased issuances in 2019 were primarily related to the acquisition of midstream natural gas assets. See details disclosed in the "Acquisition Financing" section of Note 15 to the Consolidated Financial Statements in Item 8. of this Report, "Long-Term Debt."

Net cash from financing activities increased \$233 million in 2018. The increase was primarily due to the reduction of Redemption of long-term debt and Repurchases of common stock and an increase in Issuance of long-term debt, partially offset by an increase in cash used for repayments of Short-term borrowings and an increase in Dividends on common stock.

Outlook

DTE Energy expects cash flows from operations to increase over the long-term, primarily as a result of growth from the utility and non-utility businesses. Growth in the utilities is expected to be driven primarily by capital spending which will increase the base from which rates are determined. Non-utility growth is expected from additional investments, primarily in the Gas Storage and Pipelines and Power and Industrial Projects segments.

DTE Energy may be impacted by the timing of collection or refund of various recovery and tracking mechanisms as a result of timing of MPSC orders. Energy prices are likely to be a source of volatility with regard to working capital requirements for the foreseeable future. DTE Energy continues its efforts to identify opportunities to improve cash flows through working capital initiatives and maintaining flexibility in the timing and extent of long-term capital projects.

DTE Energy has approximately \$687 million in long-term debt, including finance leases, maturing in the next twelve months. The repayment of the debt is expected to be paid through internally generated funds or the issuance of long-term debt.

DTE Energy has approximately \$1.6 billion of available liquidity at December 31, 2019, consisting of cash and amounts available under unsecured revolving credit agreements.

DTE Energy expects to issue equity up to \$300 million in 2020. At the discretion of management, and depending upon financial market conditions, DTE Energy anticipates up to \$185 million of these equity issuances will be made through contributions to the qualified pension plans, including \$160 million of DTE Electric contributions. DTE Energy does not anticipate making any contributions to the other postretirement plans in 2020. Any additional equity issuances are expected to be made through other employee benefit plans.

Various subsidiaries and equity investees of DTE Energy have entered into contracts which contain ratings triggers and are guaranteed by DTE Energy. These contracts contain provisions which allow the counterparties to require that DTE Energy post cash or letters of credit as collateral in the event that DTE Energy's credit rating is downgraded below investment grade. Certain of these provisions (known as "hard triggers") state specific circumstances under which DTE Energy can be required to post collateral upon the occurrence of a credit downgrade, while other provisions (known as "soft triggers") are not as specific. For contracts with soft triggers, it is difficult to estimate the amount of collateral which may be requested by counterparties and/or which DTE Energy may ultimately be required to post. The amount of such collateral which could be requested fluctuates based on commodity prices (primarily natural gas, power, and coal) and the provisions and maturities of the underlying transactions. As of December 31, 2019, DTE Energy's contractual obligation to post collateral in the form of cash or letters of credit in the event of a downgrade to below investment grade, under both hard trigger and soft trigger provisions, was \$527 million.

DTE Energy believes it will have sufficient operating flexibility, cash resources and funding sources to maintain adequate amounts of liquidity and to meet future operating cash and capital expenditure needs. However, virtually all DTE Energy's businesses are capital intensive, or require access to capital, and the inability to access adequate capital could adversely impact earnings and cash flows.

See Notes 10, 11, 15, 17, 19, and 21 to the Consolidated Financial Statements in Item 8 of this Report, "Regulatory Matters," "Income Taxes," "Long-Term Debt," "Short-Term Credit Arrangements and Borrowings," "Commitments and Contingencies," and "Retirement Benefits and Trusteed Assets," respectively.

Contractual Obligations

The following table details DTE Energy's, including DTE Electric's, contractual obligations for debt redemptions, leases, purchase obligations, and other long-term obligations as of December 31, 2019:

	Total	2020	2021-2022	2023-2024	2025 and Thereafter
	(In millions)				
Long-term debt:					
Mortgage bonds, notes, and other ^(a)	\$ 15,575	\$ 682	\$ 3,178	\$ 2,602	\$ 9,113
Junior subordinated debentures ^(b)	1,180	—	—	—	1,180
Finance lease obligations	17	5	6	2	4
Interest	11,221	652	1,210	1,012	8,347
Stock purchase contract	156	52	104	—	—
Operating leases	193	38	56	32	67
Electric, gas, fuel, transportation, and storage purchase obligations ^(c)	4,720	1,849	1,406	607	858
Long-term DTE Electric renewable energy power purchase agreements ^{(d)(e)}	1,028	80	160	160	628
Other long-term obligations ^{(f)(g)(h)}	1,316	1,223	60	16	17
Total obligations	\$ 35,406	\$ 4,581	\$ 6,180	\$ 4,431	\$ 20,214

(a) Excludes \$24 million of unamortized debt discount and \$91 million of unamortized debt issuance costs.

(b) Excludes \$34 million of unamortized debt issuance costs.

(c) Excludes amounts associated with full requirements contracts where no stated minimum purchase volume is required.

(d) The agreements represent the minimum obligations with suppliers for renewable energy and renewable energy credits under existing contract terms which expire from 2030 through 2035. DTE Electric's share of plant output ranges from 29% to 100%.

(e) Excludes a power purchase agreement with a non-utility affiliate of DTE Energy.

(f) Includes liabilities for unrecognized tax benefits of \$10 million.

(g) Excludes other long-term liabilities of \$220 million not directly derived from contracts or other agreements.

(h) At December 31, 2019, DTE Energy met the minimum pension funding levels required under the Employee Retirement Income Security Act of 1974 (ERISA) and the Pension Protection Act of 2006 for the defined benefit pension plans. DTE Energy may contribute more than the minimum funding requirements for the pension plans and may also make contributions to the other postretirement benefit plans; however, these amounts are not included in the table above as such amounts are discretionary. Planned funding levels are disclosed in the "Capital Resources and Liquidity" and "Critical Accounting Estimates" sections herein and in Note 21 to the Consolidated Financial Statements in Item 8 of this Report, "Retirement Benefits and Trusteed Assets."

Credit Ratings

Credit ratings are intended to provide banks and capital market participants with a framework for comparing the credit quality of securities and are not a recommendation to buy, sell, or hold securities. DTE Energy, DTE Electric, and DTE Gas' credit ratings affect their costs of capital and other terms of financing, as well as their ability to access the credit and commercial paper markets. DTE Energy, DTE Electric, and DTE Gas' management believes that the current credit ratings provide sufficient access to capital markets. However, disruptions in the banking and capital markets not specifically related to DTE Energy, DTE Electric, and DTE Gas may affect their ability to access these funding sources or cause an increase in the return required by investors.

As part of the normal course of business, DTE Electric, DTE Gas, and various non-utility subsidiaries of DTE Energy routinely enter into physical or financially settled contracts for the purchase and sale of electricity, natural gas, coal, capacity, storage, and other energy-related products and services. Certain of these contracts contain provisions which allow the counterparties to request that DTE Energy posts cash or letters of credit in the event that the senior unsecured debt rating of DTE Energy is downgraded below investment grade. The amount of such collateral which could be requested fluctuates based upon commodity prices and the provisions and maturities of the underlying transactions and could be substantial. Also, upon a downgrade below investment grade, DTE Energy, DTE Electric, and DTE Gas could have restricted access to the commercial paper market, and if DTE Energy is downgraded below investment grade, the non-utility businesses, especially the Energy Trading and Power and Industrial Projects segments, could be required to restrict operations due to a lack of available liquidity. A downgrade below investment grade could potentially increase the borrowing costs of DTE Energy, DTE Electric, and DTE Gas and their subsidiaries and may limit access to the capital markets. The impact of a downgrade will not affect DTE Energy, DTE Electric, and DTE Gas' ability to comply with existing debt covenants. While DTE Energy, DTE Electric, and DTE Gas currently do not anticipate such a downgrade, they cannot predict the outcome of current or future credit rating agency reviews.

In October 2019, Moody's Investors Service downgraded DTE Energy's unsecured debt rating from Baa1 to Baa2 following DTE Energy's announcement to acquire midstream natural gas assets. Refer to Note 4 to the Consolidated Financial Statements, "Acquisitions," for additional information. We do not expect the downgrade to negatively impact DTE Energy's liquidity or access to the capital markets.

CRITICAL ACCOUNTING ESTIMATES

The preparation of the Registrants' Consolidated Financial Statements in conformity with generally accepted accounting principles requires that management apply accounting policies and make estimates and assumptions that affect results of operations and the amounts of assets and liabilities reported in the Consolidated Financial Statements. The Registrants' management believes that the areas described below require significant judgment in the application of accounting policy or in making estimates and assumptions in matters that are inherently uncertain and that may change in subsequent periods. Additional discussion of these accounting policies can be found in the Combined Notes to Consolidated Financial Statements in Item 8 of this Report.

Regulation

A significant portion of the Registrants' businesses are subject to regulation. This results in differences in the application of generally accepted accounting principles between regulated and non-regulated businesses. DTE Electric and DTE Gas are required to record regulatory assets and liabilities for certain transactions that would have been treated as revenue or expense in non-regulated businesses. Future regulatory changes or changes in the competitive environment could result in the discontinuance of this accounting treatment for regulatory assets and liabilities for some or all of the Registrants' businesses. The Registrants' management believes that currently available facts support the continued use of regulatory assets and liabilities and that all regulatory assets and liabilities are recoverable or refundable in the current rate environment.

See Note 10 to the Consolidated Financial Statements in Item 8 of this Report, "Regulatory Matters."

Derivatives

Derivatives are generally recorded at fair value and shown as Derivative assets or liabilities. Changes in the fair value of the derivative instruments are recognized in earnings in the period of change. The normal purchases and normal sales exception requires, among other things, physical delivery in quantities expected to be used or sold over a reasonable period in the normal course of business. Contracts that are designated as normal purchases and normal sales are not recorded at fair value. Substantially all of the commodity contracts entered into by DTE Electric and DTE Gas meet the criteria specified for this exception.

Fair value is defined as 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 in a principal or most advantageous market. Fair value is a market-based measurement that is determined based on inputs, which refer broadly to assumptions that market participants use in pricing assets or liabilities. These inputs can be readily observable, market corroborated, or generally unobservable inputs. The Registrants make certain assumptions they believe that market participants would use in pricing assets or liabilities, including assumptions about risk, and the risks inherent in the inputs to valuation techniques. Credit risk of the Registrants and their counterparties is incorporated in the valuation of assets and liabilities through the use of credit reserves, the impact of which was immaterial at December 31, 2019 and 2018. The Registrants believe they use valuation techniques that maximize the use of observable market-based inputs and minimize the use of unobservable inputs.

The fair values the Registrants calculate for their derivatives may change significantly as inputs and assumptions are updated for new information. Actual cash returns realized on derivatives may be different from the results the Registrants estimate using models. As fair value calculations are estimates based largely on commodity prices, the Registrants perform sensitivity analyses on the fair values of forward contracts. See the sensitivity analysis in Item 7A. of this report, "Quantitative and Qualitative Disclosures About Market Risk." See also the "Fair Value" section herein.

See Notes 13 and 14 to the Consolidated Financial Statements in Item 8 of this Report, "Fair Value" and "Financial and Other Derivative Instruments," respectively.

Goodwill

Certain of DTE Energy's reporting units have goodwill or allocated goodwill resulting from business combinations. DTE Energy performs an impairment test for each of the reporting units with goodwill annually or whenever events or circumstances indicate that the value of goodwill may be impaired.

In performing Step 1 of the impairment test, DTE Energy compares the fair value of the reporting unit to its carrying value including goodwill. If the carrying value including goodwill were to exceed the fair value of a reporting unit, Step 2 of the test would be performed. Step 2 of the impairment test requires the carrying value of goodwill to be reduced to its fair value, if lower, as of the test date.

For Step 1 of the test, DTE Energy estimates the reporting unit's fair value using standard valuation techniques, including techniques which use estimates of projected future results and cash flows to be generated by the reporting unit. For certain reporting units, the fair values were calculated using a weighted combination of the income approach, which estimates fair value based on discounted cash flows, and the market approach, which estimates fair value based on market comparables within the utility and energy industries. The income approach includes a terminal value that utilizes an assumed long-term growth rate approach, which incorporates management's assumptions regarding sustainable long-term growth of the reporting units. The income approach cash flow valuations involve a number of estimates that require broad assumptions and significant judgment by management regarding future performance.

One of the most significant assumptions utilized in determining the fair value of reporting units under the market approach is implied market multiples for certain peer companies. Management selects comparable peers based on each peer's primary business mix, operations, and market capitalization compared to the applicable reporting unit and calculates implied market multiples based on available projected earnings guidance and peer company market values as of the test date.

DTE Energy performs an annual impairment test each October. In between annual tests, DTE Energy monitors its estimates and assumptions regarding estimated future cash flows, including the impact of movements in market indicators in future quarters, and will update the impairment analyses if a triggering event occurs. While DTE Energy believes the assumptions are reasonable, actual results may differ from projections. To the extent projected results or cash flows are revised downward, the reporting unit may be required to write down all or a portion of its goodwill, which would adversely impact DTE Energy's earnings.

DTE Energy performed its annual impairment test as of October 1, 2019 and determined that the estimated fair value of each reporting unit exceeded its carrying value, and no impairment existed.

The results of the test and key estimates that were incorporated are as follows as of the October 1, 2019 valuation date:

Reporting Unit	Goodwill	Fair Value Reduction % ^(a)	Discount Rate	Valuation Methodology ^{(b)(c)}
	(In millions)			
Electric	\$ 1,208	55%	5%	DCF and market multiples analysis
Gas	743	51%	5%	DCF and market multiples analysis
Gas Storage and Pipelines	299	34%	7%	DCF and market multiples analysis
Power and Industrial Projects	26	69%	7%	DCF
Energy Trading	17	72%	9%	DCF
	<u>\$ 2,293</u>			

(a) Percentage by which the fair value of equity of the reporting unit would need to decline to equal its carrying value, including goodwill.

(b) Discounted cash flows (DCF) incorporated 2020-2024 projected cash flows plus a calculated terminal value. For each of the reporting units, DTE Energy capitalized the terminal year cash flows at the weighted average costs of capital (WACC) less an assumed long-term growth rate of 2.0%. Management applied equal weighting to the DCF and market multiples analysis, where applicable, to determine the fair value of the respective reporting units.

(c) Due to lack of market comparable information for the Power & Industrial and Energy Trading reporting units, DTE Energy did not perform a market multiples analysis.

DTE Energy recognized additional goodwill of \$171 million at the Gas Storage and Pipelines reporting unit in the fourth quarter of 2019 as a result of the Blue Union and LEAP acquisition. For further discussion, see Note 4 to the Consolidated Financial Statements, "Acquisitions."

Business Combinations

The assets acquired and liabilities assumed in a business combination are recorded at their estimated fair values at the date of acquisition. The excess purchase price over the fair value of net assets acquired is recognized as goodwill. The fair value of the assets acquired and liabilities assumed are determined based on significant estimates and assumptions, including projected timing and amount of future cash flows and discount rates reflecting risk inherent in future market prices. In some cases, DTE Energy engages independent third-party valuation firms to assist in determining the fair values. Refer to Note 4 to the Consolidated Financial Statements, "Acquisitions."

Long-Lived Assets

The Registrants evaluate the carrying value of long-lived assets, excluding goodwill, when circumstances indicate that the carrying value of those assets may not be recoverable. Conditions that could have an adverse impact on the cash flows and fair value of the long-lived assets are deteriorating business climate, condition of the asset, or plans to dispose of the asset before the end of its useful life. The review of long-lived assets for impairment requires significant assumptions about operating strategies and estimates of future cash flows, which require assessments of current and projected market conditions. An impairment evaluation is based on an undiscounted cash flow analysis at the lowest level for which independent cash flows of long-lived assets can be identified from other groups of assets and liabilities. Impairment may occur when the carrying value of the asset exceeds the future undiscounted cash flows. When the undiscounted cash flow analysis indicates a long-lived asset is not recoverable, the amount of the impairment loss is determined by measuring the excess of the long-lived asset over its fair value. An impairment would require the Registrants to reduce both the long-lived asset and current period earnings by the amount of the impairment, which would adversely impact their earnings.

Pension and Other Postretirement Costs

DTE Energy sponsors defined benefit pension plans and other postretirement benefit plans for eligible employees of the Registrants. The measurement of the plan obligations and cost of providing benefits under these plans involve various factors, including numerous assumptions and accounting elections. When determining the various assumptions that are required, DTE Energy considers historical information as well as future expectations. The benefit costs are affected by, among other things, the actual rate of return on plan assets, the long-term expected return on plan assets, the discount rate applied to benefit obligations, the incidence of mortality, the expected remaining service period of plan participants, level of compensation and rate of compensation increases, employee age, length of service, the anticipated rate of increase of health care costs, benefit plan design changes, and the level of benefits provided to employees and retirees. Pension and other postretirement benefit costs attributed to the segments are included with labor costs and ultimately allocated to projects within the segments, some of which are capitalized.

DTE Energy had pension costs of \$112 million in 2019, \$148 million in 2018, and \$172 million in 2017. Other postretirement benefit credits were \$1 million in 2019, \$36 million in 2018, and \$31 million in 2017. Pension costs and other postretirement benefit credits for 2019 were calculated based upon several actuarial assumptions, including an expected long-term rate of return on plan assets of 7.30% for the pension plans and other postretirement benefit plans. In developing the expected long-term rate of return assumptions, DTE Energy evaluated asset class risk and return expectations, as well as inflation assumptions. Projected returns are based on broad equity, bond, and other markets. DTE Energy's 2020 expected long-term rate of return on pension plan assets is based on an asset allocation assumption utilizing active and passive investment management of 35% in equity markets, 42% in fixed income markets, including long duration bonds, and 23% invested in other assets. DTE Energy's 2020 expected long-term rate of return on other postretirement plan assets is based on an asset allocation assumption utilizing active and passive investment management of 35% in equity markets, 37% in fixed income markets, and 28% invested in other assets. Because of market volatility, DTE Energy periodically reviews the asset allocation and rebalances the portfolio when considered appropriate. DTE Energy is lowering its long-term rate of return assumption for the pension plans to 7.10% and lowering the other postretirement plans to 7.20% for 2020. DTE Energy believes these rates are reasonable assumptions for the long-term rates of return on the plans' assets for 2020 given their respective asset allocations and DTE's capital market expectations. DTE Energy will continue to evaluate the actuarial assumptions, including its expected rate of return, at least annually.

DTE Energy calculates the expected return on pension and other postretirement benefit plan assets by multiplying the expected return on plan assets by the market-related value (MRV) of plan assets at the beginning of the year, taking into consideration anticipated contributions and benefit payments that are to be made during the year. Current accounting rules provide that the MRV of plan assets can be either fair value or a calculated value that recognizes changes in fair value in a systematic and rational manner over not more than five years. For the pension plans, DTE Energy uses a calculated value when determining the MRV of the pension plan assets and recognizes changes in fair value over a three-year period. Accordingly, the future value of assets will be impacted as previously deferred gains or losses are recognized. Favorable asset performance in 2019 resulted in unrecognized net gains. As of December 31, 2019, DTE Energy had \$186 million of cumulative gains related to investment performance in prior years, that were not yet recognized in the calculation of the MRV of pension assets. For the other postretirement benefit plans, DTE Energy uses fair value when determining the MRV of other postretirement benefit plan assets, therefore all investment gains and losses have been recognized in the calculation of MRV for these plans.

The discount rate that DTE Energy utilizes for determining future pension and other postretirement benefit obligations is based on a yield curve approach and a review of bonds that receive one of the two highest ratings given by a recognized rating agency. The yield curve approach matches projected pension plan and other postretirement benefit payment streams with bond portfolios reflecting actual liability duration unique to the plans. The discount rate determined on this basis was 3.28% for the pension and 3.29% for the other postretirement plans at December 31, 2019 compared to 4.40% for both the pension and other postretirement plans at December 31, 2018.

DTE Energy changed the mortality assumption as of December 31, 2019 to reflect the updated MP-2019 projection scale. The mortality assumptions used at December 31, 2019 are the RP-2014 mortality table projected back to 2006 using Scale MP-2014, projected forward to 2015 using Scale MP-2017 and projected beyond 2015 using Scale MP-2019 with generational projection. The base mortality tables vary by type of plan, employee's union status and employment status, with additional adjustments to reflect the actual experience and credibility of each population.

DTE Energy estimates the 2020 total pension costs will be approximately \$120 million in 2020, compared to \$112 million in 2019. The increase in total pension costs is primarily due to lower discount rates, offset by favorable asset returns. The 2020 other postretirement benefit credit will be approximately \$40 million compared to \$1 million in 2019.

The health care trend rates for DTE Energy assume 6.75% for pre-65 participants and 7.25% for post-65 participants for 2020, trending down to 4.50% for both pre-65 and post-65 participants in 2032.

Future actual pension and other postretirement benefit costs or credits will depend on future investment performance, changes in future discount rates, and various other factors related to plan design.

Lowering the expected long-term rate of return on the plan assets by one percentage point would have increased the 2019 pension costs by approximately \$45 million. Lowering the discount rate and the salary increase assumptions by one percentage point would have increased the 2019 pension costs by approximately \$22 million. Lowering the expected long-term rate of return on plan assets by one percentage point would have decreased the 2019 other postretirement credit by approximately \$17 million. Lowering the discount rate and the salary increase assumptions by one percentage point would have decreased the 2019 other postretirement credit by approximately \$21 million. Lowering the health care cost trend assumptions by one percentage point would have increased the other postretirement credit for 2019 by approximately \$4 million.

The value of the qualified pension and other postretirement benefit plan assets was \$6.8 billion at December 31, 2019 and \$6.0 billion at December 31, 2018. At December 31, 2019, DTE Energy's qualified pension plans were underfunded by \$677 million and its other postretirement benefit plans were overfunded by \$68 million. In 2019, the funded status of the pension plans improved as plan sponsor contributions and favorable asset returns were partially offset by a decrease in discount rates. The funded status of the other postretirement benefit plans improved as favorable asset returns and favorable healthcare experience were partially offset by a decrease in discount rates.

Pension and other postretirement costs and pension cash funding requirements may increase in future years without typical returns in the financial markets. DTE Energy made contributions to its qualified pension plans of \$150 million in 2019 and \$175 million in 2018. At the discretion of management, consistent with the Pension Protection Act of 2006, and depending upon financial market conditions, DTE Energy anticipates making contributions to its qualified pension plans of up to \$185 million in 2020 and up to \$458 million over the next five years. DTE Energy did not make other postretirement benefit plan contributions in 2019 or 2018. DTE Energy does not anticipate making any contributions to its other postretirement plans in 2020 or over the next five years. The planned pension contributions will be made in cash and/or DTE Energy common stock.

See Note 21 to the Consolidated Financial Statements in Item 8 of this Report, "Retirement Benefits and Trusteed Assets."

Legal Reserves

The Registrants are involved in various legal proceedings, claims, and litigation arising in the ordinary course of business. The Registrants regularly assess their liabilities and contingencies in connection with asserted or potential matters and establish reserves when appropriate. Legal reserves are based upon the Registrants' management's assessment of pending and threatened legal proceedings and claims against the Registrants.

Accounting for Tax Obligations

The Registrants are required to make judgments regarding the potential tax effects of various financial transactions and results of operations in order to estimate their obligations to taxing authorities. The Registrants account for uncertain income tax positions using a benefit recognition model with a two-step approach, a more-likely-than-not recognition criterion, and a measurement attribute that measures the position as the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement. If the benefit does not meet the more likely than not criteria for being sustained on its technical merits, no benefit will be recorded. Uncertain tax positions that relate only to timing of when an item is included on a tax return are considered to have met the recognition threshold. The Registrants also have non-income tax obligations related to property, sales and use, and employment-related taxes, and ongoing appeals related to these tax matters.

Accounting for tax obligations requires judgments, including assessing whether tax benefits are more likely than not to be sustained, and estimating reserves for potential adverse outcomes regarding tax positions that have been taken. The Registrants also assess their ability to utilize tax attributes, including those in the form of carry-forwards, for which the benefits have already been reflected in the Consolidated Financial Statements. The Registrants believe the resulting tax reserve balances as of December 31, 2019 and 2018 are appropriate. The ultimate outcome of such matters could result in favorable or unfavorable adjustments to the Registrants' Consolidated Financial Statements, and such adjustments could be material.

See Note 11 to the Consolidated Financial Statements in Item 8 of this Report, "Income Taxes."

NEW ACCOUNTING PRONOUNCEMENTS

See Note 3 to the Consolidated Financial Statements in Item 8 of this Report, "New Accounting Pronouncements."

FAIR VALUE

Derivatives are generally recorded at fair value and shown as Derivative assets or liabilities. Contracts DTE Energy typically classifies as derivative instruments include power, natural gas, oil, and certain coal forwards, futures, options and swaps, and foreign currency exchange contracts. Items DTE Energy does not generally account for as derivatives include natural gas inventory, pipeline transportation contracts, renewable energy credits, and storage assets. See Notes 13 and 14 to the Consolidated Financial Statements in Item 8 of this Report, "Fair Value" and "Financial and Other Derivative Instruments," respectively.

The tables below do not include the expected earnings impact of non-derivative natural gas storage, transportation, certain power contracts, and renewable energy credits which are subject to accrual accounting. Consequently, gains and losses from these positions may not match with the related physical and financial hedging instruments in some reporting periods, resulting in volatility in the Registrants' reported period-by-period earnings; however, the financial impact of the timing differences will reverse at the time of physical delivery and/or settlement.

The Registrants manage their MTM risk on a portfolio basis based upon the delivery period of their contracts and the individual components of the risks within each contract. Accordingly, the Registrants record and manage the energy purchase and sale obligations under their contracts in separate components based on the commodity (e.g. electricity or natural gas), the product (e.g. electricity for delivery during peak or off-peak hours), the delivery location (e.g. by region), the risk profile (e.g. forward or option), and the delivery period (e.g. by month and year).

The Registrants have established a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value in three broad levels. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). For further discussion of the fair value hierarchy, see Note 13 to the Consolidated Financial Statements in Item 8 of this Report, "Fair Value."

The following table provides details on changes in DTE Energy's MTM net asset (or liability) position:

	Total
	(In millions)
MTM at December 31, 2018	\$ (23)
Reclassified to realized upon settlement	(49)
Changes in fair value recorded to income	55
Amounts recorded to unrealized income	6
Changes in fair value recorded in regulatory liabilities	2
Option premiums paid (received) and other	—
Amounts recorded in other comprehensive income, pretax	3
Change in collateral	17
MTM at December 31, 2019	<u>\$ 5</u>

The table below shows the maturity of DTE Energy's MTM positions. The positions from 2023 and beyond principally represent longer tenor gas structured transactions:

Source of Fair Value	2020	2021	2022	2023 and Beyond	Total Fair Value
	(In millions)				
Level 1	\$ (8)	\$ (5)	\$ (2)	\$ (1)	\$ (16)
Level 2	18	—	(2)	1	17
Level 3	40	6	5	(47)	4
MTM before collateral adjustments	<u>\$ 50</u>	<u>\$ 1</u>	<u>\$ 1</u>	<u>\$ (47)</u>	5
Collateral adjustments					—
MTM at December 31, 2019					<u>\$ 5</u>

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market Price Risk

The Electric and Gas businesses have commodity price risk, primarily related to the purchases of coal, natural gas, uranium, and electricity. However, the Registrants do not bear significant exposure to earnings risk, as such changes are included in the PSCR and GCR regulatory rate-recovery mechanisms. In addition, changes in the price of natural gas can impact the valuation of lost and stolen gas, storage sales, and transportation services revenue at the Gas segment. The Gas segment manages its market price risk related to storage sales revenue primarily through the sale of long-term storage contracts. The Registrants are exposed to short-term cash flow or liquidity risk as a result of the time differential between actual cash settlements and regulatory rate recovery.

DTE Energy's Gas Storage and Pipelines segment has exposure to natural gas price fluctuations which impact the pricing for natural gas storage, gathering, and transportation. DTE Energy manages its exposure through the use of short, medium, and long-term storage, gathering, and transportation contracts.

DTE Energy's Power and Industrial Projects business segment is subject to electricity, natural gas, and coal product price risk. DTE Energy manages its exposure to commodity price risk through the use of long-term contracts.

DTE Energy's Energy Trading business segment has exposure to electricity, natural gas, coal, crude oil, heating oil, and foreign currency exchange price fluctuations. These risks are managed by the energy marketing and trading operations through the use of forward energy, capacity, storage, options, and futures contracts, within pre-determined risk parameters.

Credit Risk

Bankruptcies

DTE Energy's Power and Industrial Projects segment holds ownership interests in, and operates, five generating plants that sell electric output from renewable sources under long-term power purchase agreements with PG&E. PG&E filed for Chapter 11 bankruptcy protection on January 29, 2019. As of December 31, 2019, PG&E's account is substantially current and outstanding accounts receivable from PG&E are not material. Therefore, DTE Energy determined no reserve was necessary.

As of December 31, 2019, the book value of long-lived assets used in producing electric output for sale to PG&E was approximately \$101 million. The Power and Industrial Projects segment also has equity investments, including a note receivable, of approximately \$74 million in entities that sell power to PG&E. In January 2019, following the bankruptcy filing, DTE Energy performed an impairment analysis on its long-lived assets. Based on its undiscounted cash flow projections, DTE Energy determined it did not have an impairment loss as of December 31, 2018. DTE Energy also determined there was not an other-than-temporary decline in its equity investments. DTE has not identified subsequent facts or circumstances that would cause a change to these conclusions through December 31, 2019. DTE Energy's assumptions and conclusions may change, and it could have impairment losses if any of the terms of the contracts are not honored by PG&E or the contracts are rejected through the bankruptcy process.

Allowance for Doubtful Accounts

The Registrants regularly review contingent matters relating to customers and their contracts and record provisions for amounts considered at risk of probable loss in the allowance for doubtful accounts. The Registrants believe their accrued amounts are adequate for probable loss.

Trading Activities

DTE Energy is exposed to credit risk through trading activities. Credit risk is the potential loss that may result if the trading counterparties fail to meet their contractual obligations. DTE Energy utilizes both external and internal credit assessments when determining the credit quality of trading counterparties.

The following table displays the credit quality of DTE Energy's trading counterparties as of December 31, 2019:

	Credit Exposure Before Cash Collateral	Cash Collateral	Net Credit Exposure
(In millions)			
Investment Grade ^(a)			
A- and Greater	\$ 259	\$ —	\$ 259
BBB+ and BBB	197	—	197
BBB-	34	—	34
Total Investment Grade	490	—	490
Non-investment grade ^(b)	5	—	5
Internally Rated — investment grade ^(c)	324	(1)	323
Internally Rated — non-investment grade ^(d)	13	—	13
Total	<u>\$ 832</u>	<u>\$ (1)</u>	<u>\$ 831</u>

- (a) This category includes counterparties with minimum credit ratings of Baa3 assigned by Moody's Investors Service (Moody's) or BBB- assigned by Standard & Poor's Rating Group, a division of McGraw-Hill Companies, Inc. (Standard & Poor's). The five largest counterparty exposures, combined, for this category represented 16% of the total gross credit exposure.
- (b) This category includes counterparties with credit ratings that are below investment grade. The five largest counterparty exposures, combined, for this category represented 1% of the total gross credit exposure.
- (c) This category includes counterparties that have not been rated by Moody's or Standard & Poor's but are considered investment grade based on DTE Energy's evaluation of the counterparty's creditworthiness. The five largest counterparty exposures, combined, for this category represented 15% of the total gross credit exposure.
- (d) This category includes counterparties that have not been rated by Moody's or Standard & Poor's and are considered non-investment grade based on DTE Energy's evaluation of the counterparty's creditworthiness. The five largest counterparty exposures, combined, for this category represented 1% of the total gross credit exposure.

Other

The Registrants engage in business with customers that are non-investment grade. The Registrants closely monitor the credit ratings of these customers and, when deemed necessary and permitted under the tariffs, request collateral or guarantees from such customers to secure their obligations.

Interest Rate Risk

DTE Energy is subject to interest rate risk in connection with the issuance of debt. In order to manage interest costs, DTE Energy may use treasury locks and interest rate swap agreements. DTE Energy's exposure to interest rate risk arises primarily from changes in U.S. Treasury rates, commercial paper rates, and LIBOR. As of December 31, 2019, DTE Energy had a floating rate debt-to-total debt ratio of 4.8%.

Foreign Currency Exchange Risk

DTE Energy has foreign currency exchange risk arising from market price fluctuations associated with fixed priced contracts. These contracts are denominated in Canadian dollars and are primarily for the purchase and sale of natural gas and power, as well as for long-term transportation capacity. To limit DTE Energy's exposure to foreign currency exchange fluctuations, DTE Energy has entered into a series of foreign currency exchange forward contracts through December 2023.

Summary of Sensitivity Analyses

Sensitivity analyses were performed on the fair values of commodity contracts for DTE Energy and long-term debt obligations for the Registrants. The commodity contracts listed below principally relate to energy marketing and trading activities. The sensitivity analyses involved increasing and decreasing forward prices and rates at December 31, 2019 and 2018 by a hypothetical 10% and calculating the resulting change in the fair values.

The results of the sensitivity analyses:

Activity	Assuming a 10% Increase in Prices/Rates		Assuming a 10% Decrease in Prices/Rates		Change in the Fair Value of
	As of December 31,		As of December 31,		
	2019	2018	2019	2018	
(In millions)					
Gas contracts	\$ 6	\$ 8	\$ (6)	\$ (8)	Commodity contracts
Power contracts	\$ 4	\$ 10	\$ (5)	\$ (10)	Commodity contracts
Environmental contracts	\$ (3)	\$ —	\$ 3	\$ —	Commodity contracts
Interest rate risk — DTE Energy	\$ (698)	\$ (596)	\$ 724	\$ 625	Long-term debt
Interest rate risk — DTE Electric	\$ (286)	\$ (277)	\$ 305	\$ 300	Long-term debt

For further discussion of market risk, see Management's Discussion and Analysis in Item 7 of this Report and Note 14 to the Consolidated Financial Statements in Item 8 of this Report, "Financial and Other Derivative Instruments."

Item 8. Financial Statements and Supplementary Data

The following Consolidated Financial Statements and financial statement schedules are included herein:

	<u>Page</u>
DTE Energy — Controls and Procedures	55
DTE Energy — Report of Independent Registered Public Accounting Firm	56
DTE Energy — Consolidated Statements of Operations	60
DTE Energy — Consolidated Statements of Comprehensive Income	61
DTE Energy — Consolidated Statements of Financial Position	62
DTE Energy — Consolidated Statements of Cash Flows	64
DTE Energy — Consolidated Statements of Changes in Equity	65
DTE Electric — Controls and Procedures	66
DTE Electric — Report of Independent Registered Public Accounting Firm	67
DTE Electric — Consolidated Statements of Operations	68
DTE Electric — Consolidated Statements of Comprehensive Income	69
DTE Electric — Consolidated Statements of Financial Position	70
DTE Electric — Consolidated Statements of Cash Flows	72
DTE Electric — Consolidated Statements of Changes in Shareholder's Equity	73
Combined Notes to Consolidated Financial Statements	74
Note 1 — Organization and Basis of Presentation	74
Note 2 — Significant Accounting Policies	78
Note 3 — New Accounting Pronouncements	83
Note 4 — Acquisitions	85
Note 5 — Revenue	87
Note 6 — Goodwill	91
Note 7 — Property, Plant, and Equipment	92
Note 8 — Jointly-Owned Utility Plant	94
Note 9 — Asset Retirement Obligations	94
Note 10 — Regulatory Matters	96
Note 11 — Income Taxes	100
Note 12 — Earnings Per Share	103
Note 13 — Fair Value	104
Note 14 — Financial and Other Derivative Instruments	110
Note 15 — Long-Term Debt	116
Note 16 — Preferred and Preference Securities	119
Note 17 — Short-Term Credit Arrangements and Borrowings	119
Note 18 — Capital and Operating Leases	120
Note 19 — Commitments and Contingencies	126
Note 20 — Nuclear Operations	131
Note 21 — Retirement Benefits and Trusteed Assets	132
Note 22 — Stock-Based Compensation	142
Note 23 — Segment and Related Information	144
Note 24 — Related Party Transactions	147
Note 25 — Supplementary Quarterly Financial Information (Unaudited)	148
Financial Statement Schedule	
Schedule II — Valuation and Qualifying Accounts	163

DTE Energy — Controls and Procedures

(a) Evaluation of disclosure controls and procedures

Management of DTE Energy carried out an evaluation, under the supervision and with the participation of DTE Energy's Chief Executive Officer (CEO) and Chief Financial Officer (CFO), of the effectiveness of the design and operation of DTE Energy's disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of December 31, 2019, which is the end of the period covered by this report. Based on this evaluation, DTE Energy's CEO and CFO have concluded that such disclosure controls and procedures are effective in providing reasonable assurance that information required to be disclosed by DTE Energy in reports that it files or submits under the Exchange Act (i) is recorded, processed, summarized, and reported within the time periods specified in the U.S. Securities and Exchange Commission's rules and forms and (ii) is accumulated and communicated to DTE Energy's management, including its CEO and CFO, as appropriate to allow timely decisions regarding required disclosure. Due to the inherent limitations in the effectiveness of any disclosure controls and procedures, management cannot provide absolute assurance that the objectives of its disclosure controls and procedures will be attained.

(b) Management's report on internal control over financial reporting

Management of DTE Energy is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Internal control over financial reporting is a process designed by, or under the supervision of, DTE Energy's CEO and CFO, 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.

Management has excluded the acquisition of M5 Louisiana Gathering, LLC and its wholly owned subsidiaries ("Blue Union and LEAP") from the Company's assessment of internal control over financial reporting as of December 31, 2019 as it was acquired by the Company in an acquisition on December 4, 2019. Blue Union and LEAP represent approximately 3% of consolidated total assets as of December 31, 2019 and less than 1% of total revenues and other income for the year ended December 31, 2019. We plan to fully integrate the acquired businesses into our internal control over financial reporting in 2020.

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.

Management of DTE Energy has assessed the effectiveness of DTE Energy's internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 COSO) in *Internal Control - Integrated Framework*. Based on this assessment, management concluded that, as of December 31, 2019, DTE Energy's internal control over financial reporting was effective based on those criteria.

The effectiveness of DTE Energy's internal control over financial reporting as of December 31, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm who also audited DTE Energy's financial statements, as stated in their report which appears herein.

(c) Changes in internal control over financial reporting

There have been no changes in DTE Energy's internal control over financial reporting during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, DTE Energy's internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
DTE Energy Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated statements of financial position of DTE Energy Company and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, and the related consolidated statements of operations, of comprehensive income, of changes in equity and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes and financial statement schedule listed in the accompanying index for each of the three years in the period ended December 31, 2019 (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.

As described in Management's report on internal control over financial reporting, management has excluded the acquisition of M5 Louisiana Gathering, LLC and its wholly owned subsidiaries from its assessment of internal control over financial reporting as of December 31, 2019 because they were acquired by the Company in a business combination during 2019. We have also excluded M5 Louisiana Gathering, LLC and its wholly owned subsidiaries from our audit of internal control over financial reporting. M5 Louisiana Gathering, LLC and its wholly owned subsidiaries are wholly-owned subsidiaries whose total assets and total revenues excluded from management's assessment and our audit of internal control over financial reporting represent approximately 3% and less than 1%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2019.

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 (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 matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Acquisition of M5 Louisiana Gathering, LLC - Customer Relationship Intangible Assets

As described in Note 4 to the consolidated financial statements, the Company completed the acquisition of M5 Louisiana Gathering, LLC for \$2.74 billion in 2019, which resulted in \$1.47 billion of customer relationship intangible assets being recorded. The fair value of the intangible assets acquired was estimated by applying the income approach based upon discounted projected future cash flows attributable to the existing contracts and agreements. Key management estimates and inputs include revenue and expense projections and discount rates based on the risks associated with the entities. The intangible assets are amortized on a straight-line basis over a period of 40 years, which is based on the number of years the assets are expected to economically contribute to the business. The expected economic benefit incorporates existing customer contracts with a weighted-average amortization life of 13 years and expected renewal rates, based on the estimated volume and production lives of gas resources in the region.

The principal considerations for our determination that performing procedures relating to the acquisition of M5 Gathering - customer relationship intangible assets is a critical audit matter are there was significant judgment by management in determining the fair value of the intangible assets acquired, which includes significant estimates and inputs related to revenue and expense projections, discount rates, and expected renewal rates of existing customer contracts. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and in evaluating the audit evidence obtained related to these estimates and inputs. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the financial statements. These procedures included testing the effectiveness of controls relating to the acquisition accounting, including controls over management's valuation of the intangible assets and controls over development of the significant estimates and inputs related to the valuation of the intangible assets, including revenue and expense projections, discount rates, and expected renewals rates of existing customer contracts. These procedures also included, among others (i) reading the purchase agreement; (ii) testing management's process for estimating the fair value of the intangible assets; and (iii) testing management's cash flow projections used to estimate the fair value of the intangible assets, including testing customer renewal rate assumptions included in the projections. Testing management's process included evaluating the appropriateness of the valuation method and the reasonableness of significant estimates and inputs, including the revenue and expense projections, expected renewal rates, and the discount rate for the intangible assets. Evaluating the reasonableness of these assumptions included agreeing revenue projections, consisting of pricing and minimum volume commitments, to customer contracts, comparing projections to prior year actual results and obtaining support for the expected renewal rates which included analyzing industry data on the production lives of the reserves in the region. We used professionals with specialized skill and knowledge to assist in evaluating the appropriateness of the valuation method and discount rates.

Accounting for the Effects of New, or Changes to Existing, Regulatory Matters

As described in Note 10 to the consolidated financial statements, the Company recorded \$4.176 million of regulatory assets and \$3.329 million of regulatory liabilities as of December 31, 2019. The Company is required to record regulatory assets and liabilities for certain transactions that would have been treated as revenue or expense in non-regulated businesses. Continued applicability of regulatory accounting treatment requires that rates be designed to recover specific costs of providing regulatory services and be charged to and collected from customers. Future regulatory changes could result in a discontinuance of this accounting treatment for regulatory assets and liabilities for some or all of the Company's regulated businesses and may require the write-off of the portion of any regulatory asset or liability that was no longer probable of recovery through regulated rates. Management believes that currently available facts support the continued use of regulatory assets and liabilities and that all regulatory assets and liabilities are recoverable or refundable in the current regulatory environment.

The principal considerations for our determination that performing procedures relating to the accounting for the effects of new, or changes to existing, regulatory matters is a critical audit matter are there was significant judgment by management in assessing the potential outcome and resulting accounting implications of new, or changes to existing, regulatory matters. This in turn led to significant audit judgment and effort in evaluating the appropriateness of management's assessment and audit evidence obtained related to the assessment.

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 assessment and implementation of new regulatory matters or changes to existing regulatory matters. These procedures also included, among others, assessing (i) the reasonableness of management's assessment of impacts arising from correspondence with regulators and changes in laws and regulations and (ii) the appropriateness of disclosures in the consolidated financial statements. Testing regulatory assets and liabilities, including those subject to pending rate orders, involved considering the provisions and formulas outlined in the rate orders, other regulatory correspondence, and the application of relevant regulatory precedents.

Valuation of Level 3 Derivative Instruments

As described in Notes 13 and 14 to the consolidated financial statements, the fair value of level 3 derivative assets was \$160 million and the fair value of level 3 derivative liabilities was \$156 million as of December 31, 2019. Contracts classified as derivative instruments include electricity, natural gas, oil, certain environmental contracts, certain coal forwards, futures, options, swaps, and foreign currency exchange contracts. The fair value estimate of level 3 assets and liabilities consist of unobservable inputs, and the fair value is estimated based on internally developed models or methodologies using inputs that are generally less readily observable and supported by little, if any, market activity at the measurement date. Management primarily uses a discounted cash flow valuation technique to value level 3 assets and liabilities, which include forward basis prices as unobservable inputs. Other inputs to the valuation model include commodity market prices, broker quotes, interest rates, credit ratings, default rates, market-based seasonality, and basis differential factors.

The principal considerations for our determination that performing procedures relating to the valuation of level 3 derivative instruments is a critical audit matter are there was significant judgment by management to determine the fair value of these instruments due to the use of internally-developed models or methodologies, which included significant assumptions related to forward basis prices, commodity market prices, broker quotes, and basis differential factors. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and in evaluating the audit evidence obtained related to the valuation, and the audit effort involved the use of professionals with specialized skill and knowledge.

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 the valuation of level 3 derivative instruments, including controls over the models and methodologies, data, and significant assumptions. These procedures also included, among others, testing the underlying data used in the estimate, evaluating the appropriateness of the models and methodologies, and evaluating the reasonableness of significant assumptions used by management in developing the fair value measurement related to forward basis prices, commodity market prices, broker quotes, and basis differential factors. We used professionals with specialized skill and knowledge to assist in evaluating the appropriateness of the internally developed models and methodologies, including assessing the methodology used to develop forward basis prices and assessing the key inputs and assumptions used in the models, including commodity market prices, broker quotes, and basis differential factors.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 5, 2020

We have served as the Company's auditor since 2008.

DTE Energy Company
Consolidated Statements of Operations

	Year Ended December 31,		
	2019	2018	2017
	(In millions, except per share amounts)		
Operating Revenues			
Utility operations	\$ 6,638	\$ 6,670	\$ 6,434
Non-utility operations	6,031	7,542	6,173
	<u>12,669</u>	<u>14,212</u>	<u>12,607</u>
Operating Expenses			
Fuel, purchased power, and gas — utility	1,798	1,981	1,881
Fuel, purchased power, and gas — non-utility	5,053	6,630	5,283
Operation and maintenance	2,419	2,451	2,270
Depreciation and amortization	1,263	1,124	1,030
Taxes other than income	414	405	391
Asset (gains) losses and impairments, net	15	27	41
	<u>10,962</u>	<u>12,618</u>	<u>10,896</u>
Operating Income	<u>1,707</u>	<u>1,594</u>	<u>1,711</u>
Other (Income) and Deductions			
Interest expense	641	559	536
Interest income	(17)	(12)	(12)
Non-operating retirement benefits, net	39	37	65
Other income	(350)	(333)	(268)
Other expenses	70	127	103
	<u>383</u>	<u>378</u>	<u>424</u>
Income Before Income Taxes	<u>1,324</u>	<u>1,216</u>	<u>1,287</u>
Income Tax Expense	<u>152</u>	<u>98</u>	<u>175</u>
Net Income	<u>1,172</u>	<u>1,118</u>	<u>1,112</u>
Less: Net Income (Loss) Attributable to Noncontrolling Interests	3	(2)	(22)
Net Income Attributable to DTE Energy Company	<u>\$ 1,169</u>	<u>\$ 1,120</u>	<u>\$ 1,134</u>
Basic Earnings per Common Share			
Net Income Attributable to DTE Energy Company	<u>\$ 6.32</u>	<u>\$ 6.18</u>	<u>\$ 6.32</u>
Diluted Earnings per Common Share			
Net Income Attributable to DTE Energy Company	<u>\$ 6.31</u>	<u>\$ 6.17</u>	<u>\$ 6.32</u>
Weighted Average Common Shares Outstanding			
Basic	185	181	179
Diluted	185	181	179

See Combined Notes to Consolidated Financial Statements

DTE Energy Company
Consolidated Statements of Comprehensive Income

	Year Ended December 31,		
	2019	2018	2017
	(In millions)		
Net Income	\$ 1,172	\$ 1,118	\$ 1,112
Other comprehensive income (loss), net of tax:			
Benefit obligations, net of taxes of \$2, \$2, and \$5, respectively	8	8	10
Net unrealized gains (losses) on derivatives during the period, net of taxes of \$(4), \$—, and \$—, respectively	(12)	(1)	1
Net unrealized gains on investments during the period, net of taxes of \$—, \$—, and \$1, respectively	—	—	1
Foreign currency translation	1	(2)	1
Other comprehensive income (loss)	(3)	5	13
Comprehensive income	1,169	1,123	1,125
Less: Comprehensive income (loss) attributable to noncontrolling interests	3	(2)	(22)
Comprehensive Income Attributable to DTE Energy Company	\$ 1,166	\$ 1,125	\$ 1,147

See Combined Notes to Consolidated Financial Statements

DTE Energy Company
Consolidated Statements of Financial Position

	December 31,	
	2019	2018
	(In millions)	
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 93	\$ 71
Restricted cash	—	5
Accounts receivable (less allowance for doubtful accounts of \$91 for both periods)		
Customer	1,642	1,789
Other	245	108
Inventories		
Fuel and gas	373	406
Materials and supplies	386	405
Derivative assets	133	102
Regulatory assets	5	153
Other	209	221
	3,086	3,260
Investments		
Nuclear decommissioning trust funds	1,661	1,378
Investments in equity method investees	1,862	1,771
Other	265	219
	3,788	3,368
Property		
Property, plant, and equipment	35,072	31,810
Accumulated depreciation and amortization	(9,755)	(10,160)
	25,317	21,650
Other Assets		
Goodwill	2,464	2,293
Regulatory assets	4,171	4,568
Intangible assets	2,393	849
Notes receivable	202	64
Derivative assets	41	31
Prepaid postretirement costs	69	45
Operating lease right-of-use assets	169	—
Other	182	160
	9,691	8,010
Total Assets	\$ 41,882	\$ 36,288

See Combined Notes to Consolidated Financial Statements

DTE Energy Company
Consolidated Statements of Financial Position — (Continued)

	December 31,	
	2019	2018
(In millions, except shares)		
LIABILITIES AND EQUITY		
Current Liabilities		
Accounts payable	\$ 1,076	\$ 1,329
Accrued interest	147	127
Dividends payable	195	172
Short-term borrowings	828	609
Current portion long-term debt, including finance leases	687	1,499
Derivative liabilities	83	67
Regulatory liabilities	65	126
Operating lease liabilities	33	—
Acquisition related deferred payment	379	—
Other	504	509
	<u>3,997</u>	<u>4,438</u>
Long-Term Debt (net of current portion)		
Mortgage bonds, notes, and other	14,778	10,982
Junior subordinated debentures	1,146	1,145
Finance lease obligations	11	7
	<u>15,935</u>	<u>12,134</u>
Other Liabilities		
Deferred income taxes	2,315	1,975
Regulatory liabilities	3,264	2,922
Asset retirement obligations	2,672	2,469
Unamortized investment tax credit	166	138
Derivative liabilities	86	89
Accrued pension liability	808	837
Nuclear decommissioning	249	205
Operating lease liability	127	—
Other	427	364
	<u>10,114</u>	<u>8,999</u>
Commitments and Contingencies (Notes 10 and 19)		
Equity		
Common stock (No par value, 400,000,000 shares authorized, and 192,208,533 and 181,925,281 shares issued and outstanding at December 31, 2019 and December 31, 2018, respectively)	5,233	4,245
Retained earnings	6,587	6,112
Accumulated other comprehensive loss	(148)	(120)
Total DTE Energy Company Equity	<u>11,672</u>	<u>10,237</u>
Noncontrolling interests	164	480
Total Equity	<u>11,836</u>	<u>10,717</u>
Total Liabilities and Equity	<u>\$ 41,882</u>	<u>\$ 36,288</u>

See Combined Notes to Consolidated Financial Statements

DTE Energy Company
Consolidated Statements of Cash Flows

	Year Ended December 31,		
	2019	2018	2017
Operating Activities	(In millions)		
Net Income	\$ 1,172	\$ 1,118	\$ 1,112
Adjustments to reconcile Net Income to Net cash from operating activities:			
Depreciation and amortization	1,263	1,124	1,030
Nuclear fuel amortization	60	45	53
Allowance for equity funds used during construction	(24)	(28)	(23)
Deferred income taxes	329	114	196
Equity earnings of equity method investees	(111)	(132)	(102)
Dividends from equity method investees	160	74	74
Asset (gains) losses and impairments, net	14	29	38
Changes in assets and liabilities:			
Accounts receivable, net	49	(44)	(252)
Inventories	59	(32)	(4)
Prepaid postretirement benefit costs	(24)	(45)	—
Accounts payable	(288)	146	129
Accrued pension liability	(29)	(87)	(228)
Accrued postretirement liability	—	(61)	25
Derivative assets and liabilities	(28)	31	(94)
Regulatory assets and liabilities	160	15	217
Other current and noncurrent assets and liabilities	(113)	413	(54)
Net cash from operating activities	<u>2,649</u>	<u>2,680</u>	<u>2,117</u>
Investing Activities			
Plant and equipment expenditures — utility	(2,724)	(2,439)	(2,037)
Plant and equipment expenditures — non-utility	(273)	(274)	(213)
Acquisition, net of cash acquired	(2,470)	—	—
Proceeds from sale of nuclear decommissioning trust fund assets	788	1,203	1,240
Investment in nuclear decommissioning trust funds	(794)	(1,188)	(1,226)
Distributions from equity method investees	10	9	10
Contributions to equity method investees	(149)	(637)	(299)
Notes receivable	(98)	2	1
Other	(22)	(23)	(38)
Net cash used for investing activities	<u>(5,732)</u>	<u>(3,347)</u>	<u>(2,562)</u>
Financing Activities			
Issuance of long-term debt, net of issuance costs	2,506	1,432	1,398
Redemption of long-term debt	(821)	(105)	(385)
Issuance of equity units, net of issuance costs	1,265	—	—
Short-term borrowings, net	219	(12)	122
Issuance of common stock	1,023	—	—
Repurchase of common stock	—	—	(51)
Dividends on common stock	(692)	(620)	(592)
Contributions from noncontrolling interests, principally REF entities	38	53	50
Distributions to noncontrolling interests	(59)	(48)	(40)
Purchases of noncontrolling interest, principally SGG	(300)	—	—
Other	(79)	(46)	(81)
Net cash from financing activities	<u>3,100</u>	<u>654</u>	<u>421</u>
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	17	(13)	(24)
Cash, Cash Equivalents, and Restricted Cash at Beginning of Period	76	89	113
Cash, Cash Equivalents, and Restricted Cash at End of Period	\$ 93	\$ 76	\$ 89

Supplemental disclosure of cash information

Cash paid (received) for:

Interest, net of interest capitalized	\$	595	\$	572	\$	495
Income taxes	\$	18	\$	(26)	\$	4

Supplemental disclosure of non-cash investing and financing activities^(a)

Plant and equipment expenditures in accounts payable	\$	311	\$	307	\$	295
Premium on equity units	\$	150	\$	—	\$	—

(a) See Note 15 to the Consolidated Financial Statements, "Long-Term Debt" for additional non-cash financing activity related to the remarketing of RSNs.

See Combined Notes to Consolidated Financial Statements

DTE Energy Company
Consolidated Statements of Changes in Equity

	Common Stock		Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests	Total
	Shares	Amount				
	(Dollars in millions, shares in thousands)					
Balance, December 31, 2016	179,433	\$ 4,030	\$ 5,114	\$ (133)	\$ 488	\$ 9,499
Net Income (Loss)	—	—	1,134	—	(22)	1,112
Dividends declared on common stock (\$3.36 per Common Share)	—	—	(602)	—	—	(602)
Repurchase of common stock	(524)	(51)	—	—	—	(51)
Other comprehensive income, net of tax	—	—	—	13	—	13
Stock-based compensation, net contributions from noncontrolling interests, and other	478	10	(3)	—	12	19
Balance, December 31, 2017	179,387	\$ 3,989	\$ 5,643	\$ (120)	\$ 478	\$ 9,990
Implementation of ASU 2016-01	—	—	5	(5)	—	—
Net Income (Loss)	—	—	1,120	—	(2)	1,118
Dividends declared on common stock (\$3.60 per Common Share)	—	—	(653)	—	—	(653)
Issuance of common stock	255	26	—	—	—	26
Contribution of common stock to pension plan	1,751	175	—	—	—	175
Other comprehensive income, net of tax	—	—	—	5	—	5
Stock-based compensation, net contributions from noncontrolling interests, and other	532	55	(3)	—	4	56
Balance, December 31, 2018	181,925	\$ 4,245	\$ 6,112	\$ (120)	\$ 480	\$ 10,717
Implementation of ASU 2018-02	—	—	25	(25)	—	—
Net Income	—	—	1,169	—	3	1,172
Dividends declared on common stock (\$3.85 per Common Share)	—	—	(714)	—	—	(714)
Issuance of common stock	8,634	1,014	—	—	—	1,014
Premium on equity units	—	(150)	—	—	—	(150)
Issuance costs of equity units	—	(30)	—	—	—	(30)
Contribution of common stock to pension plan	815	100	—	—	—	100
Other comprehensive loss, net of tax	—	—	—	(3)	—	(3)
Purchase of noncontrolling interests, principally SGG	—	(3)	—	—	(297)	(300)
Stock-based compensation, net distributions to noncontrolling interests, and other	835	57	(5)	—	(22)	30
Balance, December 31, 2019	192,209	\$ 5,233	\$ 6,587	\$ (148)	\$ 164	\$ 11,836

See Combined Notes to Consolidated Financial Statements

DTE Electric — Controls and Procedures

(a) Evaluation of disclosure controls and procedures

Management of DTE Electric carried out an evaluation, under the supervision and with the participation of DTE Electric's Chief Executive Officer (CEO) and Chief Financial Officer (CFO), of the effectiveness of the design and operation of DTE Electric's disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of December 31, 2019, which is the end of the period covered by this report. Based on this evaluation, DTE Electric's CEO and CFO have concluded that such disclosure controls and procedures are effective in providing reasonable assurance that information required to be disclosed by DTE Electric in reports that it files or submits under the Exchange Act (i) is recorded, processed, summarized, and reported within the time periods specified in the U.S. Securities and Exchange Commission's rules and forms and (ii) is accumulated and communicated to DTE Electric's management, including its CEO and CFO, as appropriate to allow timely decisions regarding required disclosure. Due to the inherent limitations in the effectiveness of any disclosure controls and procedures, management cannot provide absolute assurance that the objectives of its disclosure controls and procedures will be attained.

(b) Management's report on internal control over financial reporting

Management of DTE Electric is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Internal control over financial reporting is a process designed by, or under the supervision of, DTE Electric's CEO and CFO, 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.

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.

Management of DTE Electric has assessed the effectiveness of DTE Electric's internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 COSO) in *Internal Control - Integrated Framework*. Based on this assessment, management concluded that, as of December 31, 2019, DTE Electric's internal control over financial reporting was effective based on those criteria.

This annual report does not include an audit report of DTE Electric's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to audit by DTE Electric's independent registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit DTE Electric to provide only management's report in this annual report.

(c) Changes in internal control over financial reporting

There have been no changes in DTE Electric's internal control over financial reporting during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, DTE Electric's internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholder of
DTE Electric Company

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of DTE Electric Company and its subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of operations, of comprehensive income, of changes in shareholder's equity and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes and financial statement schedule listed in the accompanying index for each of the three years in the period ended December 31, 2019 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 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.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements 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 of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 5, 2020

We have served as the Company's auditor since 2008.

DTE Electric Company
Consolidated Statements of Operations

	Year Ended December 31,		
	2019	2018	2017
	(In millions)		
Operating Revenues	\$ 5,224	\$ 5,298	\$ 5,102
Operating Expenses			
Fuel and purchased power — utility	1,390	1,552	1,454
Operation and maintenance	1,452	1,470	1,428
Depreciation and amortization	946	836	753
Taxes other than income	310	307	302
Asset (gains) losses and impairments, net	13	(1)	—
	<u>4,111</u>	<u>4,164</u>	<u>3,937</u>
Operating Income	<u>1,113</u>	<u>1,134</u>	<u>1,165</u>
Other (Income) and Deductions			
Interest expense	313	283	274
Interest income	(2)	—	—
Non-operating retirement benefits, net	(1)	—	—
Other income	(107)	(83)	(77)
Other expenses	56	77	40
	<u>259</u>	<u>277</u>	<u>237</u>
Income Before Income Taxes	<u>854</u>	<u>857</u>	<u>928</u>
Income Tax Expense	138	193	327
Net Income	<u>\$ 716</u>	<u>\$ 664</u>	<u>\$ 601</u>

See Combined Notes to Consolidated Financial Statements

DTE Electric Company
Consolidated Statements of Comprehensive Income

	Year Ended December 31,		
	2019	2018	2017
	(In millions)		
Net Income	\$ 716	\$ 664	\$ 601
Other comprehensive income, net of tax:			
Net unrealized gains on investments during the period, net of taxes of \$—, \$—, and \$1, respectively	—	—	1
Other comprehensive income	—	—	1
Comprehensive Income	\$ 716	\$ 664	\$ 602

See Combined Notes to Consolidated Financial Statements

DTE Electric Company
Consolidated Statements of Financial Position

	December 31,	
	2019	2018
(In millions)		
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 12	\$ 18
Accounts receivable (less allowance for doubtful accounts of \$46 and \$53, respectively)		
Customer	729	750
Affiliates	25	11
Other	41	54
Inventories		
Fuel	187	171
Materials and supplies	280	279
Regulatory assets	5	148
Other	78	89
	<u>1,357</u>	<u>1,520</u>
Investments		
Nuclear decommissioning trust funds	1,661	1,378
Other	38	34
	<u>1,699</u>	<u>1,412</u>
Property		
Property, plant, and equipment	24,279	22,747
Accumulated depreciation and amortization	(6,706)	(7,310)
	<u>17,573</u>	<u>15,437</u>
Other Assets		
Regulatory assets	3,448	3,829
Intangible assets	15	21
Prepaid postretirement costs — affiliates	266	189
Operating lease right-of-use assets	87	—
Other	143	121
	<u>3,959</u>	<u>4,160</u>
Total Assets	<u>\$ 24,588</u>	<u>\$ 22,529</u>

See Combined Notes to Consolidated Financial Statements

DTE Electric Company
Consolidated Statements of Financial Position — (Continued)

	December 31,	
	2019	2018
	(In millions, except shares)	
LIABILITIES AND SHAREHOLDER'S EQUITY		
Current Liabilities		
Accounts payable		
Affiliates	\$ 59	\$ 71
Other	406	441
Accrued interest	84	74
Current portion long-term debt, including finance leases	636	4
Regulatory liabilities	40	98
Short-term borrowings		
Affiliates	97	101
Other	354	149
Operating lease liabilities	12	—
Other	155	139
	<u>1,843</u>	<u>1,077</u>
Long-Term Debt (net of current portion)		
Mortgage bonds, notes, and other	6,548	6,538
Finance lease obligations	4	7
	<u>6,552</u>	<u>6,545</u>
Other Liabilities		
Deferred income taxes	2,355	2,246
Regulatory liabilities	2,546	2,171
Asset retirement obligations	2,447	2,271
Unamortized investment tax credit	166	137
Nuclear decommissioning	249	205
Accrued pension liability — affiliates	717	718
Accrued postretirement liability — affiliates	367	278
Operating lease liabilities	67	—
Other	84	88
	<u>8,998</u>	<u>8,114</u>
Commitments and Contingencies (Notes 10 and 19)		
Shareholder's Equity		
Common stock (\$10 par value, 400,000,000 shares authorized, and 138,632,234 shares issued and outstanding for both periods)	4,811	4,631
Retained earnings	2,384	2,162
Total Shareholder's Equity	<u>7,195</u>	<u>6,793</u>
Total Liabilities and Shareholder's Equity	<u>\$ 24,588</u>	<u>\$ 22,529</u>

See Combined Notes to Consolidated Financial Statements

DTE Electric Company
Consolidated Statements of Cash Flows

	Year Ended December 31,		
	2019	2018	2017
Operating Activities	(In millions)		
Net Income	\$ 716	\$ 664	\$ 601
Adjustments to reconcile Net Income to Net cash from operating activities:			
Depreciation and amortization	946	836	753
Nuclear fuel amortization	60	45	53
Allowance for equity funds used during construction	(22)	(19)	(18)
Deferred income taxes	97	189	345
Asset (gains) losses and impairments, net	13	—	—
Changes in assets and liabilities:			
Accounts receivable, net	20	33	(80)
Inventories	(17)	15	31
Prepaid postretirement benefit costs — affiliates	(77)	(76)	1
Accounts payable	(57)	54	(2)
Accrued pension liability — affiliates	(1)	(93)	(197)
Accrued postretirement liability — affiliates	89	(33)	42
Regulatory assets and liabilities	139	4	202
Other current and noncurrent assets and liabilities	(197)	101	(147)
Net cash from operating activities	<u>1,709</u>	<u>1,720</u>	<u>1,584</u>
Investing Activities			
Plant and equipment expenditures	(2,200)	(1,989)	(1,574)
Proceeds from sale of nuclear decommissioning trust fund assets	788	1,203	1,240
Investment in nuclear decommissioning trust funds	(794)	(1,188)	(1,226)
Other	(21)	(15)	18
Net cash used for investing activities	<u>(2,227)</u>	<u>(1,989)</u>	<u>(1,542)</u>
Financing Activities			
Issuance of long-term debt, net of issuance costs	643	519	435
Redemption of long-term debt	—	—	(300)
Capital contribution by parent company	180	325	100
Short-term borrowings, net — affiliate	(4)	(15)	(1)
Short-term borrowings, net — other	205	(89)	176
Dividends on common stock	(494)	(461)	(432)
Other	(18)	(7)	(18)
Net cash from (used for) financing activities	<u>512</u>	<u>272</u>	<u>(40)</u>
Net Increase (Decrease) in Cash and Cash Equivalents	(6)	3	2
Cash and Cash Equivalents at Beginning of Period	18	15	13
Cash and Cash Equivalents at End of Period	<u>\$ 12</u>	<u>\$ 18</u>	<u>\$ 15</u>
Supplemental disclosure of cash information			
Cash paid (received) for:			
Interest, net of interest capitalized	\$ 295	\$ 283	\$ 252
Income taxes	\$ 46	\$ —	\$ (16)
Supplemental disclosure of non-cash investing and financing activities			
Plant and equipment expenditures in accounts payable	\$ 192	\$ 181	\$ 191

See Combined Notes to Consolidated Financial Statements

DTE Electric Company

Consolidated Statements of Changes in Shareholder's Equity

	Common Stock		Additional Paid- in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Total
	Shares	Amount				
	(Dollars in millions, shares in thousands)					
Balance, December 31, 2016	138,632	\$ 1,386	\$ 2,820	\$ 1,787	\$ 2	\$ 5,995
Net Income	—	—	—	601	—	601
Dividends declared on common stock	—	—	—	(432)	—	(432)
Other comprehensive income, net of tax	—	—	—	—	1	1
Capital contribution by parent company	—	—	100	—	—	100
Balance, December 31, 2017	138,632	\$ 1,386	\$ 2,920	\$ 1,956	\$ 3	\$ 6,265
Implementation of ASU 2016-01	—	—	—	3	(3)	—
Net Income	—	—	—	664	—	664
Dividends declared on common stock	—	—	—	(461)	—	(461)
Capital contribution by parent company	—	—	325	—	—	325
Balance, December 31, 2018	138,632	\$ 1,386	\$ 3,245	\$ 2,162	\$ —	\$ 6,793
Net Income	—	—	—	716	—	716
Dividends declared on common stock	—	—	—	(494)	—	(494)
Capital contribution by parent company	—	—	180	—	—	180
Balance, December 31, 2019	138,632	\$ 1,386	\$ 3,425	\$ 2,384	\$ —	\$ 7,195

See Combined Notes to Consolidated Financial Statements

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements

Index of Combined Notes to Consolidated Financial Statements

The Combined Notes to Consolidated Financial Statements are a combined presentation for DTE Energy and DTE Electric. The following list indicates the Registrant(s) to which each note applies:

Note 1	Organization and Basis of Presentation	DTE Energy and DTE Electric
Note 2	Significant Accounting Policies	DTE Energy and DTE Electric
Note 3	New Accounting Pronouncements	DTE Energy and DTE Electric
Note 4	Acquisitions	DTE Energy
Note 5	Revenue	DTE Energy and DTE Electric
Note 6	Goodwill	DTE Energy
Note 7	Property, Plant, and Equipment	DTE Energy and DTE Electric
Note 8	Jointly-Owned Utility Plant	DTE Energy and DTE Electric
Note 9	Asset Retirement Obligations	DTE Energy and DTE Electric
Note 10	Regulatory Matters	DTE Energy and DTE Electric
Note 11	Income Taxes	DTE Energy and DTE Electric
Note 12	Common Stock and Earnings Per Share	DTE Energy
Note 13	Fair Value	DTE Energy and DTE Electric
Note 14	Financial and Other Derivative Instruments	DTE Energy and DTE Electric
Note 15	Long-Term Debt	DTE Energy and DTE Electric
Note 16	Preferred and Preference Securities	DTE Energy and DTE Electric
Note 17	Short-Term Credit Arrangements and Borrowings	DTE Energy and DTE Electric
Note 18	Leases	DTE Energy and DTE Electric
Note 19	Commitments and Contingencies	DTE Energy and DTE Electric
Note 20	Nuclear Operations	DTE Energy and DTE Electric
Note 21	Retirement Benefits and Trusteed Assets	DTE Energy and DTE Electric
Note 22	Stock-Based Compensation	DTE Energy and DTE Electric
Note 23	Segment and Related Information	DTE Energy
Note 24	Related Party Transactions	DTE Electric
Note 25	Supplementary Quarterly Financial Information (Unaudited)	DTE Energy and DTE Electric

NOTE 1 — ORGANIZATION AND BASIS OF PRESENTATION

Corporate Structure

DTE Energy owns the following businesses:

- DTE Electric is a public utility engaged in the generation, purchase, distribution, and sale of electricity to approximately 2.2 million customers in southeastern Michigan;
- DTE Gas is a public utility engaged in the purchase, storage, transportation, distribution, and sale of natural gas to approximately 1.3 million customers throughout Michigan and the sale of storage and transportation capacity; and
- Other businesses primarily involved in 1) services related to the gathering, transportation, and storage of natural gas; 2) power and industrial projects; and 3) energy marketing and trading operations.

DTE Electric and DTE Gas are regulated by the MPSC. Certain activities of DTE Electric and DTE Gas, as well as various other aspects of businesses under DTE Energy are regulated by the FERC. In addition, the Registrants are regulated by other federal and state regulatory agencies including the NRC, the EPA, the EGLE, and for DTE Energy, the CFTC.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Basis of Presentation

The accompanying Consolidated Financial Statements of the Registrants are prepared using accounting principles generally accepted in the United States of America. These accounting principles require management to use estimates and assumptions that impact reported amounts of assets, liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities. Actual results may differ from the Registrants' estimates.

The information in these combined notes relates to each of the Registrants as noted in the Index of Combined Notes to Consolidated Financial Statements. However, DTE Electric does not make any representation as to information related solely to DTE Energy or the subsidiaries of DTE Energy other than itself.

Certain prior year balances for the Registrants were reclassified to match the current year's Consolidated Financial Statements presentation.

Principles of Consolidation

The Registrants consolidate all majority-owned subsidiaries and investments in entities in which they have controlling influence. Non-majority owned investments are accounted for using the equity method when the Registrants are able to significantly influence the operating policies of the investee. When the Registrants do not influence the operating policies of an investee, the cost method is used. These Consolidated Financial Statements also reflect the Registrants' proportionate interests in certain jointly-owned utility plants. The Registrants eliminate all intercompany balances and transactions.

The Registrants evaluate whether an entity is a VIE whenever reconsideration events occur. The Registrants consolidate VIEs for which they are the primary beneficiary. If a Registrant is not the primary beneficiary and an ownership interest is held, the VIE is accounted for under the equity method of accounting. When assessing the determination of the primary beneficiary, a Registrant considers all relevant facts and circumstances, including: the power, through voting or similar rights, to direct the activities of the VIE that most significantly impact the VIE's economic performance and the obligation to absorb the expected losses and/or the right to receive the expected returns of the VIE. The Registrants perform ongoing reassessments of all VIEs to determine if the primary beneficiary status has changed.

Legal entities within DTE Energy's Power and Industrial Projects segment enter into long-term contractual arrangements with customers to supply energy-related products or services. The entities are generally designed to pass-through the commodity risk associated with these contracts to the customers, with DTE Energy retaining operational and customer default risk. These entities generally are VIEs and consolidated when DTE Energy is the primary beneficiary. In addition, DTE Energy has interests in certain VIEs through which control of all significant activities is shared with partners, and therefore are generally accounted for under the equity method.

DTE Energy currently owns an 85% interest in SGG, which owns and operates midstream natural gas assets. SGG has contracts through which certain construction risk is designed to pass-through to the customers, with DTE Energy retaining operational and customer default risk. SGG is a VIE with DTE Energy as the primary beneficiary.

The Registrants have variable interests in NEXUS, which include DTE Energy's 50% ownership interest and DTE Electric's transportation services contract. NEXUS is a joint venture which owns a 256-mile pipeline to transport Utica and Marcellus shale gas to Ohio, Michigan, and Ontario market centers. NEXUS also owns Generation Pipeline, LLC, a 23-mile regulated pipeline system located in northern Ohio, which was acquired in September 2019. Refer to Note 4, "Acquisitions," for additional information. NEXUS is a VIE as it has insufficient equity at risk to finance its activities. The Registrants are not the primary beneficiaries, as the power to direct significant activities is shared between the owners of the equity interests. DTE Energy accounts for its ownership interest in NEXUS under the equity method.

The Registrants hold ownership interests in certain limited partnerships. The limited partnerships include investment funds which support regional development and economic growth, as well as an operational business providing energy-related products. These entities are generally VIEs as a result of certain characteristics of the limited partnership voting rights. The ownership interests are accounted for under the equity method as the Registrants are not the primary beneficiaries.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

DTE Energy has variable interests in VIEs through certain of its long-term purchase and sale contracts. DTE Electric has variable interests in VIEs through certain of its long-term purchase contracts. As of December 31, 2019, the carrying amount of assets and liabilities in DTE Energy's Consolidated Statements of Financial Position that relate to its variable interests under long-term purchase and sale contracts are predominantly related to working capital accounts and generally represent the amounts owed by or to DTE Energy for the deliveries associated with the current billing cycle under the contracts. As of December 31, 2019, the carrying amount of assets and liabilities in DTE Electric's Consolidated Statements of Financial Position that relate to its variable interests under long-term purchase contracts are predominantly related to working capital accounts and generally represent the amounts owed by DTE Electric for the deliveries associated with the current billing cycle under the contracts. The Registrants have not provided any significant form of financial support associated with these long-term contracts. There is no material potential exposure to loss as a result of DTE Energy's variable interests through these long-term purchase and sale contracts. In addition, there is no material potential exposure to loss as a result of DTE Electric's variable interests through these long-term purchase contracts.

The maximum risk exposure for consolidated VIEs is reflected on the Registrants' Consolidated Statements of Financial Position and for DTE Energy, in Note 19 to the Consolidated Financial Statements, "Commitments and Contingencies," related to the REF guarantees and indemnities. For non-consolidated VIEs, the maximum risk exposure of the Registrants is generally limited to their investment, notes receivable, future funding commitments, and amounts which DTE Energy has guaranteed. See Note 19 to the Consolidated Financial Statements, "Commitments and Contingencies," for further discussion of the NEXUS guarantee arrangements.

The following table summarizes the major Consolidated Statements of Financial Position items for consolidated VIEs as of December 31, 2019 and 2018. All assets and liabilities of a consolidated VIE are presented where it has been determined that a consolidated VIE has either (1) assets that can be used only to settle obligations of the VIE or (2) liabilities for which creditors do not have recourse to the general credit of the primary beneficiary. VIEs, in which DTE Energy holds a majority voting interest and is the primary beneficiary, that meet the definition of a business and whose assets can be used for purposes other than the settlement of the VIE's obligations have been excluded from the table below.

Amounts for DTE Energy's consolidated VIEs are as follows:

	December 31, 2019			December 31, 2018		
	SGG ^(a)	Other	Total	SGG ^(a)	Other	Total
	(In millions)					
ASSETS						
Cash and cash equivalents	\$ 16	\$ 11	\$ 27	\$ 25	\$ 14	\$ 39
Restricted cash	—	—	—	—	5	5
Accounts receivable	8	19	27	9	37	46
Inventories	—	74	74	1	92	93
Property, plant, and equipment, net	410	33	443	395	46	441
Goodwill	25	—	25	25	—	25
Intangible assets	542	—	542	557	—	557
Other current and long-term assets	2	—	2	3	—	3
	\$ 1,003	\$ 137	\$ 1,140	\$ 1,015	\$ 194	\$ 1,209
LIABILITIES						
Accounts payable and accrued current liabilities	\$ 2	\$ 13	\$ 15	\$ 3	\$ 31	\$ 34
Other current and long-term liabilities	7	7	14	9	10	19
	\$ 9	\$ 20	\$ 29	\$ 12	\$ 41	\$ 53

(a) Amounts shown are 100% of SGG's assets and liabilities, of which DTE Energy owns 85% at December 31, 2019 and 55% at December 31, 2018.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Amounts for DTE Energy's non-consolidated VIEs are as follows:

	December 31,	
	2019	2018
	(In millions)	
Investments in equity method investees	\$ 1,503	\$ 1,425
Notes receivable	\$ 21	\$ 15
Future funding commitments	\$ 63	\$ 55

Equity Method Investments

Investments in non-consolidated affiliates that are not controlled by the Registrants, but over which they have significant influence, are accounted for using the equity method. Certain of the equity method investees are also considered VIEs and disclosed in the non-consolidated VIEs table above. At December 31, 2019 and 2018, DTE Energy's share of the underlying equity in the net assets of the investees exceeded the carrying amounts of Investments in equity method investees by \$74 million and \$59 million, respectively. The difference is being amortized over the life of the underlying assets.

DTE Energy equity method investees are described below:

Segment	Investments		% Owned		Description
	2019	2018	2019	2018	
	(In millions)				
Significant Equity Method Investees					
Gas Storage and Pipelines					
NEXUS Pipeline	\$ 1,345	\$ 1,260	50%	50%	256-mile pipeline to transport Utica and Marcellus shale gas to Ohio, Michigan, and Ontario market centers. Also includes Generation Pipeline, a 23-mile pipeline located in northern Ohio
Vector Pipeline	131	123	40%	40%	348-mile pipeline connecting Chicago, Michigan, and Ontario market centers
Millennium Pipeline	209	202	26%	26%	263-mile pipeline serving markets in the Northeast
	<u>1,685</u>	<u>1,585</u>			
Other Equity Method Investees					
Other Segments	177	186			
	<u>\$ 1,862</u>	<u>\$ 1,771</u>			

The balances in Other Equity Method Investees are individually insignificant and are primarily from the Power and Industrial Projects segment. These investments are comprised of projects that deliver energy and utility-type products and services to an industrial customer, sell electricity from renewable energy projects under long-term power purchase agreements, and produce and sell metallurgical coke.

For further information by segment, see Note 23 to the Consolidated Financial Statements, "Segment and Related Information."

The following table presents summarized financial information of subsidiaries not consolidated and 50 percent or less owned by DTE Energy. The amounts included in the table below represents 100% of the results of continuing operations of such entities accounted for under the equity method of accounting.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Summarized balance sheet data is as follows:

	December 31,	
	2019	2018
	(In millions)	
Current Assets	\$ 374	\$ 358
Non-current assets	\$ 5,260	\$ 5,101
Current Liabilities	\$ 414	\$ 391
Non-current liabilities	\$ 698	\$ 762

Summarized income statement data is as follows:

	December 31,		
	2019	2018	2017
	(In millions)		
Operating Revenues	\$ 1,210	\$ 883	\$ 756
Operating Expenses	\$ 853	\$ 622	\$ 561
Net Income	\$ 313	\$ 365	\$ 254

NOTE 2 — SIGNIFICANT ACCOUNTING POLICIES

Other Income

Other income for the Registrants is recognized for non-operating income such as equity earnings of equity method investees, allowance for equity funds used during construction, contract services, and gains (losses) from trading securities. DTE Energy's Power and Industrial Projects segment also recognizes Other income in connection with the sale of membership interests in reduced emissions fuel facilities to investors. In exchange for the cash received, the investors will receive a portion of the economic attributes of the facilities, including income tax attributes. The transactions are not treated as a sale of membership interests for financial reporting purposes. Other income related to fixed non-refundable cash payments received from investors for which the earnings process is not contingent upon production of refined coal is recognized on a straight-line basis over the non-cancelable contract term as the economic benefit from the ownership of the facility is transferred to investors. Other income related to cash payments that is contingent upon production of refined coal is considered earned and recognized when the contingency regarding the timing and amount of payment is resolved, generally as refined coal is produced and tax credits are generated.

The following is a summary of DTE Energy's Other income:

	2019	2018	2017
	(In millions)		
Income from REF entities	\$ 130	\$ 98	\$ 77
Equity earnings of equity method investees	111	132	102
Gains from equity securities	37	6	26
Contract services	29	51	19
Allowance for equity funds used during construction	24	28	23
Other	19	18	21
	<u>\$ 350</u>	<u>\$ 333</u>	<u>\$ 268</u>

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following is a summary of DTE Electric's Other income:

	2019	2018	2017
	(In millions)		
Gains from equity securities allocated from DTE Energy	\$ 37	\$ 6	\$ 26
Contract services	32	51	21
Allowance for equity funds used during construction	22	19	18
Other	16	7	12
	<u>\$ 107</u>	<u>\$ 83</u>	<u>\$ 77</u>

For information on equity earnings of equity method investees by segment, see Note 23 to the Consolidated Financial Statements, "Segment and Related Information."

Accounting for ISO Transactions

DTE Electric participates in the energy market through MISO. MISO requires that DTE Electric submit hourly day-ahead, real-time, and FTR bids and offers for energy at locations across the MISO region. DTE Electric accounts for MISO transactions on a net hourly basis in each of the day-ahead, real-time, and FTR markets. In any single hour, transactions in each of the MISO energy markets are netted based on MWh to determine if DTE Electric is in a net sale or purchase position. Net purchases are recorded in Fuel, purchased power, and gas — utility and net sales are recorded in Operating Revenues — Utility operations on the Registrants' Consolidated Statements of Operations.

The Energy Trading segment participates in the energy markets through various ISOs and RTOs. These markets require that Energy Trading submits hourly day-ahead, real-time bids and offers for energy at locations across each region. Energy Trading submits bids in the annual and monthly auction revenue rights and FTR auctions to the RTOs. Energy Trading accounts for these transactions on a net hourly basis for the day-ahead, real-time, and FTR markets. These transactions are related to trading contracts which, if derivatives, are presented on a net basis in Operating Revenues — Non-utility operations, and if non-derivatives, the realized gains and losses for sales are recorded in Operating Revenues — Non-utility operations and purchases are recorded in Fuel, purchased power, and gas — non-utility in the DTE Energy Consolidated Statements of Operations.

DTE Electric and Energy Trading record accruals for future net purchases adjustments based on historical experience and reconcile accruals to actual costs when invoices are received from MISO and other ISOs and RTOs.

Derivatives

Energy Trading classifies derivative transactions as revenue or expense based on the intent of the transaction (buy or sell). Revenues are recorded on a gross or net basis within the income statement depending upon whether it represents a non-trading activity or trading activity, respectively. For additional information, refer to Note 14 to the Consolidated Financial Statements, "Financial and Other Derivative Instruments".

Changes in Accumulated Other Comprehensive Income (Loss)

Comprehensive income (loss) is the change in common shareholders' equity during a period from transactions and events from non-owner sources, including Net Income. The amounts recorded to Accumulated other comprehensive income (loss) for DTE Energy include changes in benefit obligations, consisting of deferred actuarial losses and prior service costs, unrealized gains and losses from derivatives accounted for as cash flow hedges, DTE Energy's interest in other comprehensive income of equity investees which comprise the net unrealized gains and losses on investments, and foreign currency translation adjustments. DTE Energy releases income tax effects from accumulated other comprehensive income when the circumstances upon which they are premised cease to exist.

Changes in Accumulated other comprehensive income (loss) are presented in DTE Energy's Consolidated Statements of Changes in Equity and DTE Electric's Consolidated Statements of Changes in Shareholder's Equity. For further discussion regarding changes in Accumulated other comprehensive income (loss), see Note 3 to the Consolidated Financial Statements, "New Accounting Pronouncements." For the years ended December 31, 2019 and 2018, reclassifications out of Accumulated other comprehensive income (loss) not relating to the adoption of new accounting pronouncements for DTE Energy were not material.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following table summarizes the changes in DTE Energy's Accumulated other comprehensive income (loss) by component^(a) for the years ended December 31, 2019 and 2018:

	Net Unrealized Gain (Loss) on Derivatives	Net Unrealized Loss on Investments	Benefit Obligations ^(b)	Foreign Currency Translation	Total
(In millions)					
Balance, December 31, 2017	\$ (3)	\$ (2)	\$ (110)	\$ (5)	\$ (120)
Other comprehensive loss before reclassifications	(2)	—	(1)	(2)	(5)
Amounts reclassified from Accumulated other comprehensive income (loss)	1	—	9	—	10
Net current-period Other comprehensive income (loss)	(1)	—	8	(2)	5
Implementation of ASU 2016-01	(7)	2	—	—	(5)
Balance, December 31, 2018	\$ (11)	\$ —	\$ (102)	\$ (7)	\$ (120)
Other comprehensive income (loss) before reclassifications	(14)	—	(7)	1	(20)
Amounts reclassified from Accumulated other comprehensive income (loss)	2	—	15	—	17
Net current-period Other comprehensive income (loss)	(12)	—	8	1	(3)
Implementation of ASU 2018-02	(2)	—	(23)	—	(25)
Balance, December 31, 2019	<u>\$ (25)</u>	<u>\$ —</u>	<u>\$ (117)</u>	<u>\$ (6)</u>	<u>\$ (148)</u>

(a) All amounts are net of tax, except for Foreign currency translation.

(b) The amounts reclassified from Accumulated other comprehensive income (loss) are included in the computation of the net periodic pension and other postretirement benefit costs (see Note 21 to the Consolidated Financial Statements, "Retirement Benefits and Trusteed Assets").

Cash, Cash Equivalents, and Restricted Cash

Cash and cash equivalents include cash on hand, cash in banks, and temporary investments purchased with remaining maturities of three months or less. Restricted cash consists of funds held to satisfy requirements of certain debt and DTE Energy partnership operating agreements. Restricted cash designated for interest and principal payments within one year is classified as a Current Asset.

Receivables

Accounts receivable are primarily composed of trade receivables and unbilled revenue. The Registrants' Accounts receivable are stated at net realizable value.

The allowance for doubtful accounts for DTE Electric and DTE Gas is generally calculated using the aging approach that utilizes rates developed in reserve studies. DTE Electric and DTE Gas establish an allowance for uncollectible accounts based on historical losses and management's assessment of existing economic conditions, customer trends, and other factors. Customer accounts are generally considered delinquent if the amount billed is not received by the due date, which is typically in 21 days, however, factors such as assistance programs may delay aggressive action. DTE Electric and DTE Gas assess late payment fees on trade receivables based on past-due terms with customers. Customer accounts are written off when collection efforts have been exhausted. The time period for write-off is 150 days after service has been terminated.

The customer allowance for doubtful accounts for DTE Energy's other businesses is calculated based on specific review of probable future collections based on receivable balances generally in excess of 30 days.

DTE Energy unbilled revenues of \$0.9 billion and \$1.0 billion at December 31, 2019 and 2018, respectively, include \$263 million and \$264 million of DTE Electric unbilled revenues, respectively, included in Customer Accounts receivable.

Notes Receivable

Notes receivable, or financing receivables, for DTE Energy are primarily comprised of finance lease receivables and loans and are included in Notes receivable and Other current assets on DTE Energy's Consolidated Statements of Financial Position. Notes receivable, or financing receivables, for DTE Electric are primarily comprised of loans.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Notes receivable are typically considered delinquent when payment is not received for periods ranging from 60 to 120 days. The Registrants cease accruing interest (nonaccrual status), consider a note receivable impaired, and establish an allowance for credit loss when it is probable that all principal and interest amounts due will not be collected in accordance with the contractual terms of the note receivable. Cash payments received on nonaccrual status notes receivable, that do not bring the account contractually current, are first applied to contractually owed past due interest, with any remainder applied to principal. Accrual of interest is generally resumed when the note receivable becomes contractually current.

In determining the allowance for credit losses for notes receivable, the Registrants consider the historical payment experience and other factors that are expected to have a specific impact on the counterparty's ability to pay. In addition, the Registrants monitor the credit ratings of the counterparties from which they have notes receivable.

Inventories

Inventory related to utility operations is generally valued at average cost. Inventory related to non-utility operations is valued at the lower of cost or net realizable value.

DTE Gas' natural gas inventory of \$40 million and \$48 million as of December 31, 2019 and 2018, respectively, is determined using the last-in, first-out (LIFO) method. The replacement cost of gas in inventory exceeded the LIFO cost by \$49 million and \$113 million at December 31, 2019 and 2018, respectively.

Property, Retirement and Maintenance, and Depreciation and Amortization

Property is stated at cost and includes construction-related labor, materials, overheads, and AFUDC for utility property. The cost of utility properties retired is charged to accumulated depreciation. Expenditures for maintenance and repairs are charged to expense when incurred.

Utility property at DTE Electric and DTE Gas is depreciated over its estimated useful life using straight-line rates approved by the MPSC. DTE Energy's non-utility property is depreciated over its estimated useful life using the straight-line method. Depreciation and amortization expense also includes the amortization of certain regulatory assets for the Registrants.

The cost of nuclear fuel is capitalized. The amortization of nuclear fuel is included within Fuel, purchased power, and gas — utility in the DTE Energy Consolidated Statements of Operations, and Fuel and purchased power in the DTE Electric Consolidated Statements of Operations, and is recorded using the units-of-production method.

See Note 7 to the Consolidated Financial Statements, "Property, Plant, and Equipment."

Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. If the carrying amount of the asset exceeds the expected undiscounted future cash flows generated by the asset, an impairment loss is recognized resulting in the asset being written down to its estimated fair value. Assets to be disposed of are reported at the lower of the carrying amount or fair value, less costs to sell.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Intangible Assets

The Registrants have certain Intangible assets as shown below:

	Useful Lives	December 31, 2019			December 31, 2018		
		Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
(In millions)							
Intangible assets subject to amortization							
Customer relationships	25 to 40 years ^(a)	\$ 2,252	\$ (66)	\$ 2,186	\$ 779	\$ (44)	\$ 735
Contract intangibles	6 to 26 years	268	(76)	192	159	(66)	93
		2,520	(142)	2,378	938	(110)	828
DTE Electric renewable energy credits	(b)	15	—	15	20	—	20
DTE Electric emission allowances	(b)	—	—	—	1	—	1
DTE Electric Long-term intangible assets		15	—	15	21	—	21
DTE Energy Long-term intangible assets		\$ 2,535	\$ (142)	\$ 2,393	\$ 959	\$ (110)	\$ 849

- (a) The useful lives of the customer relationship intangible assets are based on the number of years in which the assets are expected to economically contribute to the business. The expected economic benefit incorporates existing customer contracts and expected renewal rates based on the estimated volume and production lives of gas resources in the region.
- (b) Emission allowances and renewable energy credits are charged to expense, using average cost, as the allowances and credits are consumed in the operation of the business.

The following table summarizes DTE Energy's estimated customer relationship and contract intangible amortization expense expected to be recognized during each year through 2024:

	2020	2021	2022	2023	2024
(In millions)					
Estimated amortization expense	\$ 82	\$ 86	\$ 86	\$ 86	\$ 86

DTE Energy amortizes customer relationship and contract intangible assets on a straight-line basis over the expected period of benefit. DTE Energy's Intangible assets amortization expense was \$33 million in 2019, \$27 million in 2018, and \$29 million in 2017.

Excise and Sales Taxes

The Registrants record the billing of excise and sales taxes as a receivable with an offsetting payable to the applicable taxing authority, with no net impact on the Registrants' Consolidated Statements of Operations.

Deferred Debt Costs

The costs related to the issuance of long-term debt are deferred and amortized over the life of each debt issue. The deferred amounts are included as a direct deduction from the carrying amount of each debt issue in Mortgage bonds, notes, and other and Junior subordinated debentures on DTE Energy's Consolidated Statements of Financial Position and in Mortgage bonds, notes, and other on DTE Electric's Consolidated Statements of Financial Position. In accordance with MPSC regulations applicable to DTE Energy's electric and gas utilities, the unamortized discount, premium, and expense related to utility debt redeemed with a refinancing are amortized over the life of the replacement issue. Discount, premium, and expense on early redemptions of debt associated with DTE Energy's non-utility operations are charged to earnings.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Investments in Debt and Equity Securities

The Registrants generally record investments in debt and equity securities at market value with unrealized gains or losses included in earnings. Changes in the fair value of Fermi 2 nuclear decommissioning investments are recorded as adjustments to Regulatory assets or liabilities, due to a recovery mechanism from customers. The Registrants' equity investments are reviewed for impairment each reporting period. If the assessment indicates that an impairment exists, a loss is recognized resulting in the equity investment being written down to its estimated fair value. See Note 13 of the Consolidated Financial Statements, "Fair Value."

DTE Energy Foundation

There were no contributions made by DTE Energy to the DTE Energy Foundation for the year ended December 31, 2019. DTE Energy's charitable contributions to the DTE Energy Foundation were \$22 million and \$43 million for the years ended December 31, 2018 and 2017, respectively. The DTE Energy Foundation is a non-consolidated not-for-profit private foundation, the purpose of which is to contribute to and assist charitable organizations.

Other Accounting Policies

See the following notes for other accounting policies impacting the Registrants' Consolidated Financial Statements:

Note	Title
5	Revenue
9	Asset Retirement Obligations
10	Regulatory Matters
11	Income Taxes
13	Fair Value
14	Financial and Other Derivative Instruments
18	Leases
21	Retirement Benefits and Trusteed Assets
22	Stock-Based Compensation

NOTE 3 — NEW ACCOUNTING PRONOUNCEMENTS

Recently Adopted Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, as amended. This guidance requires a lessee to account for leases as finance or operating leases and disclose key information about leasing arrangements. Both types of leases will result in the lessee recognizing a right-of-use asset and a corresponding lease liability on its balance sheet, with differing methodology for income statement recognition, depending on the lease classification. The Registrants adopted the standard on January 1, 2019 using the prospective approach. The standard provides a number of transition practical expedients of which the Registrants elected the package of three expedients that must be taken together, allowing entities to not reassess whether an agreement is a lease, to carryforward the existing lease classification, and to not reassess initial direct costs associated with existing leases; but did not elect to apply hindsight in determining lease term and impairment of the right-to-use assets. The Registrants also elected to not evaluate land easements under the new guidance at adoption if they were not previously accounted for as leases. These practical expedients apply to leases that commenced prior to January 1, 2019.

At adoption of the new standard, the Registrants recognized on the Consolidated Statements of Financial Position, right-of-use assets and lease liabilities for certain operating leases of approximately \$137 million and \$130 million, respectively, for DTE Energy and approximately \$74 million and \$67 million, respectively, for DTE Electric as of January 1, 2019. The right-of-use lease assets include \$9 million of prepaid lease costs that have been reclassified from Other assets, current and noncurrent, and \$2 million of deferred lease costs that have been reclassified from Other liabilities, current and noncurrent, for the Registrants. The adoption of the ASU did not have a significant impact on the Registrants' Consolidated Statements of Operations but required additional disclosures for leases. See Note 18 to the Consolidated Financial Statements, "Leases."

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

In February 2018, the FASB issued ASU No. 2018-02, *Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. The amendments in this update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the TCJA. The amendments in this update also require entities to disclose their accounting policy for releasing income tax effects from accumulated other comprehensive income. The Registrants adopted the standard effective January 1, 2019. Upon adoption, DTE Energy reclassified \$25 million of income tax effects from Accumulated other comprehensive income (loss) to Retained Earnings.

Recently Issued Pronouncements

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, as amended. The amendments in this update replace the incurred loss impairment methodology in current generally accepted accounting principles with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information, including forecasts, to develop credit loss estimates. The ASU requires entities to use the new methodology to measure impairment of financial instruments, including accounts receivable, and may result in earlier recognition of credit losses than under current generally accepted accounting principles. Entities will apply the new guidance as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The ASU is effective for the Registrants beginning after December 15, 2019, and interim periods therein. The Registrants will adopt the ASU on its effective date. The Registrants are currently assessing the impact of this standard on their Consolidated Financial Statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurements (Topic 820): Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement*. The amendments in this update modify the disclosure requirements on fair value measurements in Topic 820. The ASU is effective for the Registrants for fiscal years beginning after December 15, 2019, and interim periods therein. The Registrants will adopt the ASU on its effective date. The Registrants are currently assessing the impact of this standard on their Consolidated Financial Statements.

In August 2018, the FASB issued ASU No. 2018-14, *Compensation — Retirement Benefits — Defined Benefit Plans (Subtopic 715-20): Disclosure Framework — Changes to the Disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans*. The amendments in this update modify the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. The ASU is effective for the Registrants for fiscal years ending after December 15, 2020. Early adoption is permitted. The Registrants anticipate adopting the ASU on its effective date. The Registrants are currently assessing the impact of this standard on their Consolidated Financial Statements.

In August 2018, the FASB issued ASU No. 2018-15, *Intangibles — Goodwill and Other — Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract*. The amendments in this update align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal use software license). The ASU is effective for the Registrants for fiscal years beginning after December 15, 2019, and interim periods therein. The Registrants will adopt the ASU on its effective date. The ASU may be applied using either a retrospective or prospective approach. The Registrants will apply the ASU prospectively, and are currently assessing the impact of this standard on their Consolidated Financial Statements.

In October 2018, the FASB issued ASU No. 2018-17, *Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities*. The amendments in this update modify the requirements for determining whether a decision-making fee is a variable interest and require reporting entities to consider indirect interests held through related parties under common control on a proportional basis. The ASU is effective for the Registrants for fiscal years beginning after December 15, 2019, and interim periods therein. The Registrants will adopt the ASU on its effective date. The Registrants are currently assessing the impact of this standard on their Consolidated Financial Statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740) — Simplifying the Accounting for Income Taxes*. The amendments in this update simplify the accounting for income taxes by removing certain exceptions and clarifying certain requirements regarding franchise taxes, goodwill, consolidated tax expenses, and annual effective tax rate calculations. The ASU is effective for the Registrants for fiscal years beginning after December 15, 2020. Early adoption is permitted. The Registrants are currently assessing the impact of this standard on their Consolidated Financial Statements.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

NOTE 4 — ACQUISITIONS

Electric Segment Acquisition

Effective September 12, 2019, DTE Sustainable Generation closed on the purchase of an 89 MW renewable energy project located in Michigan from Heritage Sustainable Energy in support of DTE Energy's renewable energy goals. Direct transaction costs primarily related to advisory fees were immaterial and are included in Operation and maintenance in DTE Energy's Consolidated Statements of Operations. The fair value of consideration provided for the acquisition was approximately \$175 million, of which \$174 million has been paid in cash.

The acquisition was accounted for using the acquisition method of accounting for business combinations. Accordingly, the cost was allocated to the underlying net assets based on their respective fair values as shown below:

	(In millions)	
Contract intangibles	\$	109
Property, plant, and equipment, net		60
Working capital		6
Total	\$	175

The intangible assets recorded pertain to existing customer contracts and were estimated by applying the income approach, based on discounted projected cash flows attributable to the existing agreements. The contract intangible assets are amortized on a straight-line basis with useful lives ranging from 11 years to 13 years, which is based on the remaining number of years the assets are expected to economically contribute to the business. The pro forma financial information has not been presented for DTE Energy because the effects of the acquisition were not material to the Consolidated Statements of Operations.

In conjunction with the above acquisition, DTE Sustainable Generation closed on a purchase and sale agreement with Heritage Sustainable Energy in January 2020 to acquire an additional renewable energy project for approximately \$33 million paid in cash.

The acquired projects are non-utility operations and related revenues are classified accordingly as Operating Revenues - Non-utility operations within DTE Energy's Consolidated Statements of Operations and the Electric segment results of operations. Refer to Note 23 to the Consolidated Financial Statements, "Segment and Related Information."

Gas Storage and Pipelines Segment Acquisitions

Generation Pipeline Acquisition

Effective September 20, 2019, NEXUS closed on the purchase of Generation Pipeline, LLC, a pipeline system regulated by the Public Utilities Commission of Ohio. The 23-mile pipeline system supplies gas to industrial customers in the Toledo, OH area, has existing interconnects with ANR Pipeline Company and Panhandle Eastern Pipeline Company, and is located four miles from NEXUS. Total consideration paid for the acquired entity was approximately \$163 million, of which DTE Energy's portion was 50%. DTE Energy accounts for its ownership interest in NEXUS under the equity method, which now includes equity in earnings related to Generation Pipeline, LLC.

Blue Union and LEAP Acquisition

On December 4, 2019, DTE Energy closed on the purchase of midstream natural gas assets in support of its strategy to continue to grow and earn competitive returns for shareholders. DTE Energy purchased 100 percent of M5 Louisiana Gathering, LLC and its wholly owned subsidiaries from Momentum Midstream and Indigo Natural Resources. The acquisition includes the Blue Union and LEAP assets which provide natural gas gathering and other midstream services to producers located primarily in Louisiana.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The fair value of the consideration provided for the entities acquired was \$2.74 billion and includes \$2.36 billion paid in cash and an estimated \$378 million of contingent consideration to be paid upon completion of a gathering pipeline in the second half of 2020. The contingent payment will range from \$0 million to \$385 million, with no payment due until the pipeline is completed. As of December 31, 2019, the liability for the contingent consideration payment and the related accretion expense of \$1 million is included in a separate line in the Consolidated Statements of Financial Position. The acquisition was financed through the issuance of Equity Units, common stock, and Senior Notes. See Notes 12 and 15 to the Consolidated Financial Statements, "Common Stock and Earnings Per Share" and "Long-Term Debt," respectively, for more information. The acquired assets are part of DTE Energy's non-utility Gas Storage and Pipelines segment.

The acquisition was accounted for using the acquisition method of accounting for business combinations. The allocation of the purchase price included in the Consolidated Statements of Financial Position is preliminary and may be revised up to one year from the date of acquisition due to adjustments in the estimated fair value of the assets acquired and the liabilities assumed. The purchase price is subject to (i) final working capital settlement adjustments, and (ii) resolution of any indemnification claims that might be deducted from the \$100 million of cash consideration paid and held in escrow. As such, DTE Energy cannot estimate the potential amount of the additional revisions to the purchase price allocation in 2020. The excess purchase price over the fair value of net assets acquired totaled approximately \$171 million and was classified as goodwill. The factors contributing to the recognition of goodwill are based on various strategic benefits that are expected to be realized from the Blue Union and LEAP acquisition. The acquisition will provide DTE Energy with a platform for midstream growth and access to further investment opportunities in the Haynesville basin. The goodwill is expected to be deductible for income tax purposes.

The preliminary allocation of the purchase price is based on estimated fair values of the Blue Union and LEAP assets acquired and liabilities assumed at the date of acquisition, December 4, 2019. The components of the preliminary purchase price allocation are as follows:

	(In millions)
Assets	
Cash	\$ 62
Accounts receivable	31
Property, plant, and equipment, net	1,035
Goodwill	171
Customer relationship intangibles	1,473
Other current assets	1
	\$ 2,773
Liabilities	
Accounts payable	\$ 26
Acquisition related deferred payment	378
Other current liabilities	2
Asset retirement obligations	9
	\$ 415
Total cash consideration	\$ 2,358

The intangible assets recorded as a result of the acquisition pertain to existing customer relationships, which were valued at approximately \$1.47 billion as of the acquisition date. The fair value of the intangible assets acquired was estimated by applying the income approach. The income approach is based upon discounted projected future cash flows attributable to the existing contracts and agreements. The fair value measurement is based on significant unobservable inputs, including management estimates and assumptions, and thus represents a Level 3 measurement, pursuant to the applicable accounting guidance. Key estimates and inputs include revenue and expense projections and discount rates based on the risks associated with the entities. The intangible assets are amortized on a straight-line basis over a period of 40 years, which is based on the number of years the assets are expected to economically contribute to the business. The expected economic benefit incorporates existing customer contracts with a weighted-average amortization life of 13 years and expected renewal rates, based on the estimated volume and production lives of gas resources in the region. See Note 2 to the Consolidated Financial Statements, "Significant Accounting Policies," for more information.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

DTE Energy has incurred \$18 million of direct transaction costs for the year ended December 31, 2019. These costs are primarily related to advisory fees and are included in Operation and maintenance in DTE Energy's Consolidated Statements of Operations. Additionally, DTE Energy has incurred \$49 million of issuance costs related to the acquisition financing, of which \$10 million are included in Mortgage bonds, notes, and other, and \$39 million are included in Common Stock in DTE Energy's Consolidated Statements of Financial Position.

DTE Energy's 2019 Consolidated Statements of Operations include Operating Revenues — Non-utility operations of \$15 million and Net Income of \$3 million associated with the acquired entities for the one-month period following the acquisition date, excluding the \$18 million transaction costs described above. The pro forma financial information has not been presented for DTE Energy because the effects of the acquisition were not material to the Consolidated Statements of Operations.

NOTE 5 — REVENUE

Significant Accounting Policy

Upon the adoption of Topic 606, revenue is measured based upon the consideration specified in a contract with a customer at the time when performance obligations are satisfied. Under Topic 606, a performance obligation is a promise in a contract to transfer a distinct good or service or a series of distinct goods or services to the customer. The Registrants recognize revenue when performance obligations are satisfied by transferring control over a product or service to a customer. The Registrants have determined control to be transferred when the product is delivered or the service is provided to the customer. For the years ended December 31, 2019 and 2018, recognition of revenue for the Registrants subsequent to the adoption of Topic 606 is substantially similar in amount and approach to that prior to adoption.

Rates for DTE Electric and DTE Gas include provisions to adjust billings for fluctuations in fuel and purchased power costs, cost of natural gas, and certain other costs. Revenues are adjusted for differences between actual costs subject to reconciliation and the amounts billed in current rates. Under or over recovered revenues related to these cost recovery mechanisms are included in Regulatory assets or liabilities on the Registrants' Consolidated Statements of Financial Position and are recovered or returned to customers through adjustments to the billing factors.

For discussion of derivative contracts, see Note 14 to the Consolidated Financial Statements, "Financial and Other Derivative Instruments."

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Disaggregation of Revenue

The following is a summary of revenues disaggregated by segment for DTE Energy:

	2019	2018
	(In millions)	
Electric^(a)		
Residential	\$ 2,427	\$ 2,494
Commercial	1,795	1,794
Industrial	659	690
Other ^(b)	348	320
Total Electric operating revenues ^(c)	<u>\$ 5,229</u>	<u>\$ 5,298</u>
Gas		
Gas sales	\$ 1,043	\$ 1,055
End User Transportation	219	232
Intermediate Transportation	78	58
Other ^(b)	142	91
Total Gas operating revenues ^(d)	<u>\$ 1,482</u>	<u>\$ 1,436</u>
Other segment operating revenues		
Gas Storage and Pipelines ^(e)	\$ 501	\$ 485
Power and Industrial Projects ^(f)	\$ 1,560	\$ 2,204
Energy Trading ^(g)	\$ 4,610	\$ 5,557

(a) Revenues under the Electric segment generally represent those of DTE Electric.

(b) Includes revenue adjustments related to various regulatory mechanisms.

(c) Includes \$22 million under Alternative Revenue Programs and \$19 million of other revenues, which are both outside the scope of Topic 606 for the year ended December 31, 2019 and includes \$21 million under Alternative Revenue Programs and \$20 million of other revenues, which are both outside the scope of Topic 606 for the year ended December 31, 2018.

(d) Includes \$8 million under Alternative Revenue Programs and \$7 million of other revenues, which are both outside the scope of Topic 606 for the year ended December 31, 2019 and includes \$2 million under Alternative Revenue Programs and \$7 million of other revenues, which are both outside the scope of Topic 606 for the year ended December 31, 2018.

(e) Includes revenues outside the scope of Topic 606 primarily related to \$9 million of contracts accounted for as leases for the year ended December 31, 2019.

(f) Includes revenues outside the scope of Topic 606 primarily related to \$121 million and \$125 million of contracts accounted for as leases for the years ended December 31, 2019 and December 31, 2018, respectively.

(g) Includes revenues outside the scope of Topic 606 primarily related to \$3.4 billion and \$4.5 billion of derivatives for the years ended December 31, 2019 and December 31, 2018, respectively.

Nature of Goods and Services

The following is a description of principal activities, separated by reportable segments, from which DTE Energy generates revenue. For more detailed information about reportable segments, see Note 23 to the Consolidated Financial Statements, "Segment and Related Information."

The Registrants have contracts with customers which may contain more than one performance obligation. When more than one performance obligation exists in a contract, the consideration under the contract is allocated to the performance obligations based on the relative standalone selling price. DTE Energy generally determines standalone selling prices based on the prices charged to customers or the use of the adjusted market assessment approach. The adjusted market assessment approach involves the evaluation of the market in which DTE Energy sells goods or services and estimating the price that a customer in that market would be willing to pay.

Under Topic 606, when a customer simultaneously receives and consumes the product or service provided, revenue is considered to be recognized over time. Alternatively, if it is determined that the criteria for recognition of revenue over time is not met, the revenue is considered to be recognized at a point in time.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Electric

Electric consists principally of DTE Electric. Electric revenues are primarily comprised of the supply and delivery of electricity, and related capacity. Revenues are primarily associated with cancelable contracts, with the exception of certain long-term contracts with commercial and industrial customers. Revenues, including estimated unbilled amounts, are generally recognized over time based upon volumes delivered or through the passage of time ratably based upon providing a stand-ready service. The Registrants have determined that the above methods represent a faithful depiction of the transfer of control to the customer. Unbilled revenues are typically determined utilizing approved tariff rates and estimated meter volumes. Estimated unbilled amounts recognized in revenue are subject to adjustment in the following reporting period as actual volumes by customer class are known. Revenues are typically subject to tariff rates based upon customer class and type of service and are billed and received monthly. Tariff rates are determined by the MPSC on a per unit or monthly basis.

Gas

Gas consists principally of DTE Gas. Gas revenues are primarily comprised of the supply and delivery of natural gas, and other services including storage, transportation, and appliance maintenance. Revenues are primarily associated with cancelable contracts with the exception of certain long-term contracts with commercial and industrial customers. Revenues, including estimated unbilled amounts, are generally recognized over time based upon volumes delivered or through the passage of time ratably based upon providing a stand-ready service. DTE Energy has determined that the above methods represent a faithful depiction of the transfer of control to the customer. Unbilled revenues are typically determined using both estimated meter volumes and estimated usage based upon the number of unbilled days and historical temperatures. Estimated unbilled amounts recognized in revenue are subject to adjustment in the following reporting period as actual volumes by customer class and service type are known. Revenues are typically subject to tariff rates or other rates subject to regulatory oversight and are billed and received monthly. Tariff rates are determined by the MPSC on a per unit or monthly basis.

Gas Storage and Pipelines

Gas Storage and Pipelines revenues generally consist of services related to the gathering, transportation, and storage of natural gas. Contracts are primarily long-term in nature. Revenues, including estimated unbilled amounts, are generally recognized over time based upon services provided or through the passage of time ratably based upon providing a stand-ready service. DTE Energy has determined that the above methods represent a faithful depiction of the transfer of control to the customer. Revenues are typically billed and received monthly. Pricing for such revenues may consist of demand rates, commodity rates, transportation rates, and other associated fees. Consideration may consist of both fixed and variable components. Generally, uncertainties in the variable consideration components are resolved and revenues are known at the time of recognition.

Power and Industrial Projects

Power and Industrial Projects revenues include contracts accounted for as leases which are outside of the scope of Topic 606. For performance obligations within the scope of Topic 606, the timing of revenue recognition is dependent upon when control over the associated product or service is transferred.

Revenues at Power and Industrial Projects, within the scope of Topic 606, generally consist of sales of refined coal, coal, blast furnace coke, coke oven gas, electricity, equipment maintenance services, and other energy related products and services. Revenues, including estimated unbilled amounts, for the sale of blast furnace coke are generally recognized at a point in time when the product is delivered, which represents the transfer of control to the customer. Other revenues are generally recognized over time based upon services provided or through the passage of time ratably based upon providing a stand-ready service. DTE Energy has determined that the above methods represent a faithful depiction of the transfer of control to the customer. Market based pricing structures exist in such contracts including adjustments for consumer price or other indices. Consideration may consist of both fixed and variable components. Generally, uncertainties in the variable consideration components are resolved and revenues are known at the time of recognition. Billing terms vary and are generally monthly with payment terms typically within 30 days following billing.

Energy Trading

Energy Trading revenues consist primarily of derivative contracts outside of the scope of Topic 606. For performance obligations within the scope of Topic 606, the timing of revenue recognition is dependent upon when control over the associated product or service is transferred.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Revenues, including estimated unbilled amounts, within the scope of Topic 606 arising from the sale of natural gas, electricity, power capacity, and other energy related products are generally recognized over time based upon volumes delivered or through the passage of time ratably based upon providing a stand-ready service. DTE Energy has determined that the above methods represent a faithful depiction of the transfer of control to the customer. Revenues are known at the time of recognition. Payment for the aforementioned revenues is generally due from customers in the month following delivery.

Revenues associated with RECs are recognized at a point in time when control of the RECs are transferred to the customer which is deemed to be when the subject RECs are entered for transfer to the customer in the applicable regulatory tracking system. Revenues associated with RECs under a wholesale full requirements power contract are deferred until control has been transferred. The deferred revenues represent a contract liability for which payment has been received and the amounts have been estimated using the adjusted market assessment approach. With the exception of RECs, generally all other performance obligations associated with wholesale full requirements power contracts are satisfied over time in conjunction with the delivery of power. At the time power is delivered, DTE Energy may not have control over the RECs as the RECs are not self-generated and may not yet have been procured resulting in deferred revenues.

Deferred Revenue

The following is a summary of deferred revenue activity:

	DTE Energy
	(In millions)
Beginning Balance, January 1, 2019	\$ 74
Increases due to cash received or receivable, excluding amounts recognized as revenue during the period	51
Revenue recognized that was included in the deferred revenue balance at the beginning of the period	(50)
Ending Balance, December 31, 2019	\$ 75

The deferred revenues at DTE Energy generally represent amounts paid by or receivable from customers for which the associated performance obligation has not yet been satisfied.

Deferred revenues include amounts associated with REC performance obligations under certain wholesale full requirements power contracts. Deferred revenues associated with RECs are recognized as revenue when control of the RECs has transferred.

Other performance obligations associated with deferred revenues include providing products and services related to customer prepayments. Deferred revenues associated with these products and services are recognized when control has transferred to the customer.

The following table represents deferred revenue amounts for DTE Energy that are expected to be recognized as revenue in future periods:

	DTE Energy
	(In millions)
2020	\$ 43
2021	6
2022	7
2023	6
2024	3
2025 and thereafter	10
	\$ 75

Transaction Price Allocated to the Remaining Performance Obligations

In accordance with optional exemptions available under Topic 606, the Registrants did not disclose the value of unsatisfied performance obligations for (1) contracts with an original expected length of one year or less, (2) with the exception of fixed consideration, contracts for which revenue is recognized at the amount to which the Registrants have the right to invoice for goods provided and services performed, and (3) contracts for which variable consideration relates entirely to an unsatisfied performance obligation.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Such contracts consist of varying types of performance obligations across the segments, including the supply and delivery of energy related products and services. Contracts with variable volumes and/or variable pricing, including those with pricing provisions tied to a consumer price or other index, have also been excluded as the related consideration under the contract is variable at inception of the contract. Contract lengths vary from cancelable to multi-year.

The Registrants expect to recognize revenue for the following amounts related to fixed consideration associated with remaining performance obligations in each of the future periods noted:

	DTE Energy	DTE Electric
	(In millions)	
2020	\$ 253	\$ 8
2021	292	8
2022	232	7
2023	164	7
2024	126	7
2025 and thereafter	538	—
	\$ 1,605	\$ 37

Other Matters

The following table represents expenses recognized for estimated uncollectible accounts receivable:

	December 31,	
	2019	2018
	(In millions)	
DTE Energy	\$ 111	\$ 140
DTE Electric	\$ 65	\$ 85

NOTE 6 — GOODWILL

DTE Energy has goodwill resulting from business combinations.

The following is the summary of change in the carrying amount of goodwill for the years ended December 31:

	2019	2018
	(In millions)	
Balance as of January 1	\$ 2,293	\$ 2,293
Goodwill attributable to Gas Storage and Pipelines 2019 acquisition of Blue Union and LEAP	171	—
Balance at December 31	\$ 2,464	\$ 2,293

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

NOTE 7 — PROPERTY, PLANT, AND EQUIPMENT

The following is a summary of Property, plant, and equipment by classification as of December 31:

Property, plant, and equipment	(In millions)	
	2019	2018
DTE Electric		
Generation	\$ 12,028	\$ 11,027
Distribution	9,715	9,153
Other	2,536	2,567
Total DTE Electric	24,279	22,747
DTE Gas		
Distribution	4,164	3,823
Storage	570	548
Transmission and other	1,244	1,204
Total DTE Gas	5,978	5,575
Non-utility and other		
Gas Storage and Pipelines	3,524	2,307
Power and Industrial Projects	1,108	1,070
Other	183	111
Non-utility and other	4,815	3,488
Total DTE Energy	35,072	31,810
Accumulated depreciation and amortization		
DTE Electric		
Generation	(3,460)	(3,609)
Distribution	(2,553)	(2,974)
Other	(693)	(727)
Total DTE Electric	(6,706)	(7,310)
DTE Gas		
Distribution	(1,334)	(1,283)
Storage	(172)	(165)
Transmission and other	(409)	(404)
Total DTE Gas	(1,915)	(1,852)
Non-utility and other		
Gas Storage and Pipelines	(459)	(390)
Power and Industrial Projects	(604)	(546)
Other	(71)	(62)
Non-utility and other	(1,134)	(998)
Total DTE Energy	(9,755)	(10,160)
Net DTE Energy Property, plant, and equipment	\$ 25,317	\$ 21,650
Net DTE Electric Property, plant, and equipment	\$ 17,573	\$ 15,437

The following is a summary of the Registrants' AFUDC and interest capitalized for the years ended December 31:

	DTE Energy		DTE Electric	
	2019	2018	2019	2018
(In millions)				
Allowance for debt funds used during construction and interest capitalized	\$ 15	\$ 15	\$ 10	\$ 9
Allowance for equity funds used during construction	24	28	22	19
Total	\$ 39	\$ 43	\$ 32	\$ 28

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The composite depreciation rate for DTE Electric was approximately 4.0%, 3.7%, and 3.6% in 2019, 2018 and 2017, respectively. The composite depreciation rate for DTE Gas was 2.7% for all periods. The average estimated useful life for each major class of utility Property, plant, and equipment as of December 31, 2019 follows:

Utility	Estimated Useful Lives in Years		
	Generation	Distribution	Storage
DTE Electric	34	38	N/A
DTE Gas	N/A	50	56

The estimated useful lives for DTE Electric's Other utility assets range from 3 to 80 years, while the estimated useful lives for DTE Gas' Transmission and other utility assets range from 3 to 70 years. The estimated useful lives for major classes of DTE Energy's non-utility assets and facilities range from 2 to 55 years.

The following is a summary of Depreciation and amortization expense for DTE Energy:

	2019	2018	2017
	(In millions)		
Property, plant, and equipment	\$ 997	\$ 878	\$ 829
Regulatory assets and liabilities	227	212	165
Intangible assets	33	27	29
Other	6	7	7
	<u>\$ 1,263</u>	<u>\$ 1,124</u>	<u>\$ 1,030</u>

The following is a summary of Depreciation and amortization expense for DTE Electric:

	2019	2018	2017
	(In millions)		
Property, plant, and equipment	\$ 748	\$ 652	\$ 615
Regulatory assets and liabilities	193	179	133
Other	5	5	5
	<u>\$ 946</u>	<u>\$ 836</u>	<u>\$ 753</u>

Capitalized software costs are classified as Property, plant, and equipment and the related amortization is included in accumulated depreciation and amortization on the Registrants' Consolidated Financial Statements. The Registrants capitalize the costs associated with computer software developed or obtained for use in their businesses. The Registrants amortize capitalized software costs on a straight-line basis over the expected period of benefit, ranging from 3 to 15 years for DTE Energy and 3 to 15 years for DTE Electric.

The following balances for capitalized software relate to DTE Energy:

	Year Ended December 31,		
	2019	2018	2017
	(In millions)		
Amortization expense of capitalized software	\$ 123	\$ 108	\$ 101
Gross carrying value of capitalized software	\$ 906	\$ 905	
Accumulated amortization of capitalized software	\$ 520	\$ 534	

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following balances for capitalized software relate to DTE Electric:

	Year Ended December 31,		
	2019	2018	2017
	(In millions)		
Amortization expense of capitalized software	\$ 112	\$ 101	\$ 93
Gross carrying value of capitalized software	\$ 811	\$ 799	
Accumulated amortization of capitalized software	\$ 462	\$ 463	

NOTE 8 — JOINTLY-OWNED UTILITY PLANT

DTE Electric has joint ownership interest in two power plants, Belle River and Ludington Hydroelectric Pumped Storage. DTE Electric's share of direct expenses of the jointly-owned plants are included in Fuel, purchased power, and gas — utility and Operation and maintenance expenses in the DTE Energy Consolidated Statements of Operations and Fuel and purchased power— utility and Operation and maintenance expenses in the DTE Electric Consolidated Statements of Operations.

DTE Electric's ownership information of the two utility plants as of December 31, 2019 was as follows:

	Belle River	Ludington Hydroelectric Pumped Storage
In-service date	1984-1985	1973
Total plant capacity	1,270 MW	2,220 MW
Ownership interest	81%	49%
Investment in Property, plant, and equipment (in millions)	\$ 1,903	\$ 616
Accumulated depreciation (in millions)	\$ 896	\$ 193

Belle River

The Michigan Public Power Agency (MPPA) has ownership interests in Belle River Unit No. 1 and other related facilities. The MPPA is entitled to 19% of the total capacity and energy of the plant and is responsible for the same percentage of the plant's operation, maintenance, and capital improvement costs.

Ludington Hydroelectric Pumped Storage

Consumers Energy Company has an ownership interest in the Ludington Hydroelectric Pumped Storage Plant. Consumers Energy is entitled to 51% of the total capacity and energy of the plant and is responsible for the same percentage of the plant's operation, maintenance, and capital improvement costs.

NOTE 9 — ASSET RETIREMENT OBLIGATIONS

DTE Electric has a legal retirement obligation for the decommissioning costs for its Fermi 1 and Fermi 2 nuclear plants, dismantlement of facilities located on leased property, and various other operations. DTE Electric has conditional retirement obligations for asbestos and PCB removal at certain of its power plants and various distribution equipment. DTE Gas has conditional retirement obligations for gas pipelines, certain service centers, compressor and gate stations. The Registrants recognize such obligations as liabilities at fair market value when they are incurred, which generally is at the time the associated assets are placed in service. Fair value is measured using expected future cash outflows discounted at the Registrants' credit-adjusted risk-free rate. For its utility operations, the Registrants recognize in the Consolidated Statements of Operations removal costs in accordance with regulatory treatment. Any differences between costs recognized related to asset retirement and those reflected in rates are recognized as either a Regulatory asset or liability on the Consolidated Statements of Financial Position.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

If a reasonable estimate of fair value cannot be made in the period in which the retirement obligation is incurred, such as for assets with indeterminate lives, the liability is recognized when a reasonable estimate of fair value can be made. Natural gas storage system and certain other distribution assets for DTE Gas and substations, manholes, and certain other distribution assets for DTE Electric have an indeterminate life. Therefore, no liability has been recorded for these assets.

Changes to asset retirement obligations for 2019, 2018, and 2017 were as follows:

	2019	2018	2017
	(In millions)		
DTE Energy			
Asset retirement obligations at January 1	\$ 2,469	\$ 2,320	\$ 2,197
Accretion	149	140	131
Liabilities incurred	20	27	2
Liabilities settled	(17)	(16)	(6)
Revision in estimated cash flows	51	(2)	(4)
Asset retirement obligations at December 31	<u>\$ 2,672</u>	<u>\$ 2,469</u>	<u>\$ 2,320</u>

	2019	2018	2017
	(In millions)		
DTE Electric			
Asset retirement obligations at January 1	\$ 2,271	\$ 2,125	\$ 2,012
Accretion	138	129	120
Liabilities incurred	1	27	1
Liabilities settled	(14)	(8)	(2)
Revision in estimated cash flows	51	(2)	(6)
Asset retirement obligations at December 31	<u>\$ 2,447</u>	<u>\$ 2,271</u>	<u>\$ 2,125</u>

Approximately \$2.1 billion of the asset retirement obligations represent nuclear decommissioning liabilities that are funded through a surcharge to electric customers over the life of the Fermi 2 nuclear plant. The NRC has jurisdiction over the decommissioning of nuclear power plants and requires minimum decommissioning funding based upon a formula. The MPSC and FERC regulate the recovery of costs of decommissioning nuclear power plants and both require the use of external trust funds to finance the decommissioning of Fermi 2. Rates approved by the MPSC provide for the recovery of decommissioning costs of Fermi 2 and the disposal of low-level radioactive waste. DTE Electric believes the MPSC collections will be adequate to fund the estimated cost of decommissioning. The decommissioning assets, anticipated earnings thereon, and future revenues from decommissioning collections will be used to decommission Fermi 2. DTE Electric expects the liabilities to be reduced to zero at the conclusion of the decommissioning activities. If amounts remain in the trust funds for Fermi 2 following the completion of the decommissioning activities, those amounts will be disbursed based on rulings by the MPSC and FERC.

A portion of the funds recovered through the Fermi 2 decommissioning surcharge and deposited in external trust accounts is designated for the removal of non-radioactive assets and returning the site to greenfield. This removal and greenfielding is not considered a legal liability. Therefore, it is not included in the asset retirement obligation, but is reflected as the Nuclear decommissioning liability. The decommissioning of Fermi 1 is funded by DTE Electric. Contributions to the Fermi 1 trust are discretionary. For additional discussion of Nuclear decommissioning trust fund assets, see Note 13 to the Consolidated Financial Statements, "Fair Value."

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

NOTE 10 — REGULATORY MATTERS

Regulation

DTE Electric and DTE Gas are subject to the regulatory jurisdiction of the MPSC, which issues orders pertaining to rates, recovery of certain costs, including the costs of generating facilities and regulatory assets, conditions of service, accounting, and operating-related matters. DTE Electric is also regulated by the FERC with respect to financing authorization and wholesale electric activities. Regulation results in differences in the application of generally accepted accounting principles between regulated and non-regulated businesses.

The Registrants are unable to predict the outcome of the unresolved regulatory matters discussed herein. Resolution of these matters is dependent upon future MPSC orders and appeals, which may materially impact the Consolidated Financial Statements of the Registrants.

Regulatory Assets and Liabilities

DTE Electric and DTE Gas are required to record Regulatory assets and liabilities for certain transactions that would have been treated as revenue or expense in non-regulated businesses. Continued applicability of regulatory accounting treatment requires that rates be designed to recover specific costs of providing regulated services and be charged to and collected from customers. Future regulatory changes could result in the discontinuance of this accounting treatment for Regulatory assets and liabilities for some or all of the Registrants' businesses and may require the write-off of the portion of any Regulatory asset or liability that was no longer probable of recovery through regulated rates. Management believes that currently available facts support the continued use of Regulatory assets and liabilities and that all Regulatory assets and liabilities are recoverable or refundable in the current regulatory environment.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following are balances and a brief description of the Registrants' Regulatory assets and liabilities at December 31:

	DTE Energy		DTE Electric	
	2019	2018	2019	2018
Assets	(In millions)			
Recoverable pension and other postretirement costs				
Pension	\$ 1,983	\$ 1,961	\$ 1,497	\$ 1,476
Other postretirement costs	201	213	131	121
Fermi 2 asset retirement obligation	669	778	669	778
Recoverable undepreciated costs on retiring plants	657	630	657	630
Recoverable Michigan income taxes	189	201	152	161
Deferred environmental costs	66	69	—	—
Recoverable income taxes related to AFUDC equity	56	51	47	41
Unamortized loss on reacquired debt	56	60	40	43
Customer360 deferred costs	55	42	55	42
Energy Waste Reduction incentive	54	49	43	39
Nuclear Performance Evaluation and Review Committee Tracker	48	43	48	43
Enhanced Tree Trimming Program deferred costs	43	—	43	—
Other recoverable income taxes	20	23	20	23
Non-service pension and other postretirement costs	15	10	—	—
Transitional Reconciliation Mechanism	10	21	10	21
Accrued PSCR/GCR revenue	3	116	3	116
Removal costs asset	—	407	—	407
Other	51	47	38	36
	4,176	4,721	3,453	3,977
Less amount included in Current Assets	(5)	(153)	(5)	(148)
	\$ 4,171	\$ 4,568	\$ 3,448	\$ 3,829
	DTE Energy		DTE Electric	
	2019	2018	2019	2018
Liabilities	(In millions)			
Refundable federal income taxes	\$ 2,359	\$ 2,410	\$ 1,911	\$ 1,958
Removal costs liability	700	253	483	—
Negative other postretirement offset	93	101	69	79
Renewable energy	54	86	54	86
Non-service pension and other postretirement costs	46	22	21	11
Accrued PSCR/GCR refund	23	—	—	—
TCJA rate reduction liability	1	118	—	93
Other	53	58	48	42
	3,329	3,048	2,586	2,269
Less amount included in Current Liabilities	(65)	(126)	(40)	(98)
	\$ 3,264	\$ 2,922	\$ 2,546	\$ 2,171

As noted below, certain Regulatory assets for which costs have been incurred have been included (or are expected to be included, for costs incurred subsequent to the most recently approved rate case) in DTE Electric's or DTE Gas' rate base, thereby providing a return on invested costs (except as noted). Certain other regulatory assets are not included in rate base but accrue recoverable carrying charges until surcharges to collect the assets are billed. Certain Regulatory assets do not result from cash expenditures and therefore do not represent investments included in rate base or have offsetting liabilities that reduce rate base.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

ASSETS

- *Recoverable pension and other postretirement costs* — Accounting standards for pension and other postretirement benefit costs require, among other things, the recognition in Other comprehensive income of the actuarial gains or losses and the prior service costs that arise during the period but that are not immediately recognized as components of net periodic benefit costs. DTE Electric and DTE Gas record the impact of actuarial gains or losses and prior service costs as a Regulatory asset since the traditional rate setting process allows for the recovery of pension and other postretirement costs. The asset will reverse as the deferred items are amortized and recognized as components of net periodic benefit costs.^(a)
- *Fermi 2 asset retirement obligation* — This obligation is for Fermi 2 decommissioning costs. The asset captures the timing differences between expense recognition and current recovery in rates and will reverse over the remaining life of the related plant.^(a)
- *Recoverable undepreciated costs on retiring plants* — Deferral of estimated remaining balances associated with coal power plants expected to be retired by 2023.
- *Recoverable Michigan income taxes* — The State of Michigan enacted a corporate income tax resulting in the establishment of state deferred tax liabilities for DTE Energy's utilities. Offsetting Regulatory assets were also recorded as the impacts of the deferred tax liabilities will be reflected in rates as the related taxable temporary differences reverse and flow through current income tax expense.
- *Deferred environmental costs* — The MPSC approved the deferral of investigation and remediation costs associated with DTE Gas' former MGP sites. Amortization of deferred costs is over a ten-year period beginning in the year after costs were incurred, with recovery (net of any insurance proceeds) through base rate filings.^(a)
- *Recoverable income taxes related to AFUDC equity* — Accounting standards for income taxes require recognition of a deferred tax liability for the equity component of AFUDC. A regulatory asset is required for the future increase in taxes payable related to the equity component of AFUDC that will be recovered from customers through future rates over the remaining life of the related plant.
- *Unamortized loss on reacquired debt* — The unamortized discount, premium, and expense related to debt redeemed with a refinancing are deferred, amortized, and recovered over the life of the replacement issue.
- *Customer360 deferred costs* — The MPSC approved the deferral and amortization of certain costs associated with implementing Customer360, an integrated software application that enables improved interface among customer service, billing, meter reading, credit and collections, device management, account management, and retail access. Amortization of deferred costs over a 15-year amortization period began after the billing system was put into operation during the second quarter of 2017.
- *Energy Waste Reduction incentive* — DTE Electric and DTE Gas operate MPSC approved energy waste reduction programs designed to reduce overall energy usage by their customers. The utilities are eligible to earn an incentive by exceeding statutory savings targets. The utilities have consistently exceeded the savings targets and recognize the incentive as a regulatory asset in the period earned.^(a)
- *Nuclear Performance Evaluation and Review Committee Tracker* — Deferral and amortization of certain costs associated with oversight and review of DTE Electric's nuclear power generation program, including safety and regulatory compliance, nuclear leadership, nuclear facilities, as well as operation and financial performance, pursuant to the MPSC authorization. The approved five-year amortization period began January 1, 2018, with recovery through base rate filings.
- *Enhanced Tree Trimming Program deferred costs* — The MPSC approved the deferral of costs for the first three years of a tree trimming surge, aimed at reducing the number and duration of customer interruptions. The MPSC will review the surge program and amortization of deferred costs in future rate filings.
- *Other recoverable income taxes* — Income taxes receivable from DTE Electric's customers representing the difference in property-related deferred income taxes and amounts previously reflected in DTE Electric's rates. This asset will reverse over the remaining life of the related plant.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

- *Non-service pension and other postretirement costs* — Upon adoption of ASU 2017-07 on January 1, 2018, certain non-service costs are no longer capitalized into Property, Plant & Equipment. Such costs may be recorded to regulatory assets for ratemaking purposes and recovered as amortization expense based on the composite depreciation rate for plant-in-service.
- *Transitional Reconciliation Mechanism* — The MPSC approved the recovery of the deferred net incremental revenue requirement associated with the transition of PLD customers to DTE Electric's distribution system, effective July 1, 2014. Annual reconciliations are filed and surcharges are implemented to recover approved amounts.
- *Accrued PSCR/GCR revenue* — Receivable for the temporary under-recovery of and carrying costs on fuel and purchased power costs incurred by DTE Electric which are recoverable through the PSCR mechanism and temporary under-recovery of and carrying costs on gas costs incurred by DTE Gas which are recoverable through the GCR mechanism.
- *Removal costs asset* — Receivable for the recovery of asset removal expenditures in excess of amounts collected from customers.^(a) Cost of removal is included within depreciation rates approved by the MPSC. In connection with DTE Electric's recent rate order in 2019 which approved an updated depreciation study, DTE Electric re-measured the amount of historical depreciation expense that had been allocated between accumulated depreciation and cost of removal. The reallocation was performed following a settlement with the MPSC in which DTE Electric agreed to maintain specific, individual reserve accounts for the cost of removal for certain retiring plants. Based upon the reallocation, it was determined that the amounts collected for asset removal expenditures, as a component of depreciation, have exceeded actual asset removal expenditures. Accordingly, DTE Electric reallocated amounts from accumulated depreciation to the removal cost regulatory balance resulting in a net Removal costs liability as of December 31, 2019.

(a) Regulatory assets not earning a return or accruing carrying charges.

LIABILITIES

- *Refundable federal income taxes* — DTE Electric and DTE Gas' remeasurement of deferred taxes due to the enactment of the TCJA, which reflects the net impact of the tax rate change on cumulative temporary differences expected to reverse after the effective date of January 1, 2018. Refer to "2017 Tax Reform" section below for additional information.
- *Removal costs liability* — The amount collected from customers for the funding of future asset removal activities. For 2019, the liability includes amounts previously reflected within the Removal costs asset for DTE Electric, as noted above.
- *Negative other postretirement offset* — DTE Electric and DTE Gas' negative other postretirement costs are not included as a reduction to their authorized rates; therefore, DTE Electric and DTE Gas are accruing a Regulatory liability to eliminate the impact on earnings of the negative other postretirement expense accrual. The Regulatory liabilities will reverse to the extent DTE Electric and DTE Gas' other postretirement expense is positive in future years.
- *Renewable energy* — Amounts collected in rates in excess of renewable energy expenditures.
- *Non-service pension and other postretirement costs* — Upon adoption of ASU 2017-07 on January 1, 2018, certain non-service cost activity is no longer credited to Property, Plant & Equipment. Such costs may be recorded to regulatory liabilities for ratemaking purposes and refunded through credits to amortization expense based on the composite depreciation rate for plant-in-service.
- *Accrued PSCR/GCR refund* - Liability for the temporary over-recovery of and a return on power supply costs and transmission costs incurred by DTE Electric which are recoverable through the PSCR mechanism and temporary over-recovery of and a return on gas costs incurred by DTE Gas which are recoverable through the GCR mechanism.
- *TCJA rate reduction liability* — Due to the change in the corporate Federal income tax rate from 35% to 21%, DTE Electric and DTE Gas reduced rates charged to customers during 2018. A regulatory liability equal to the difference between revenues billed based on a 35% rate, and revenues based on a 21% rate, was accrued for the period January 1, 2018 through the date the lower rates were implemented. The refund of the liability occurred from January 1, 2019 through June 30, 2019.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

2018 Electric Rate Case Filing

DTE Electric filed a rate case with the MPSC on July 6, 2018 requesting an increase in base rates of \$328 million based on a projected twelve-month period ending April 30, 2020. The requested increase in base rates was primarily due to an increase in net plant resulting from infrastructure investments, depreciation expense, as requested in the 2016 DTE Electric Depreciation Case Filing, and reliability improvement projects. The rate filing also requested an increase in return on equity from 10.0% to 10.5% and included projected changes in sales, operation and maintenance expenses, and working capital. In addition, the rate filing requested an Infrastructure Recovery Mechanism to recover the incremental revenue requirement associated with certain distribution, fossil generation, and nuclear generation capital expenditures through 2022. Finally, as noted in the 2017 Tax Reform section below, DTE Electric proposed an amortization schedule for Calculation C in this filing. On February 1, 2019 DTE Electric reduced its initial requested increase in base rates to \$248.6 million, primarily reflecting the reduction in requested depreciation expense resulting from the MPSC's approval of new depreciation rates. On May 2, 2019, the MPSC issued an order approving an annual revenue increase of \$125 million for services rendered on or after May 9, 2019. The MPSC authorized a return on equity of 10.0%. In addition, the order approved the proposed amortization schedule for Calculation C but denied the requested Infrastructure Recovery Mechanism.

2019 Electric Rate Case Filing

DTE Electric filed a rate case with the MPSC on July 8, 2019 requesting an increase in base rates of \$351 million based on a projected twelve-month period ending April 30, 2021. The requested increase in base rates is primarily due to an increase in net plant resulting from infrastructure and generation investments. The rate filing also requests an increase in return on equity from 10.0% to 10.5% and includes projected changes in sales and operating and maintenance expenses. A final MPSC order in this case is expected by May 2020.

2016 DTE Electric Depreciation Case Filing

DTE Electric filed a depreciation case with the MPSC on November 1, 2016 requesting an increase in depreciation rates for plant in service balances as of December 31, 2015. The MPSC issued an order on December 6, 2018 authorizing DTE Electric to increase its composite depreciation rate from 3.06% to 3.72%. The new rates are effective for service rendered on or after May 9, 2019, per the final order in DTE Electric's 2018 rate case issued on May 2, 2019.

2017 Tax Reform

On December 27, 2017, the MPSC issued an order to consider changes in the rates of all Michigan rate-regulated utilities to reflect the effects of the federal TCJA. On January 19, 2018, DTE Electric and DTE Gas filed information with the MPSC regarding the potential change in revenue requirements due to the TCJA effective January 1, 2018 and outlined their recommended method to flow the current and deferred tax benefits of those impacts to ratepayers.

On February 22, 2018, the MPSC issued an order in this case requiring utilities, including DTE Electric and DTE Gas, to follow a 3-step approach of credits and calculations. In 2018, MPSC orders for the first two steps, Credit A and Credit B, were issued for DTE Electric and DTE Gas. The third step is to perform Calculation C to address all remaining issues relative to the new tax law, which is primarily the remeasurement of deferred taxes and how the amounts deferred as Regulatory liabilities will flow to ratepayers. DTE Gas filed its Calculation C case on November 16, 2018 to reduce the annual revenue requirement by \$12 million related to the amortization of deferred tax remeasurement. On August 20, 2019, the MPSC issued an order in this case approving a \$13 million reduction to DTE Gas' annual revenue requirement. This reduction in revenue will be offset by a corresponding reduction in income tax expenses with the Consolidated Statement of Operations. DTE Electric proposed an amortization schedule for Calculation C in its general rate case filed July 6, 2018, which was approved by the MPSC in the May 2, 2019 rate order.

2019 Gas Rate Case Filing

DTE Gas filed a rate case with the MPSC on November 25, 2019 requesting an increase in base rates of \$204 million based on a projected twelve-month period ending September 30, 2021. The requested increase in base rates is primarily due to an increase in net plant resulting from infrastructure investments and operating and maintenance expenses. The rate filing also requests an increase in return on equity from 10.0% to 10.5% and includes projected changes in sales and working capital. A final MPSC order in this case is expected by September 2020.

NOTE 11 — INCOME TAXES

Income Tax Summary

DTE Energy files a consolidated federal income tax return. DTE Electric is a part of the consolidated federal income tax return of DTE Energy. DTE Energy and its subsidiaries file consolidated and/or separate company income tax returns in various states and localities, including a consolidated return in the State of Michigan. DTE Electric is part of the Michigan consolidated income tax return of DTE Energy. The federal, state and local income tax expense for DTE Electric is determined on an individual company basis with no allocation of tax expenses or benefits from other affiliates of DTE Energy. DTE Electric had income tax receivables with DTE Energy of \$14 million and \$8 million at December 31, 2019 and 2018, respectively.

The Registrants' total Income Tax Expense varied from the statutory federal income tax rate for the following reasons:

	2019	2018	2017
	(In millions)		
DTE Energy			
Income Before Income Taxes	\$ 1,324	\$ 1,216	\$ 1,287
Income tax expense at statutory rate - 21% in 2019 and 2018 - 35% in 2017	\$ 278	\$ 255	\$ 450
Production tax credits	(128)	(223)	(189)
Investment tax credits	(4)	(4)	(4)
TCJA regulatory liability amortization	(38)	—	—

Depreciation	2	2	(4)
Noncontrolling interests	—	2	8
AFUDC equity	(4)	(14)	(18)
Employee Stock Ownership Plan dividends	(3)	(3)	(5)
Stock based compensation	(7)	(3)	(14)
State and local income taxes, net of federal benefit	48	60	51
Enactment of the Tax Cuts and Jobs Act	—	21	(105)
Other, net	8	5	5
Income Tax Expense	<u>\$ 152</u>	<u>\$ 98</u>	<u>\$ 175</u>
Effective income tax rate	<u>11.5%</u>	<u>8.1%</u>	<u>13.6%</u>

	2019	2018	2017
DTE Electric	(In millions)		
Income Before Income Taxes	\$ 854	\$ 857	\$ 928
Income tax expense at statutory rate - 21% in 2019 and 2018 - 35% in 2017	\$ 179	\$ 180	\$ 325
Production tax credits	(45)	(35)	(36)
Investment tax credits	(4)	(3)	(4)
TCJA regulatory liability amortization	(35)	—	—
Depreciation	2	2	3
AFUDC equity	(4)	(3)	(5)
Employee Stock Ownership Plan dividends	(2)	(2)	(3)
State and local income taxes, net of federal benefit	49	49	48
Enactment of the Tax Cuts and Jobs Act	—	7	—
Other, net	(2)	(2)	(1)
Income Tax Expense	<u>\$ 138</u>	<u>\$ 193</u>	<u>\$ 327</u>
Effective income tax rate	<u>16.2%</u>	<u>22.5%</u>	<u>35.2%</u>

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Components of the Registrants' Income Tax Expense were as follows:

	2019	2018	2017
	(In millions)		
DTE Energy			
Current income tax expense (benefit)			
Federal	\$ (184)	\$ (17)	\$ (22)
State and other income tax	7	1	1
Total current income taxes	(177)	(16)	(21)
Deferred income tax expense			
Federal	275	38	118
State and other income tax	54	76	78
Total deferred income taxes	329	114	196
	<u>\$ 152</u>	<u>\$ 98</u>	<u>\$ 175</u>

	2019	2018	2017
	(In millions)		
DTE Electric			
Current income tax expense (benefit)			
Federal	\$ 25	\$ —	\$ (17)
State and other income tax	16	4	(1)
Total current income taxes	41	4	(18)
Deferred income tax expense			
Federal	51	131	270
State and other income tax	46	58	75
Total deferred income taxes	97	189	345
	<u>\$ 138</u>	<u>\$ 193</u>	<u>\$ 327</u>

Deferred tax assets and liabilities are recognized for the estimated future tax effect of temporary differences between the tax basis of assets or liabilities and the reported amounts in the Registrant's Consolidated Financial Statements. Consistent with the original establishment of these deferred tax liabilities (assets), recognition of these non-cash transactions are not reflected in the Consolidated Statements of Cash Flows.

The Registrants' deferred tax assets (liabilities) were comprised of the following at December 31:

	DTE Energy		DTE Electric	
	2019	2018	2019	2018
	(In millions)			
Property, plant, and equipment	\$ (3,755)	\$ (3,462)	\$ (2,956)	\$ (2,840)
Regulatory assets and liabilities	(47)	(54)	4	(3)
Tax credit carry-forwards	1,161	1,178	252	250
Pension and benefits	300	311	258	258
Federal net operating loss carry-forward	276	117	—	2
State and local net operating loss carry-forwards	117	59	—	1
Investments in equity method investees	(465)	(216)	—	(1)
Other	138	125	87	87
	<u>(2,275)</u>	<u>(1,942)</u>	<u>(2,355)</u>	<u>(2,246)</u>
Less valuation allowance	(40)	(33)	—	—
Long-term deferred income tax liabilities	\$ (2,315)	\$ (1,975)	\$ (2,355)	\$ (2,246)
Deferred income tax assets	\$ 2,264	\$ 2,021	\$ 865	\$ 855
Deferred income tax liabilities	(4,579)	(3,996)	(3,220)	(3,101)
	<u>\$ (2,315)</u>	<u>\$ (1,975)</u>	<u>\$ (2,355)</u>	<u>\$ (2,246)</u>

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Tax credit carry-forwards for DTE Energy include \$1.01 billion of general business credits that expire from 2034 through 2039 and \$153 million of alternative minimum tax credits that will be refundable over the next three years. The alternative minimum tax credits are production tax credits earned prior to 2006 but not utilized. The majority of these alternative minimum tax credits were generated from projects that had received a private letter ruling (PLR) from the IRS. These PLRs provide assurance as to the appropriateness of using these credits to offset taxable income, however, these tax credits are subject to IRS audit and adjustment. No valuation allowance is required for the tax credits carry-forward deferred tax asset.

DTE Energy has a federal net operating loss carry-forward of \$1.3 billion as of December 31, 2019. The net operating loss carry-forwards generated in 2015 and 2016 will expire from 2035 through 2036, and the net operating loss carry-forward generated in 2018 and subsequent years will be carried forward indefinitely. No valuation allowance is required for the federal net operating loss deferred tax asset.

DTE Energy has state and local deferred tax assets related to net operating loss carry-forwards of \$117 million and \$59 million at December 31, 2019 and 2018, respectively. The state and local net operating loss carry-forwards expire from 2020 through 2039. DTE Energy has recorded valuation allowances at December 31, 2019 and 2018 of approximately \$40 million and \$33 million, respectively, which are primarily related to these deferred tax assets. In assessing the realizability of deferred tax assets, DTE Energy considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible.

Tax credit carry-forwards for DTE Electric include \$252 million of general business credits that expire from 2036 through 2039. No valuation allowance is required for the tax credits carry-forward deferred tax asset.

DTE Electric has no state and local deferred tax assets related to net operating loss carry-forwards at December 31, 2019, while there was \$1 million of state and local deferred tax assets related to net operating loss carry-forwards at December 31, 2018. No valuation allowance is required for DTE Electric's state and local net operating loss carry-forwards.

The above tables exclude unamortized investment tax credits that are shown separately on the Registrants' Consolidated Statements of Financial Position. Investment tax credits are deferred and amortized to income over the average life of the related property.

Tax Cuts and Jobs Act

On December 22, 2017, the TCJA was enacted reducing the corporate income tax rate from 35% to 21%, effective January 1, 2018. As a result of the enactment, the deferred tax assets and liabilities were remeasured to reflect the impact of the TCJA on the cumulative temporary differences expected to reverse after the effective date. The net impact of this remeasurement was a decrease in deferred tax liabilities of \$2.56 billion, of which \$2.45 billion was attributable to regulated utilities and offset to regulatory assets and liabilities. This regulatory treatment is consistent with prior precedent set by the MPSC from previous tax law changes. The remaining \$105 million was attributable to the non-utility entities and was recognized as a net reduction to income tax expense in 2017.

During the year ended December 31, 2018, DTE Energy and DTE Electric finalized their analysis and recorded true-up adjustments to the remeasurement of deferred taxes of \$21 million and \$7 million, respectively. The impact of the true-up adjustments was an increase in Income Tax Expense, of which \$17 million was attributable to the regulated utilities and increased Regulatory liabilities.

During 2019, DTE Electric and DTE Gas began amortizing excess deferred tax liabilities in accordance with orders issued by the Michigan Public Service Commission. Refer to Note 10 to the Consolidated Financial Statements, "Regulatory Matters," for further detail regarding these orders.

Uncertain Tax Positions

A reconciliation of the beginning and ending amount of unrecognized tax benefits for the Registrants is as follows:

	2019	2018	2017
DTE Energy	(In millions)		
Balance at January 1	\$ 10	\$ 10	\$ 10
Additions for tax positions of prior years	—	—	—
Balance at December 31	\$ 10	\$ 10	\$ 10

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

	2019	2018	2017
DTE Electric	(In millions)		
Balance at January 1	\$ 13	\$ 13	\$ 13
Additions for tax positions of prior years	—	—	—
Balance at December 31	<u>\$ 13</u>	<u>\$ 13</u>	<u>\$ 13</u>

DTE Energy had \$8 million of unrecognized tax benefits at December 31, 2019 and 2018 that, if recognized, would favorably impact its effective tax rate. DTE Energy does not anticipate any material decrease in unrecognized tax benefits in the next twelve months.

DTE Electric had \$10 million of unrecognized tax benefits at December 31, 2019 and 2018 that, if recognized, would favorably impact its effective tax rate. DTE Electric does not anticipate any material decrease in unrecognized tax benefits in the next twelve months.

The Registrants recognize interest and penalties pertaining to income taxes in Interest expense and Other expenses, respectively, on their Consolidated Statements of Operations.

Accrued interest pertaining to income taxes for DTE Energy totaled \$4 million at December 31, 2019 and 2018. DTE Energy recognized interest expense related to income taxes of \$1 million in 2019 and 2018, and a nominal amount in 2017. DTE Energy had accrued no penalties pertaining to income taxes.

Accrued interest pertaining to income taxes for DTE Electric totaled \$6 million and \$5 million at December 31, 2019 and 2018, respectively. DTE Electric recognized interest expense related to income taxes of \$1 million in 2019 and 2018, and a nominal amount in 2017. DTE Electric had accrued no penalties pertaining to income taxes.

In 2019, DTE Energy, including DTE Electric, settled a federal tax audit for the 2017 tax year. DTE Energy's federal income tax returns for 2018 and subsequent years remain subject to examination by the IRS. DTE Energy's Michigan Business Tax returns for the years 2008-2011 and Michigan Corporate Income Tax returns for the year 2015 and subsequent years remain subject to examination by the State of Michigan. DTE Energy also files tax returns in numerous state and local jurisdictions with varying statutes of limitation.

NOTE 12 — COMMON STOCK AND EARNINGS PER SHARE

Common Stock

On October 1, 2019, DTE Energy issued approximately 5.87 million shares of common stock under the stock repurchase contracts associated with DTE Energy's 2016 Series C Equity Units for \$675 million. Refer to Note 15 to the Consolidated Financial Statements, "Long-Term Debt" for additional information.

In conjunction with the acquisition of Blue Union and LEAP, in November 2019 DTE Energy issued 2.76 million shares of common stock at \$126.00 per share grossing \$348 million. Net proceeds from the offering were approximately \$339 million. Refer to Note 4 to the Consolidated Financial Statements, "Acquisitions" for additional information.

Earnings per Share

Basic earnings per share is calculated by dividing the net income, adjusted for income allocated to participating securities, by the weighted average number of common shares outstanding during the period. Diluted earnings per share reflect the dilution that would occur if any potentially dilutive instruments were exercised or converted into common shares. DTE Energy's participating securities are restricted shares under the stock incentive program that contain rights to receive non-forfeitable dividends. Equity units, performance shares, and stock options do not receive cash dividends; as such, these awards are not considered participating securities. For additional information, see Notes 15 and 22 to the Consolidated Financial Statements, "Long-Term Debt" and "Stock-Based Compensation," respectively.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following is a reconciliation of DTE Energy's basic and diluted income per share calculation for the years ended December 31:

	2019	2018	2017
(In millions, except per share amounts)			
Basic Earnings per Share			
Net Income Attributable to DTE Energy Company	\$ 1,169	\$ 1,120	\$ 1,134
Less: Allocation of earnings to net restricted stock awards	(2)	(2)	(2)
Net income available to common shareholders — basic	\$ 1,167	\$ 1,118	\$ 1,132
Average number of common shares outstanding — basic	185	181	179
Basic Earnings per Common Share	\$ 6.32	\$ 6.18	\$ 6.32
Diluted Earnings per Share			
Net Income Attributable to DTE Energy Company	\$ 1,169	\$ 1,120	\$ 1,134
Less: Allocation of earnings to net restricted stock awards	(2)	(2)	(2)
Net income available to common shareholders — diluted	\$ 1,167	\$ 1,118	\$ 1,132
Average number of common shares outstanding - diluted	185	181	179
Diluted Earnings per Common Share ^(a)	\$ 6.31	\$ 6.17	\$ 6.32

(a) Equity Units excluded from the calculation of diluted EPS were approximately 9.9 million for the year ended December 31, 2019 and 6.3 million for the years ended December 31, 2018 and 2017, as the dilutive stock price threshold was not met. For more information, see Note 15 to the Consolidated Financial Statements, "Long-Term Debt."

NOTE 13 — FAIR VALUE

Fair value is defined as 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 in a principal or most advantageous market. Fair value is a market-based measurement that is determined based on inputs, which refer broadly to assumptions that market participants use in pricing assets or liabilities. These inputs can be readily observable, market corroborated, or generally unobservable inputs. The Registrants make certain assumptions they believe that market participants would use in pricing assets or liabilities, including assumptions about risk, and the risks inherent in the inputs to valuation techniques. Credit risk of the Registrants and their counterparties is incorporated in the valuation of assets and liabilities through the use of credit reserves, the impact of which was immaterial at December 31, 2019 and 2018. The Registrants believe they use valuation techniques that maximize the use of observable market-based inputs and minimize the use of unobservable inputs.

A fair value hierarchy has been established that prioritizes the inputs to valuation techniques used to measure fair value in three broad levels. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). In some cases, the inputs used to measure fair value might fall in different levels of the fair value hierarchy. All assets and liabilities are required to be classified in their entirety based on the lowest level of input that is significant to the fair value measurement in its entirety. Assessing the significance of a particular input may require judgment considering factors specific to the asset or liability and may affect the valuation of the asset or liability and its placement within the fair value hierarchy. The Registrants classify fair value balances based on the fair value hierarchy defined as follows:

- *Level 1* — Consists of unadjusted quoted prices in active markets for identical assets or liabilities that the Registrants have the ability to access as of the reporting date.
- *Level 2* — Consists of inputs other than quoted prices included within Level 1 that are directly observable for the asset or liability or indirectly observable through corroboration with observable market data.
- *Level 3* — Consists of unobservable inputs for assets or liabilities whose fair value is estimated based on internally developed models or methodologies using inputs that are generally less readily observable and supported by little, if any, market activity at the measurement date. Unobservable inputs are developed based on the best available information and subject to cost-benefit constraints.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following table presents assets and liabilities for DTE Energy measured and recorded at fair value on a recurring basis^(a):

	December 31, 2019					December 31, 2018						
	Level 1	Level 2	Level 3	Other ^(b)	Netting ^(c)	Net Balance	Level 1	Level 2	Level 3	Other ^(b)	Netting ^(c)	Net Balance
(In millions)												
Assets												
Cash equivalents ^(d)	\$ 15	\$ —	\$ —	\$ —	\$ —	\$ 15	\$ 16	\$ 2	\$ —	\$ —	\$ —	\$ 18
Nuclear decommissioning trusts												
Equity securities	1,046	—	—	—	—	1,046	851	—	—	—	—	851
Fixed income securities	160	378	—	—	—	538	12	490	—	—	—	502
Private equity and other	—	—	—	43	—	43	—	—	—	20	—	20
Cash equivalents	34	—	—	—	—	34	5	—	—	—	—	5
Other investments ^(e)												
Equity securities	140	—	—	—	—	140	110	—	—	—	—	110
Fixed income securities	79	—	—	—	—	79	69	—	—	—	—	69
Cash equivalents	4	—	—	—	—	4	4	—	—	—	—	4
Derivative assets												
Commodity contracts												
Natural gas	205	76	74	—	(266)	89	199	87	63	—	(277)	72
Electricity	—	223	83	—	(225)	81	—	247	56	—	(252)	51
Environmental & Other	—	110	3	—	(110)	3	—	—	7	—	(1)	6
Foreign currency exchange contracts												
	—	1	—	—	—	1	—	4	—	—	—	4
Total derivative assets	205	410	160	—	(601)	174	199	338	126	—	(530)	133
Total	\$ 1,683	\$ 788	\$ 160	\$ 43	\$ (601)	\$ 2,073	\$ 1,266	\$ 830	\$ 126	\$ 20	\$ (530)	\$ 1,712
Liabilities												
Derivative liabilities												
Commodity contracts												
Natural gas	\$ (221)	\$ (41)	\$ (89)	\$ —	\$ 266	\$ (85)	\$ (197)	\$ (71)	\$ (112)	\$ —	\$ 272	\$ (108)
Electricity	—	(231)	(67)	—	225	(73)	—	(227)	(58)	—	240	(45)
Environmental & Other	—	(121)	—	—	110	(11)	—	(1)	—	—	1	—
Interest rate contracts												
	—	—	—	—	—	—	—	(3)	—	—	—	(3)
Total	\$ (221)	\$ (393)	\$ (156)	\$ —	\$ 601	\$ (169)	\$ (197)	\$ (302)	\$ (170)	\$ —	\$ 513	\$ (156)
Net Assets (Liabilities) at end of period	\$ 1,462	\$ 395	\$ 4	\$ 43	\$ —	\$ 1,904	\$ 1,069	\$ 528	\$ (44)	\$ 20	\$ (17)	\$ 1,556
Assets												
Current	\$ 218	\$ 320	\$ 123	\$ —	\$ (513)	\$ 148	\$ 212	\$ 273	\$ 96	\$ —	\$ (461)	\$ 120
Noncurrent	1,465	468	37	43	(88)	1,925	1,054	557	30	20	(69)	1,592
Total Assets	\$ 1,683	\$ 788	\$ 160	\$ 43	\$ (601)	\$ 2,073	\$ 1,266	\$ 830	\$ 126	\$ 20	\$ (530)	\$ 1,712
Liabilities												
Current	\$ (211)	\$ (300)	\$ (85)	\$ —	\$ 513	\$ (83)	\$ (191)	\$ (251)	\$ (76)	\$ —	\$ 451	\$ (67)
Noncurrent	(10)	(93)	(71)	—	88	(86)	(6)	(51)	(94)	—	62	(89)
Total Liabilities	\$ (221)	\$ (393)	\$ (156)	\$ —	\$ 601	\$ (169)	\$ (197)	\$ (302)	\$ (170)	\$ —	\$ 513	\$ (156)
Net Assets (Liabilities) at end of period	\$ 1,462	\$ 395	\$ 4	\$ 43	\$ —	\$ 1,904	\$ 1,069	\$ 528	\$ (44)	\$ 20	\$ (17)	\$ 1,556

(a) See footnotes on following page.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

- (b) Amounts represent assets valued at NAV as a practical expedient for fair value.
(c) Amounts represent the impact of master netting agreements that allow DTE Energy to net gain and loss positions and cash collateral held or placed with the same counterparties.
(d) At December 31, 2019, the \$15 million consisted of \$4 million and \$11 million of cash equivalents included in Cash and Cash equivalents and Other investments on DTE Energy's Consolidated Statements of Financial Position, respectively. At December 31, 2018, the \$18 million consisted of \$3 million, \$5 million, and \$10 million of cash equivalents included in Cash and Cash equivalents, Restricted cash, and Other investments on DTE Energy's Consolidated Statements of Financial Position, respectively.
(e) Excludes cash surrender value of life insurance investments.

The following table presents assets for DTE Electric measured and recorded at fair value on a recurring basis as of:

	December 31, 2019					December 31, 2018				
	Level 1	Level 2	Level 3	Other ^(a)	Net Balance	Level 1	Level 2	Level 3	Other ^(a)	Net Balance
(In millions)										
Assets										
Cash equivalents ^(b)	\$ 11	\$ —	\$ —	\$ —	\$ 11	\$ 8	\$ 2	\$ —	\$ —	\$ 10
Nuclear decommissioning trusts										
Equity securities	1,046	—	—	—	1,046	851	—	—	—	851
Fixed income securities	160	378	—	—	538	12	490	—	—	502
Private equity and other	—	—	—	43	43	—	—	—	20	20
Cash equivalents	34	—	—	—	34	5	—	—	—	5
Other investments										
Equity securities	13	—	—	—	13	10	—	—	—	10
Derivative assets — FTRs	—	—	3	—	3	—	—	6	—	6
Total	\$ 1,264	\$ 378	\$ 3	\$ 43	\$ 1,688	\$ 886	\$ 492	\$ 6	\$ 20	\$ 1,404
Assets										
Current	\$ 11	\$ —	\$ 3	\$ —	\$ 14	\$ 8	\$ 2	\$ 6	\$ —	\$ 16
Noncurrent	1,253	378	—	43	1,674	878	490	—	20	1,388
Total Assets	\$ 1,264	\$ 378	\$ 3	\$ 43	\$ 1,688	\$ 886	\$ 492	\$ 6	\$ 20	\$ 1,404

- (a) Amounts represent assets valued at NAV as a practical expedient for fair value.
(b) At December 31, 2019, the \$11 million consisted of cash equivalents included in Other investments on DTE Electric's Consolidated Statements of Financial Position. At December 31, 2018, the \$10 million consisted of cash equivalents included in Other investments on DTE Electric's Consolidated Statements of Financial Position.

Cash Equivalents

Cash equivalents include investments with maturities of three months or less when purchased. The cash equivalents shown in the fair value table are comprised of short-term investments and money market funds.

Nuclear Decommissioning Trusts and Other Investments

The nuclear decommissioning trusts and other investments hold debt and equity securities directly and indirectly through commingled funds. Exchange-traded debt and equity securities held directly are valued using quoted market prices in actively traded markets. Commingled funds that hold exchange-traded equity or debt securities are valued based on stated NAVs. Non-exchange traded fixed income securities are valued based upon quotations available from brokers or pricing services. Other assets such as private equity investments are classified as NAV assets. A primary price source is identified by asset type, class, or issue for each security. The trustee monitors prices supplied by pricing services and may use a supplemental price source or change the primary price source of a given security if the trustee determines that another price source is considered preferable. The Registrants have obtained an understanding of how these prices are derived, including the nature and observability of the inputs used in deriving such prices.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Derivative Assets and Liabilities

Derivative assets and liabilities are comprised of physical and financial derivative contracts, including futures, forwards, options, and swaps that are both exchange-traded and over-the-counter traded contracts. Various inputs are used to value derivatives depending on the type of contract and availability of market data. Exchange-traded derivative contracts are valued using quoted prices in active markets. The Registrants consider the following criteria in determining whether a market is considered active: frequency in which pricing information is updated, variability in pricing between sources or over time, and the availability of public information. Other derivative contracts are valued based upon a variety of inputs including commodity market prices, broker quotes, interest rates, credit ratings, default rates, market-based seasonality, and basis differential factors. The Registrants monitor the prices that are supplied by brokers and pricing services and may use a supplemental price source or change the primary price source of an index if prices become unavailable or another price source is determined to be more representative of fair value. The Registrants have obtained an understanding of how these prices are derived. Additionally, the Registrants selectively corroborate the fair value of their transactions by comparison of market-based price sources. Mathematical valuation models are used for derivatives for which external market data is not readily observable, such as contracts which extend beyond the actively traded reporting period. The Registrants have established a Risk Management Committee whose responsibilities include directly or indirectly ensuring all valuation methods are applied in accordance with predefined policies. The development and maintenance of the Registrants' forward price curves has been assigned to DTE Energy's Risk Management Department, which is separate and distinct from the trading functions within DTE Energy.

The following table presents the fair value reconciliation of Level 3 assets and liabilities measured at fair value on a recurring basis for DTE Energy:

	Year Ended December 31, 2019				Year Ended December 31, 2018			
	Natural Gas	Electricity	Other	Total	Natural Gas	Electricity	Other	Total
	(In millions)							
Net Assets (Liabilities) as of January 1	\$ (49)	\$ (2)	\$ 7	\$ (44)	\$ (29)	\$ 12	\$ 8	\$ (9)
Transfers from Level 3 into Level 2	—	—	—	—	(3)	—	—	(3)
Total gains (losses)								
Included in earnings	15	77	(1)	91	(146)	29	1	(116)
Recorded in Regulatory liabilities	—	—	2	2	—	—	9	9
Purchases, issuances, and settlements:								
Settlements	19	(59)	(5)	(45)	129	(43)	(11)	75
Net Assets (Liabilities) as of December 31	<u>\$ (15)</u>	<u>\$ 16</u>	<u>\$ 3</u>	<u>\$ 4</u>	<u>\$ (49)</u>	<u>\$ (2)</u>	<u>\$ 7</u>	<u>\$ (44)</u>
The amount of total gains (losses) included in Net Income attributed to the change in unrealized gains (losses) related to assets and liabilities held at December 31, 2019 and 2018 and reflected in Operating Revenues — Non-utility operations and Fuel, purchased power, and gas — non-utility in DTE Energy's Consolidated Statements of Operations	<u>\$ (1)</u>	<u>\$ 59</u>	<u>\$ (38)</u>	<u>\$ 20</u>	<u>\$ (119)</u>	<u>\$ 15</u>	<u>\$ (16)</u>	<u>\$ (120)</u>

The following table presents the fair value reconciliation of Level 3 assets and liabilities measured at fair value on a recurring basis for DTE Electric:

	Year Ended December 31,	
	2019	2018
	(In millions)	
Net Assets as of January 1	\$ 6	\$ 9
Change in fair value recorded in Regulatory liabilities	2	9
Purchases, issuances, and settlements:		
Settlements	(5)	(12)
Net Assets as of December 31	<u>\$ 3</u>	<u>\$ 6</u>
The amount of total gains (losses) included in Regulatory liabilities attributed to the change in unrealized gains (losses) related to assets and liabilities held at December 31, 2019 and 2018 and reflected in DTE Electric's Consolidated Statements of Financial Position	<u>\$ 3</u>	<u>\$ 6</u>

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Derivatives are transferred between levels primarily due to changes in the source data used to construct price curves as a result of changes in market liquidity. Transfers in and transfers out are reflected as if they had occurred at the beginning of the period.

There were no transfers between Levels 1 and 2 for the Registrants during the years ended December 31, 2019 and 2018, and there were no transfers from or into Level 3 for DTE Electric during the same periods.

The following tables present the unobservable inputs related to DTE Energy's Level 3 assets and liabilities:

Commodity Contracts	December 31, 2019		Valuation Techniques	Unobservable Input	Range	Weighted Average
	Derivative Assets	Derivative Liabilities				
(In millions)						
Natural Gas	\$ 74	\$ (89)	Discounted Cash Flow	Forward basis price (per MMBtu)	\$ (1.78) — \$ 5.78/MMBtu	\$ (0.09)/MMBtu
Electricity	\$ 83	\$ (67)	Discounted Cash Flow	Forward basis price (per MWh)	\$ (10) — \$ 6/MWh	\$ —
Commodity Contracts	December 31, 2018		Valuation Techniques	Unobservable Input	Range	Weighted Average
	Derivative Assets	Derivative Liabilities				
(In millions)						
Natural Gas	\$ 63	\$ (112)	Discounted Cash Flow	Forward basis price (per MMBtu)	\$ (2.15) — \$ 5.59/MMBtu	\$ (0.10)/MMBtu
Electricity	\$ 56	\$ (58)	Discounted Cash Flow	Forward basis price (per MWh)	\$ (7) — \$ 9/MWh	\$ 1/MWh

The unobservable inputs used in the fair value measurement of the electricity and natural gas commodity types consist of inputs that are less observable due in part to lack of available broker quotes, supported by little, if any, market activity at the measurement date or are based on internally developed models. Certain basis prices (i.e., the difference in pricing between two locations) included in the valuation of natural gas and electricity contracts were deemed unobservable.

The inputs listed above would have a direct impact on the fair values of the above security types if they were adjusted. A significant increase (decrease) in the basis price would result in a higher (lower) fair value for long positions, with offsetting impacts to short positions.

Fair Value of Financial Instruments

The following table presents the carrying amount and fair value of financial instruments for DTE Energy:

	December 31, 2019						December 31, 2018					
	Carrying Amount	Fair Value			Carrying Amount	Fair Value						
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3				
(In millions)												
Notes receivable — Other ^(a) , excluding lessor finance leases	\$ 184	\$ —	\$ —	\$ 184	\$ 40	\$ —	\$ —	\$ 40				
Dividends payable	\$ 195	\$ 195	\$ —	\$ —	\$ 172	\$ 172	\$ —	\$ —				
Short-term borrowings	\$ 828	\$ —	\$ 828	\$ —	\$ 609	\$ —	\$ 609	\$ —				
Notes payable — Other ^(b) , excluding lessee finance leases	\$ 25	\$ —	\$ —	\$ 25	\$ 41	\$ —	\$ —	\$ 41				
Long-term debt ^(c)	\$ 16,606	\$ 2,572	\$ 14,207	\$ 1,252	\$ 13,622	\$ 1,796	\$ 10,712	\$ 1,317				

(a) Current portion included in Current Assets — Other on DTE Energy's Consolidated Statements of Financial Position.

(b) Included in Current Liabilities — Other and Other Liabilities — Other on DTE Energy's Consolidated Statements of Financial Position.

(c) Includes debt due within one year, unamortized debt discounts, and issuance costs. Excludes finance lease obligations.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following table presents the carrying amount and fair value of financial instruments for DTE Electric:

	December 31, 2019						December 31, 2018					
	Carrying Amount	Fair Value			Carrying Amount	Fair Value						
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3				
(In millions)												
Notes receivable — Other ^(a) , excluding lessor finance leases	\$ 9	\$ —	\$ —	\$ 9	\$ 6	\$ —	\$ —	\$ 6				
Short-term borrowings — affiliates	\$ 97	\$ —	\$ —	\$ 97	\$ 101	\$ —	\$ —	\$ 101				
Short-term borrowings — other	\$ 354	\$ —	\$ 354	\$ —	\$ 149	\$ —	\$ 149	\$ —				
Notes payable — Other ^(b) , excluding lessee finance leases	\$ 21	\$ —	\$ —	\$ 21	\$ 21	\$ —	\$ —	\$ 21				
Long-term debt ^(c)	\$ 7,180	\$ —	\$ 7,916	\$ 173	\$ 6,538	\$ —	\$ 6,552	\$ 161				

(a) Included in Current Assets — Other on DTE Electric's Consolidated Statements of Financial Position.

(b) Included in Current Liabilities — Other and Other Liabilities — Other on DTE Electric's Consolidated Statements of Financial Position.

(c) Includes debt due within one year, unamortized debt discounts, and issuance costs. Excludes finance lease obligations.

For further fair value information on financial and derivative instruments, see Note 14 to the Consolidated Financial Statements, "Financial and Other Derivative Instruments."

Nuclear Decommissioning Trust Funds

DTE Electric has a legal obligation to decommission its nuclear power plants following the expiration of its operating licenses. This obligation is reflected as an Asset retirement obligation on DTE Electric's Consolidated Statements of Financial Position. Rates approved by the MPSC provide for the recovery of decommissioning costs of Fermi 2 and the disposal of low-level radioactive waste. See Note 9 to the Consolidated Financial Statements, "Asset Retirement Obligations."

The following table summarizes DTE Electric's fair value of the nuclear decommissioning trust fund assets:

	December 31,	
	2019	2018
(In millions)		
Fermi 2	\$ 1,650	\$ 1,372
Fermi 1	3	3
Low-level radioactive waste	8	3
	<u>\$ 1,661</u>	<u>\$ 1,378</u>

The costs of securities sold are determined on the basis of specific identification. The following table sets forth DTE Electric's gains and losses and proceeds from the sale of securities by the nuclear decommissioning trust funds:

	Year Ended December 31,		
	2019	2018	2017
(In millions)			
Realized gains	\$ 56	\$ 65	\$ 83
Realized losses	\$ (31)	\$ (42)	\$ (29)
Proceeds from sale of securities	\$ 788	\$ 1,203	\$ 1,240

Realized gains and losses from the sale of securities and unrealized gains and losses incurred by the Fermi 2 trust are recorded to the Regulatory asset and Nuclear decommissioning liability. Realized gains and losses from the sale of securities and unrealized gains and losses on the low-level radioactive waste funds are recorded to the Nuclear decommissioning liability.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following table sets forth DTE Electric's fair value and unrealized gains and losses for the nuclear decommissioning trust funds:

	December 31, 2019			December 31, 2018		
	Fair Value	Unrealized Gains	Unrealized Losses	Fair Value	Unrealized Gains	Unrealized Losses
	(In millions)					
Equity securities	\$ 1,046	\$ 396	\$ (39)	\$ 851	\$ 235	\$ (79)
Fixed income securities	538	24	(1)	502	7	(8)
Private equity and other	43	—	—	20	—	—
Cash equivalents	34	—	—	5	—	—
	\$ 1,661	\$ 420	\$ (40)	\$ 1,378	\$ 242	\$ (87)

The following table summarizes the fair value of the fixed income securities held in nuclear decommissioning trust funds by contractual maturity:

	December 31, 2019
	(In millions)
Due within one year	\$ 15
Due after one through five years	102
Due after five through ten years	109
Due after ten years	312
	\$ 538

Other Securities

At December 31, 2019 and 2018, the Registrants' securities, included in Other investments on the Consolidated Statements of Financial Position, were comprised primarily of money market and equity securities. Net gains related to equity securities held at December 31, 2019 were \$37 million. Net losses related to equity securities held at December 31, 2018 were \$11 million and net gains related to equity securities held at December 31, 2017 were \$26 million. Gains or losses related to the Rabbi Trust assets are allocated from DTE Energy to DTE Electric.

NOTE 14 — FINANCIAL AND OTHER DERIVATIVE INSTRUMENTS

The Registrants recognize all derivatives at their fair value as Derivative assets or liabilities on their respective Consolidated Statements of Financial Position unless they qualify for certain scope exceptions, including the normal purchases and normal sales exception. Further, derivatives that qualify and are designated for hedge accounting are classified as either hedges of a forecasted transaction or the variability of cash flows to be received or paid related to a recognized asset or liability (cash flow hedge); or as hedges of the fair value of a recognized asset or liability or of an unrecognized firm commitment (fair value hedge). For cash flow hedges, the derivative gain or loss is deferred in Accumulated other comprehensive income (loss) and later reclassified into earnings when the underlying transaction occurs. For fair value hedges, changes in fair values for the derivative and hedged item are recognized in earnings each period. For derivatives that do not qualify or are not designated for hedge accounting, changes in fair value are recognized in earnings each period.

The Registrants' primary market risk exposure is associated with commodity prices, credit, and interest rates. The Registrants have risk management policies to monitor and manage market risks. The Registrants use derivative instruments to manage some of the exposure. DTE Energy uses derivative instruments for trading purposes in its Energy Trading segment. Contracts classified as derivative instruments include electricity, natural gas, oil, certain environmental contracts, forwards, futures, options, swaps, and foreign currency exchange contracts. Items not classified as derivatives include natural gas and environmental inventory, pipeline transportation contracts, some environmental contracts, and natural gas storage assets.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

DTE Electric — DTE Electric generates, purchases, distributes, and sells electricity. DTE Electric uses forward contracts to manage changes in the price of electricity and fuel. Substantially all of these contracts meet the normal purchases and normal sales exception and are therefore accounted for under the accrual method. Other derivative contracts are MTM and recoverable through the PSCR mechanism when settled. This results in the deferral of unrealized gains and losses as Regulatory assets or liabilities until realized.

DTE Gas — DTE Gas purchases, stores, transports, distributes, and sells natural gas, buys and sells transportation capacity, and sells storage capacity. DTE Gas has fixed-priced contracts for portions of its expected natural gas supply requirements through March 2022. Substantially all of these contracts meet the normal purchases and normal sales exception and are therefore accounted for under the accrual method. DTE Gas may also sell forward transportation and storage capacity contracts. Forward transportation and storage contracts are generally not derivatives and are therefore accounted for under the accrual method.

Gas Storage and Pipelines — This segment is primarily engaged in services related to the gathering, transportation, and storage of natural gas. Primarily fixed-priced contracts are used in the marketing and management of transportation and storage services. Generally, these contracts are not derivatives and are therefore accounted for under the accrual method.

Power and Industrial Projects — This segment manages and operates energy and pulverized coal projects, a coke battery, reduced emissions fuel projects, renewable gas recovery, and power generation assets. Primarily fixed-price contracts are used in the marketing and management of the segment assets. These contracts are generally not derivatives and are therefore accounted for under the accrual method.

Energy Trading — Commodity Price Risk — Energy Trading markets and trades electricity, natural gas physical products, and energy financial instruments, and provides energy and asset management services utilizing energy commodity derivative instruments. Forwards, futures, options, and swap agreements are used to manage exposure to the risk of market price and volume fluctuations in its operations. These derivatives are accounted for by recording changes in fair value to earnings unless hedge accounting criteria are met.

Energy Trading — Foreign Currency Exchange Risk — Energy Trading has foreign currency exchange forward contracts to economically hedge fixed Canadian dollar commitments existing under natural gas and power purchase and sale contracts and natural gas transportation contracts. Energy Trading enters into these contracts to mitigate price volatility with respect to fluctuations of the Canadian dollar relative to the U.S. dollar. These derivatives are accounted for by recording changes in fair value to earnings unless hedge accounting criteria are met.

Corporate and Other — Interest Rate Risk — DTE Energy may use interest rate swaps, treasury locks, and other derivatives to hedge the risk associated with interest rate market volatility.

Credit Risk — DTE Energy maintains credit policies that significantly minimize overall credit risk. These policies include an evaluation of potential customers' and counterparties' financial condition, including the viability of underlying productive assets, credit rating, collateral requirements, or other credit enhancements such as letters of credit or guarantees. DTE Energy generally uses standardized agreements that allow the netting of positive and negative transactions associated with a single counterparty. DTE Energy maintains a provision for credit losses based on factors surrounding the credit risk of its customers, historical trends, and other information. Based on DTE Energy's credit policies and its December 31, 2019 provision for credit losses, DTE Energy's exposure to counterparty nonperformance is not expected to have a material adverse effect on DTE Energy's Consolidated Financial Statements.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Derivative Activities

DTE Energy manages its MTM risk on a portfolio basis based upon the delivery period of its contracts and the individual components of the risks within each contract. Accordingly, it records and manages the energy purchase and sale obligations under its contracts in separate components based on the commodity (e.g. electricity or natural gas), the product (e.g. electricity for delivery during peak or off-peak hours), the delivery location (e.g. by region), the risk profile (e.g. forward or option), and the delivery period (e.g. by month and year). The following describes the categories of activities represented by their operating characteristics and key risks:

- *Asset Optimization* — Represents derivative activity associated with assets owned and contracted by DTE Energy, including forward natural gas purchases and sales, natural gas transportation, and storage capacity. Changes in the value of derivatives in this category typically economically offset changes in the value of underlying non-derivative positions, which do not qualify for fair value accounting. The difference in accounting treatment of derivatives in this category and the underlying non-derivative positions can result in significant earnings volatility.
- *Marketing and Origination* — Represents derivative activity transacted by originating substantially hedged positions with wholesale energy marketers, producers, end-users, utilities, retail aggregators, and alternative energy suppliers.
- *Fundamentals Based Trading* — Represents derivative activity transacted with the intent of taking a view, capturing market price changes, or putting capital at risk. This activity is speculative in nature as opposed to hedging an existing exposure.
- *Other* — Includes derivative activity at DTE Electric related to FTRs. Changes in the value of derivative contracts at DTE Electric are recorded as Derivative assets or liabilities, with an offset to Regulatory assets or liabilities as the settlement value of these contracts will be included in the PSCR mechanism when realized.

The following table presents the fair value of derivative instruments for DTE Energy:

	December 31, 2019		December 31, 2018	
	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
(In millions)				
Derivatives designated as hedging instruments				
Interest rate contracts	\$ —	\$ —	\$ —	\$ (3)
Derivatives not designated as hedging instruments				
Commodity contracts				
Natural gas	\$ 355	\$ (351)	\$ 349	\$ (380)
Electricity	306	(298)	303	(285)
Environmental & Other	113	(121)	7	(1)
Foreign currency exchange contracts	1	—	4	—
Total derivatives not designated as hedging instruments	\$ 775	\$ (770)	\$ 663	\$ (666)
Current	\$ 646	\$ (596)	\$ 563	\$ (518)
Noncurrent	129	(174)	100	(151)
Total derivatives	\$ 775	\$ (770)	\$ 663	\$ (669)

The following table presents the fair value of derivative instruments for DTE Electric:

	December 31,	
	2019	2018
(In millions)		
FTRs — Other current assets	\$ 3	\$ 6
Total derivatives not designated as hedging instruments	\$ 3	\$ 6

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Certain of DTE Energy's derivative positions are subject to netting arrangements which provide for offsetting of asset and liability positions as well as related cash collateral. Such netting arrangements generally do not have restrictions. Under such netting arrangements, DTE Energy offsets the fair value of derivative instruments with cash collateral received or paid for those contracts executed with the same counterparty, which reduces DTE Energy's Total Assets and Liabilities. Cash collateral is allocated between the fair value of derivative instruments and customer accounts receivable and payable with the same counterparty on a pro-rata basis to the extent there is exposure. Any cash collateral remaining, after the exposure is netted to zero, is reflected in Accounts receivable and Accounts payable as collateral paid or received, respectively.

DTE Energy also provides and receives collateral in the form of letters of credit which can be offset against net Derivative assets and liabilities as well as Accounts receivable and payable. DTE Energy had issued letters of credit of \$6 million outstanding at December 31, 2019 and \$4 million at December 31, 2018, which could be used to offset net Derivative liabilities. Letters of credit received from third parties which could be used to offset net Derivative assets were \$4 million and \$8 million at December 31, 2019 and 2018, respectively. Such balances of letters of credit are excluded from the tables below and are not netted with the recognized assets and liabilities in DTE Energy's Consolidated Statements of Financial Position.

For contracts with certain clearing agents, the fair value of derivative instruments is netted against realized positions with the net balance reflected as either 1) a Derivative asset or liability or 2) an Account receivable or payable. Other than certain clearing agents, Accounts receivable and Accounts payable that are subject to netting arrangements have not been offset against the fair value of Derivative assets and liabilities.

The following table presents net cash collateral offsetting arrangements for DTE Energy:

	December 31,	
	2019	2018
	(In millions)	
Cash collateral netted against Derivative assets	\$ —	\$ (17)
Cash collateral recorded in Accounts receivable ^(a)	13	10
Cash collateral recorded in Accounts payable ^(a)	(3)	(6)
Total net cash collateral posted (received)	<u>\$ 10</u>	<u>\$ (13)</u>

(a) Amounts are recorded net by counterparty.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following table presents the netting offsets of Derivative assets and liabilities for DTE Energy:

	December 31, 2019			December 31, 2018		
	Gross Amounts of Recognized Assets (Liabilities)	Gross Amounts Offset in the Consolidated Statements of Financial Position	Net Amounts of Assets (Liabilities) Presented in the Consolidated Statements of Financial Position	Gross Amounts of Recognized Assets (Liabilities)	Gross Amounts Offset in the Consolidated Statements of Financial Position	Net Amounts of Assets (Liabilities) Presented in the Consolidated Statements of Financial Position
(In millions)						
Derivative assets						
Commodity contracts						
Natural gas	\$ 355	\$ (266)	\$ 89	\$ 349	\$ (277)	\$ 72
Electricity	306	(225)	81	303	(252)	51
Environmental & Other	113	(110)	3	7	(1)	6
Foreign currency exchange contracts	1	—	1	4	—	4
Total derivative assets	\$ 775	\$ (601)	\$ 174	\$ 663	\$ (530)	\$ 133
Derivative liabilities						
Commodity contracts						
Natural gas	\$ (351)	\$ 266	\$ (85)	\$ (380)	\$ 272	\$ (108)
Electricity	(298)	225	(73)	(285)	240	(45)
Environmental & Other	(121)	110	(11)	(1)	1	—
Interest rate contracts	—	—	—	(3)	—	(3)
Total derivative liabilities	\$ (770)	\$ 601	\$ (169)	\$ (669)	\$ 513	\$ (156)

The following table presents the netting offsets of Derivative assets and liabilities showing the reconciliation of derivative instruments to DTE Energy's Consolidated Statements of Financial Position:

	December 31, 2019				December 31, 2018			
	Derivative Assets		Derivative Liabilities		Derivative Assets		Derivative Liabilities	
	Current	Noncurrent	Current	Noncurrent	Current	Noncurrent	Current	Noncurrent
(In millions)								
Total fair value of derivatives	\$ 646	\$ 129	\$ (596)	\$ (174)	\$ 563	\$ 100	\$ (518)	\$ (151)
Counterparty netting	(513)	(88)	513	88	(451)	(62)	451	62
Collateral adjustment	—	—	—	—	(10)	(7)	—	—
Total derivatives as reported	\$ 133	\$ 41	\$ (83)	\$ (86)	\$ 102	\$ 31	\$ (67)	\$ (89)

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The effect of derivatives not designated as hedging instruments on DTE Energy's Consolidated Statements of Operations is as follows:

	Location of Gain (Loss) Recognized in Income on Derivatives	Gain (Loss) Recognized in Income on Derivatives for Years Ended December 31,		
		2019	2018	2017
(In millions)				
Commodity contracts				
Natural gas	Operating Revenues — Non-utility operations	\$ 44	\$ (42)	\$ (74)
Natural gas	Fuel, purchased power, and gas — non-utility	(5)	(94)	97
Electricity	Operating Revenues — Non-utility operations	44	49	105
Environmental & Other	Operating Revenues — Non-utility operations	(26)	(1)	2
Foreign currency exchange contracts	Operating Revenues — Non-utility operations	(2)	7	(2)
Total		\$ 55	\$ (81)	\$ 128

Revenues and energy costs related to trading contracts are presented on a net basis in DTE Energy's Consolidated Statements of Operations. Commodity derivatives used for trading purposes, and financial non-trading commodity derivatives, are accounted for using the MTM method with unrealized and realized gains and losses recorded in Operating Revenues — Non-utility operations. Non-trading physical commodity sale and purchase derivative contracts are generally accounted for using the MTM method with unrealized and realized gains and losses for sales recorded in Operating Revenues — Non-utility operations and purchases recorded in Fuel, purchased power, and gas — non-utility.

The following represents the cumulative gross volume of DTE Energy's derivative contracts outstanding as of December 31, 2019:

Commodity	Number of Units
Natural gas (MMBtu)	1,699,804,805
Electricity (MWh)	31,351,229
Foreign currency exchange (CAD)	78,563,487

Various subsidiaries of DTE Energy have entered into contracts which contain ratings triggers and are guaranteed by DTE Energy. These contracts contain provisions which allow the counterparties to require that DTE Energy post cash or letters of credit as collateral in the event that DTE Energy's credit rating is downgraded below investment grade. Certain of these provisions (known as "hard triggers") state specific circumstances under which DTE Energy can be required to post collateral upon the occurrence of a credit downgrade, while other provisions (known as "soft triggers") are not as specific. For contracts with soft triggers, it is difficult to estimate the amount of collateral which may be requested by counterparties and/or which DTE Energy may ultimately be required to post. The amount of such collateral which could be requested fluctuates based on commodity prices (primarily natural gas, power, and coal) and the provisions and maturities of the underlying transactions. As of December 31, 2019, DTE Energy's contractual obligation to post collateral in the form of cash or letters of credit in the event of a downgrade to below investment grade, under both hard trigger and soft trigger provisions, was \$527 million.

As of December 31, 2019, DTE Energy had \$678 million of derivatives in net liability positions, for which hard triggers exist. There is no collateral that has been posted against such liabilities, including cash and letters of credit. Associated derivative net asset positions for which contractual offset exists were \$593 million. The net remaining amount of \$85 million is derived from the \$527 million noted above.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

NOTE 15 — LONG-TERM DEBT

Long-Term Debt

DTE Energy's long-term debt outstanding and weighted average interest rates of debt outstanding at December 31 were:

	Interest Rate ^(a)	Maturity Date	2019	2018
(In millions)				
Mortgage bonds, notes, and other				
DTE Energy Debt, Unsecured	3.2%	2022 — 2033	\$ 6,625	\$ 4,425
DTE Electric Taxable Debt, Principally Secured	4.2%	2020 — 2049	6,930	6,280
DTE Electric Tax-Exempt Revenue Bonds ^(b)	4.3%	2020 — 2030	310	310
DTE Gas Taxable Debt, Principally Secured	4.3%	2020 — 2049	1,710	1,550
Other Long-Term Debt, including Non-Recourse Debt			—	1
			<u>15,575</u>	<u>12,566</u>
Unamortized debt discount			(24)	(16)
Unamortized debt issuance costs			(91)	(73)
Long-term debt due within one year			(682)	(1,495)
			<u>\$ 14,778</u>	<u>\$ 10,982</u>
Junior Subordinated Debentures				
Subordinated Debentures	5.5%	2062 — 2077	\$ 1,180	\$ 1,180
Unamortized debt issuance costs			(34)	(35)
			<u>\$ 1,146</u>	<u>\$ 1,145</u>

(a) Weighted average interest rate as of December 31, 2019.

(b) DTE Electric Tax-Exempt Revenue Bonds are issued by a public body that loans the proceeds to DTE Electric on terms substantially mirroring the Revenue Bonds.

DTE Electric's long-term debt outstanding and weighted average interest rates of debt outstanding at December 31 were:

	Interest Rate ^(a)	Maturity Date	2019	2018
(In millions)				
Mortgage bonds, notes, and other				
Taxable Debt, Principally Secured	4.2%	2020 — 2049	\$ 6,930	\$ 6,280
Tax-Exempt Revenue Bonds ^(b)	4.3%	2020 — 2030	310	310
			<u>7,240</u>	<u>6,590</u>
Unamortized debt discount			(15)	(11)
Unamortized debt issuance costs			(45)	(41)
Long-term debt due within one year			(632)	—
			<u>\$ 6,548</u>	<u>\$ 6,538</u>

(a) Weighted average interest rate as of December 31, 2019.

(b) Tax-Exempt Revenue Bonds are issued by a public body that loans the proceeds to DTE Electric on terms substantially mirroring the Revenue Bonds.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Debt Issuances

In 2019, the following debt was issued:

Company	Month	Type	Interest Rate	Maturity Date	Amount
(In millions)					
DTE Electric	February	Mortgage Bonds ^(a)	3.95%	2049	\$ 650
DTE Energy	June	Senior Notes ^(b)	2.60%	2022	300
DTE Energy	June	Senior Notes ^(b)	3.40%	2029	500
DTE Gas	October	Mortgage Bonds ^(b)	2.95%	2029	140
DTE Gas	October	Mortgage Bonds ^(b)	3.72%	2049	140
DTE Energy	November	Senior Notes ^(c)	2.25%	2022	500
DTE Energy	November	Senior Notes ^(c)	2.95%	2030	300
DTE Energy	November	Equity Units ^(d)	(d)	2025	1,300
					\$ 3,830

- (a) Bonds were issued as Green Bonds and the proceeds will be used to finance expenditures for solar and wind energy, payments under power purchase agreements for solar and wind energy, and energy optimization programs.
- (b) Proceeds were used for the repayment of short-term borrowings and general corporate purposes.
- (c) Proceeds were used to pay a portion of the purchase price of the Blue Union and LEAP acquisition. Refer to "Acquisition Financing" below for additional information.
- (d) See "Acquisition Financing" below for more information regarding the rates associated with the Equity Units.

Debt Redemptions

In 2019, the following debt was redeemed:

Company	Month	Type	Interest Rate	Maturity Date	Amount
(In millions)					
DTE Energy	October	Senior Notes	1.50%	2019	\$ 400
DTE Gas	October	Senior Notes	5.00%	2019	120
DTE Energy	December	Senior Notes	2.40%	2019	300
DTE Energy	Various	Other long-term debt	Various	2019	1
					\$ 821

The following table shows the Registrants' scheduled debt maturities, excluding any unamortized discount on debt:

	2020	2021	2022	2023	2024	2025 and Thereafter	Total
(In millions)							
DTE Energy ^(a)	\$ 682	\$ 462	\$ 2,716	\$ 1,177	\$ 1,425	\$ 10,293	\$ 16,755
DTE Electric	\$ 632	\$ 462	\$ 316	\$ 202	\$ 400	\$ 5,228	\$ 7,240

- (a) Amounts include DTE Electric's scheduled debt maturities.

In January 2020, DTE Electric sent notice to optionally redeem its \$300 million 2010 Series A 4.89% Senior Notes due September 2020. The notes are expected to be redeemed in March 2020.

Junior Subordinated Debentures

DTE Energy has the right to defer interest payments on the Junior Subordinated Debentures. Should DTE Energy exercise this right, it cannot declare or pay dividends on, or redeem, purchase or acquire, any of its capital stock during the deferral period. Any deferred interest payments will bear additional interest at the rate associated with the related debt issue. As of December 31, 2019, no interest payments have been deferred on the Junior Subordinated Debentures.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Cross Default Provisions

Substantially all of the net utility properties of DTE Electric and DTE Gas are subject to the lien of mortgages. Should DTE Electric or DTE Gas fail to timely pay their indebtedness under these mortgages, such failure may create cross defaults in the indebtedness of DTE Energy.

2016 Acquisition Senior Notes Remarketing

In October 2016, DTE Energy issued \$675 million of 2016 Equity Units, initially in the form of Corporate Units. The Corporate Units were listed on the New York Stock Exchange under the symbol DTV. Each Corporate Unit consisted of a stock purchase contract and a 1/20 interest in a RSN issued by DTE Energy. The stock purchase contract obligated the holders to purchase shares of DTE Energy's common stock at a future settlement date. The purchase price under the stock purchase contracts was \$50 per Corporate Unit and the number of shares purchased was determined by a formula based upon the average closing price of DTE Energy common stock near the settlement date. The RSNs were pledged as collateral to secure the purchase of common stock under the related stock purchase contracts.

In August 2019, DTE Energy remarketed the \$675 million 2016 Series C 1.5% RSNs due 2024 pursuant to the terms of the 2016 Equity Units. As a result of the remarketing, the interest rate was reset to 2.529%, payable semi-annually at the new rate beginning October 1, 2019. DTE Energy did not receive any proceeds from the remarketing. All proceeds belonged to the investors holding the related 2016 Equity Units and were temporarily used to purchase a portfolio of treasury securities. The securities were released on behalf of investors on October 1, 2019 to satisfy the related stock purchase contracts and pay the purchase price to DTE Energy for the issuance of approximately 5.87 million shares of common stock.

Gas Storage and Pipelines Segment Acquisition Financing

In December 2019, DTE Energy closed on the purchase of midstream natural gas assets. The acquisition was financed through the issuance of Equity Units, Senior Notes, and common stock. For information on the common stock issuance, refer to Note 12 to the Consolidated Financial Statements, "Common Stock and Earnings Per Share."

In November 2019, DTE issued \$1.3 billion of 2019 Equity Units. Each Equity Unit has a stated amount of \$50 and was initially issued in the form of a Corporate Unit, comprised of (i) a forward purchase contract to buy DTE Energy common stock (stock purchase contract) and (ii) a 1/20 undivided beneficial ownership interest in \$1,000 principal amount of DTE Energy's 2019 Series F 2.25% RSNs due 2025. The RSN debt instruments and the stock purchase contract equity instruments are deemed to be separate instruments as the investor may trade the RSNs separately from the stock purchase contracts and may also settle the stock purchase contracts separately. The Corporate Units are listed on the New York Stock Exchange under the symbol DTP.

The stock purchase contract obligates the holder to purchase from DTE Energy on the settlement date, November 1, 2022, for a price of \$50 per stock purchase contract, the following number of shares of DTE Energy's common stock, subject to anti-dilution adjustments:

- if the AMV of DTE Energy's common stock, which is the average volume-weighted average price of DTE Energy's common stock for the trading days during the 20 consecutive scheduled trading day period ending on the third scheduled trading day immediately preceding the stock purchase contract settlement date, is equal to or greater than \$157.50, 0.3175 shares of common stock;
- if the AMV is less than \$157.50 but greater than \$126.00, a number of shares of common stock equal to \$50 divided by the AMV; and
- if the AMV is less than or equal to \$126.00, 0.3968 shares of common stock.

The RSNs bear interest at a rate of 2.25% per year, payable quarterly, and mature on November 1, 2025. The RSNs will be remarketed in 2022. If this remarketing is successful, the interest rate on the RSNs will be reset, and thereafter interest will be payable semi-annually at the reset rate. If there is no successful remarketing, the interest rate on the RSNs will not be reset, and the holders of the RSNs will have the right to put the RSNs to DTE Energy at a price equal to 100% of the principal amount, and the proceeds of the put right will be deemed to have been applied against the holders' obligation under the stock purchase contracts. DTE Energy may also redeem, in whole or in part, the RSNs in the event of a failed final remarketing.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

DTE Energy will also pay the stock purchase contract holders quarterly contract adjustment payments at a rate of 4% per year of the stated amount of \$50 per Equity Unit, or \$2 per year, commencing on February 1, 2020. The present value of the future contract adjustment payments of \$150 million is recorded as a reduction of shareholders' equity, offset by the stock purchase contract liability. The stock purchase contract liability is included in Current Liabilities — Other and Other Liabilities — Other on DTE Energy's Consolidated Statements of Financial Position. Interest payments on the RSNs are recorded as interest expense and stock purchase contract payments are charged against the liability. Accretion of the stock purchase contract liability is recorded as imputed interest expense. The treasury stock method will be used to compute diluted EPS for the stock purchase contract. Under the treasury stock method, the stock purchase contract will only have a dilutive effect when the settlement rate is based on the market value of DTE's common stock that is greater than \$157.50 (the threshold appreciation price). If payments for the stock purchase contract are deferred, DTE Energy may not make any cash distributions related to its capital stock, including dividends, redemptions, repurchases, liquidation payments or guarantee payments. Also, during the deferral period, DTE Energy may not make any payments on or redeem or repurchase any debt securities that are equal in right of payment with, or subordinated to, the RSNs.

Until settlement of the stock purchase contracts, the shares of stock underlying each contract are not outstanding. Under the terms of the stock purchase contracts, assuming no anti-dilution or other adjustments, DTE Energy will issue between 8.3 million and 10.3 million shares of its common stock in November 2022. A total of 13 million shares of DTE Energy's common stock have been reserved for issuance in connection with the stock purchase contracts.

Selected information about DTE Energy's 2019 Equity Units is presented below:

Issuance Date	Units Issued	Total Net Proceeds	Total Long-Term Debt	RSN Annual Interest Rate	Stock Purchase Contract Annual Rate	Stock Purchase Settlement Date	Stock Purchase Contract Liability	RSN Maturity Date
(In millions, except interest rates)								
11/1/19	26	\$ 1,268	\$ 1,300	2.25%	4.0%	11/1/2022	\$ 150	11/1/2025

In November 2019, DTE Energy issued \$500 million of 2019 Series G 2.25% Senior Notes due 2022 and \$300 million of Series H 2.95% Senior Notes due 2030. The proceeds from the Senior Notes were used for the acquisition.

NOTE 16 — PREFERRED AND PREFERENCE SECURITIES

As of December 31, 2019, the amount of authorized and unissued stock is as follows:

Company	Type of Stock	Par Value	Shares Authorized
DTE Energy	Preferred	\$ —	5,000,000
DTE Electric	Preferred	\$ 100	6,747,484
DTE Electric	Preference	\$ 1	30,000,000
DTE Gas	Preferred	\$ 1	7,000,000
DTE Gas	Preference	\$ 1	4,000,000

NOTE 17 — SHORT-TERM CREDIT ARRANGEMENTS AND BORROWINGS

DTE Energy, DTE Electric, and DTE Gas have unsecured revolving credit agreements that can be used for general corporate borrowings, but are intended to provide liquidity support for each of the companies' commercial paper programs. Borrowings under the revolvers are available at prevailing short-term interest rates. Additionally, DTE Energy has other facilities to support letter of credit issuance.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The agreements require DTE Energy, DTE Electric, and DTE Gas to maintain a total funded debt to capitalization ratio of no more than 0.65 to 1. In the agreements, "total funded debt" means all indebtedness of each respective company and their consolidated subsidiaries, including finance lease obligations, hedge agreements, and guarantees of third parties' debt, but excluding contingent obligations, nonrecourse and junior subordinated debt, and certain equity-linked securities and, except for calculations at the end of the second quarter, certain DTE Gas short-term debt. "Capitalization" means the sum of (a) total funded debt plus (b) "consolidated net worth," which is equal to consolidated total equity of each respective company and their consolidated subsidiaries (excluding pension effects under certain FASB statements), as determined in accordance with accounting principles generally accepted in the United States of America. At December 31, 2019, the total funded debt to total capitalization ratios for DTE Energy, DTE Electric, and DTE Gas were 0.58 to 1, 0.51 to 1, and 0.48 to 1, respectively, and were in compliance with this financial covenant.

The availability under the facilities in place at December 31, 2019 is shown in the following table:

	DTE Energy	DTE Electric	DTE Gas	Total
	(In millions)			
Unsecured letter of credit facility, expiring in February 2021	\$ 150	\$ —	\$ —	\$ 150
Unsecured letter of credit facility, expiring in August 2021	110	—	—	110
Unsecured revolving credit facility, expiring April 2024	1,500	500	300	2,300
	1,760	500	300	2,560
Amounts outstanding at December 31, 2019				
Commercial paper issuances	280	354	194	828
Letters of credit	229	—	—	229
	509	354	194	1,057
Net availability at December 31, 2019	<u>\$ 1,251</u>	<u>\$ 146</u>	<u>\$ 106</u>	<u>\$ 1,503</u>

DTE Energy has \$9 million of other outstanding letters of credit which are used for various corporate purposes and are not included in the facilities described above.

The weighted average interest rate for short-term borrowings was 2.0% and 2.9% at December 31, 2019 and 2018, respectively, for DTE Energy. The weighted average interest rate for short-term borrowings was 1.9% and 2.9% at December 31, 2019 and 2018, respectively, for DTE Electric.

In conjunction with maintaining certain exchange-traded risk management positions, DTE Energy may be required to post collateral with its clearing agent. DTE Energy has a demand financing agreement for up to \$100 million with its clearing agent. The agreement, as amended, also allows for up to \$50 million of additional margin financing provided that DTE Energy posts a letter of credit for the incremental amount and allows the right of setoff with posted collateral. At December 31, 2019, the capacity under this facility was \$150 million. The amount outstanding under this agreement was \$114 million and \$93 million at December 31, 2019 and 2018, respectively, and was fully offset by the posted collateral.

Dividend Restrictions

Certain of DTE Energy's credit facilities contain a provision requiring DTE Energy to maintain a total funded debt to capitalization ratio, as defined in the agreements, of no more than 0.65 to 1, which has the effect of limiting the amount of dividends DTE Energy can pay in order to maintain compliance with this provision. At December 31, 2019, the effect of this provision was to restrict the payment of approximately \$3.2 billion of Retained earnings totaling \$6.6 billion. There are no other effective limitations with respect to DTE Energy's ability to pay dividends.

NOTE 18 — LEASES

Disclosures related to the year ended December 31, 2019 are presented as required under Topic 842. Prior period disclosures for the year ended December 31, 2018 are presented under Topic 840. The Registrants have elected to use a practical expedient provided by Topic 842 whereby comparative disclosures for prior periods are allowed to be presented under Topic 840. As a result, the disclosures presented under Topic 842 and Topic 840 will not be fully comparable in specific disclosure requirements.

Lessee

Topic 842 — Leases at DTE Energy are primarily comprised of various forms of equipment, computer hardware, coal railcars, production facilities, buildings, and certain easement leases with terms ranging from approximately 2 to 40 years. Leases at DTE Electric are primarily comprised of various forms of equipment, computer hardware, coal railcars, and certain easement leases with terms ranging from approximately 2 to 40 years.

A lease is deemed to exist when the Registrants have the right to control the use of identified property, plant or equipment, as conveyed through a contract, for a certain period of time and consideration paid. The right to control is deemed to occur when the Registrants have the right to obtain substantially all of the economic benefits of the identified assets and the right to direct the use of such assets.

Lease liabilities are determined utilizing a discount rate to determine the present values of lease payments. Topic 842 requires the use of the rate implicit in the lease when it is readily determinable. When the rate implicit in the lease is not readily determinable, the incremental borrowing rate is used. The Registrants have determined their respective incremental borrowing rates based upon the rate of interest that would have been paid on a collateralized basis over similar tenors to that of the leases. The incremental borrowing rates for DTE Electric and DTE Gas have been determined utilizing respective secured borrowing rates for first mortgage bonds with like tenors of remaining lease terms. Incremental borrowing rates for non-utility entities have been determined utilizing an implied secured

borrowing rate based upon an unsecured rate for a similar tenor of remaining lease terms, which is then adjusted for the estimated impact of collateral.

Certain leases of the Registrants contain escalation clauses whereby the payments are adjusted for consumer price or labor indices. DTE Energy has leases with non-index based escalation clauses for fixed dollar or percentage increases. DTE Electric has leases with non-index based escalation clauses for fixed dollar increases. DTE Energy also has leases with variable payments based upon usage of, or revenues associated with, the leased assets. DTE Electric also has leases with variable payments based upon the usage of the leased assets.

Certain leases of easements and coal railcars contain provisions whereby the Registrants have the option to terminate the lease agreement by giving notice of such termination during the time frames specified in the respective lease. The Registrants have considered such provisions in the determination of the lease term when it is reasonably certain that the lease would be terminated.

The Registrants have certain leases which contain purchase options. Based upon the nature of the leased property and terms of the purchase options, the Registrants have determined it is not reasonably certain that such purchase options will be utilized. Thus, the impact of the purchase options has not been included in the determination of right-of-use assets and lease liabilities for the subject leases.

The Registrants have certain leases which contain renewal options. Where the renewal options were deemed reasonably certain to occur, the impacts of such options were included in the determination of the right of use assets and lease liabilities.

The Registrants have agreements with lease and non-lease components, which are generally accounted for separately. Consideration in a lease is allocated between lease and non-lease components based upon the estimated relative standalone prices. The Registrants have certain coal railcar leases for which non-lease and lease components are accounted for as a single lease component, as permitted under Topic 842.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The components of lease cost for the year ended December 31, 2019 were as follows:

	DTE Energy		DTE Electric	
	(In millions)			
Operating lease cost	\$	41	\$	17
Finance lease cost:				
Amortization of right-of-use assets		4		4
Interest of lease liabilities		—		—
Total finance lease cost		4		4
Variable lease cost		10		—
Short-term lease cost		10		3
	\$	65	\$	24

The Registrants have elected not to apply the recognition requirements of Topic 842 to leases with a term of 12 months or less. DTE Energy and DTE Electric record operating, variable, and short-term lease costs as Operating Expenses on the Consolidated Statements of Operations, except for certain amounts that may be capitalized to other assets.

Other information related to leases for the year ended December 31, 2019 were as follows:

	DTE Energy		DTE Electric	
	(In millions)			
Supplemental Cash Flows Information				
Cash paid for amounts included in the measurement of these liabilities:				
Operating cash flows for finance leases	\$	5	\$	5
Operating cash flows for operating leases	\$	40	\$	16
Right-of-use assets obtained in exchange for lease obligations:				
Operating leases	\$	68	\$	27
Finance leases	\$	8	\$	—
Weighted Average Remaining Lease Term				
Operating leases		9.7 years		10.6 years
Finance leases		9.1 years		2.0 years
Weighted Average Discount Rate				
Operating leases		3.5%		3.3%
Finance leases		3.1%		3.1%

The Registrants' future minimum lease payments under leases for remaining periods as of December 31, 2019 were as follows:

	DTE Energy		DTE Electric	
	Operating Leases	Finance Leases	Operating Leases	Finance Leases
(In millions)				
2020	\$ 38	\$ 5	\$ 14	\$ 3
2021	30	5	13	4
2022	26	1	12	—
2023	20	1	10	—
2024	12	1	8	—
2025 and thereafter	67	4	38	—
Total future minimum lease payments	193	17	95	7
Imputed interest	(33)	(2)	(16)	—
	\$ 160	\$ 15	\$ 79	\$ 7

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Finance leases reported on the Consolidated Statement of Financial Position were as follows:

	DTE Energy	DTE Electric
	December 31, 2019	
	(In millions)	
Right-of-use assets, within Property, plant, and equipment, net	\$ 15	\$ 7
Current lease liabilities, within Current Liabilities — Other	\$ 4	\$ 3

Topic 840 — The following disclosures are presented under Topic 840 for the year ended December 31, 2018.

The Registrants lease various assets under operating leases, including coal railcars, office buildings, a warehouse, computers, vehicles, and other equipment. The lease arrangements expire at various dates through 2051 and 2046 for DTE Energy and DTE Electric, respectively.

The Registrants' future minimum lease payments under non-cancelable operating leases at December 31, 2018 were as follows:

	DTE Energy	DTE Electric
	(In millions)	
2019	\$ 42	\$ 17
2020	30	12
2021	18	10
2022	11	7
2023	8	5
2024 and thereafter	45	29
	<u>\$ 154</u>	<u>\$ 80</u>

The Registrants are the lessee under certain capital leases related to software and information technology related equipment. Property under capital leases for the Registrants as of December 31, 2018 were as follows:

	DTE Energy	DTE Electric
	(In millions)	
Gross property under capital leases	\$ 18	\$ 18
Accumulated amortization of property under capital leases	\$ 7	\$ 7

Lessor

Topic 842 — DTE Energy leases a portion of its pipeline system to the Vector Pipeline through a finance lease contract that has been renewed through 2025, with additional renewal options reasonably certain to be exercised through 2040. DTE Energy owns a 40% interest in the Vector Pipeline. In addition, DTE Energy has an energy services agreement that expires in 2026, of which a portion is accounted for as a finance lease.

DTE Energy also leases various assets under operating leases for a pipeline, energy facilities and related equipment. Such leases are comprised of both fixed payments and variable payments which are contingent on volumes, with terms ranging from 3 to 24 years. Generally, the operating leases do not have renewal provisions or options to purchase the assets at the end of the lease. The operating leases generally do not have termination for convenience provisions. Termination may be allowed under specific circumstances stated in the lease contract, such as under an event of default.

Certain of the finance and operating leases have lease terms that extend to the end of the estimated economic life of the leased assets, thereby resulting in no residual value. Any remaining residual values under the finance and operating leases are expected to be recovered through rates, renewals or new lease contracts. Residual values have been determined using the estimated economic life of the leased assets. The finance and operating leases do not contain residual value guarantees.

Certain of the operating leases have both lease and non-lease components. The lease and non-lease components are allocated based upon estimated relative standalone selling prices.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

A lease is deemed to exist when the Registrants have provided other parties with the right to control the use of identified property, plant or equipment, as conveyed through a contract, for a certain period of time and consideration received. The right to control is deemed to occur when the Registrants have provided other parties with the right to obtain substantially all of the economic benefits of the identified assets and the right to direct the use of such assets.

DTE Energy's lease income associated with operating leases was as follows for the year ended December 31, 2019:

	DTE Energy
	(In millions)
Fixed payments ^(a)	\$ 65
Variable payments ^(a)	128
	\$ 193

(a) Includes \$130 million of lease payments reported in Operating Revenues and \$63 million of lease payments reported in Other income on DTE Energy's Consolidated Statements of Operations.

DTE Energy's minimum future rental revenues under operating leases for remaining periods as of December 31, 2019 were as follows:

	DTE Energy
	(In millions)
2020	\$ 64
2021	62
2022	22
2023	22
2024	22
2025 and thereafter	194
	\$ 386

Depreciation expense associated with DTE Energy's property under operating leases was \$26 million for the year ended December 31, 2019.

Property under operating leases for DTE Energy as of December 31, 2019 were as follows:

	DTE Energy
	(In millions)
Gross property under operating leases	\$ 445
Accumulated amortization of property under operating leases	\$ 173

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The components of DTE Energy's net investment in finance leases for remaining periods as of December 31, 2019 were as follows:

	DTE Energy	
	(In millions)	
2020	\$	9
2021		4
2022		4
2023		5
2024		5
2025 and thereafter		55
Total minimum future lease receipts		82
Residual value of leased pipeline		19
Less unearned income		55
Net investment in finance lease		46
Less current portion		5
	\$	41

Interest income recognized under finance leases was \$5 million for the year ended December 31, 2019.

Topic 840 — DTE Energy leases various assets under operating leases for energy facilities and related equipment.

DTE Energy's minimum future rental revenues under non-cancelable operating leases as of December 31, 2018 were as follows:

	DTE Energy	
	(In millions)	
2019	\$	66
2020		66
2021		64
2022		20
2023		20
2024 and thereafter		196
	\$	432

The amounts listed above do not include contingent rentals associated with the leased assets. DTE Energy had contingent rental revenues of \$107 million, \$91 million, and \$101 million in 2018, 2017, and 2016, respectively.

DTE Energy leases a portion of its pipeline system to the Vector Pipeline through a capital lease contract that was set to expire in 2020, with renewal options extending for five years. DTE Energy owns a 40% interest in the Vector Pipeline. In addition, DTE Energy has two energy services agreements, for which a portion of are accounted for as capital leases. These agreements were set to expire in 2019 and 2026.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The components of DTE Energy's net investment in capital leases at December 31, 2018 were as follows:

	DTE Energy
	(In millions)
2019	\$ 10
2020	9
2021	—
2022	—
2023	—
2024 and thereafter	1
Total minimum future lease receipts	20
Residual value of leased pipeline	40
Less unearned income	9
Net investment in capital lease	51
Less current portion	5
	\$ 46

Property under operating leases for DTE Energy as of December 31, 2018 were as follows:

	DTE Energy
	(In millions)
Gross property under operating leases	\$ 447
Accumulated amortization of property under operating leases	\$ 148

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

NOTE 19 — COMMITMENTS AND CONTINGENCIES

Environmental

DTE Electric

Air — DTE Electric is subject to the EPA ozone and fine particulate transport and acid rain regulations that limit power plant emissions of SO₂ and NO_x. The EPA and the State of Michigan have also issued emission reduction regulations relating to ozone, fine particulate, regional haze, mercury, and other air pollution. These rules have led to controls on fossil-fueled power plants to reduce SO₂, NO_x, mercury, and other emissions. Additional rulemakings may occur over the next few years which could require additional controls for SO₂, NO_x, and other hazardous air pollutants.

The EPA proposed revised air quality standards for ground level ozone in November 2014 and specifically requested comments on the form and level of the ozone standards. The standards were finalized in October 2015. The State of Michigan recommended to the EPA in October 2016 which areas of the state are not attaining the new standard. On April 30, 2018, the EPA finalized the State of Michigan's recommended marginal non-attainment designation for southeast Michigan. The State is required to develop and implement a plan to address the southeast Michigan ozone non-attainment area by 2021. The Registrants cannot predict the financial impact of the State's plan to address the ozone non-attainment area at this time.

In July 2009, the Registrants received a NOV/FOV from the EPA alleging, among other things, that five DTE Electric power plants violated New Source Performance standards, Prevention of Significant Deterioration requirements, and operating permit requirements under the Clean Air Act. In June 2010, the EPA issued a NOV/FOV making similar allegations related to a project and outage at Unit 2 of the Monroe Power Plant. In March 2013, DTE Energy received a supplemental NOV from the EPA relating to the July 2009 NOV/FOV. The supplemental NOV alleged additional violations relating to the New Source Review provisions under the Clean Air Act, among other things.

In August 2010, the U.S. Department of Justice, at the request of the EPA, brought a civil suit in the U.S. District Court for the Eastern District of Michigan against DTE Energy and DTE Electric, related to the June 2010 NOV/FOV and the outage work performed at Unit 2 of the Monroe Power Plant. In August 2011, the U.S. District Court judge granted DTE Energy's motion for summary judgment in the civil case, dismissing the case and entering judgment in favor of DTE Energy and DTE Electric. In October 2011, the EPA filed a Notice of Appeal to the Court of Appeals for the Sixth Circuit. In March 2013, the Court of Appeals remanded the case to the U.S. District Court for review of the procedural component of the New Source Review notification requirements. In September 2013, the EPA filed a motion seeking leave to amend their complaint regarding the June 2010 NOV/FOV adding additional claims related to outage work performed at the Trenton Channel and Belle River Power Plants as well as additional claims related to work performed at the Monroe Power Plant. In March 2014, the U.S. District Court judge again granted DTE Energy's motion for summary judgment dismissing the civil case related to Monroe Unit 2. In April 2014, the U.S. District Court judge granted motions filed by the EPA and the Sierra Club to amend their New Source Review complaint adding additional claims for Monroe Units 1, 2, and 3, Belle River Units 1 and 2, and Trenton Channel Unit 9. In October 2014, the EPA and the U.S. Department of Justice filed a notice of appeal of the U.S. District Court judge's dismissal of the Monroe Unit 2 case. The amended New Source Review claims were all stayed pending resolution of the appeal by the Court of Appeals for the Sixth Circuit. On January 10, 2017, a divided panel of the Court reversed the decision of the U.S. District Court. On May 8, 2017, DTE Energy and DTE Electric filed a motion to stay the mandate pending filing of a petition for writ of certiorari with the U.S. Supreme Court. The Sixth Circuit granted the motion on May 16, 2017, staying the claims in the U.S. District Court until the U.S. Supreme Court disposes of the case. DTE Electric and DTE Energy filed a petition for writ of certiorari on July 31, 2017. On December 11, 2017, the U.S. Supreme Court denied certiorari. As a result of the Supreme Court electing not to review the matter, the case was sent back to the U.S. District Court for further proceedings and on June 14, 2018 the case was stayed pending settlement negotiations. The proceedings at the District Court remain stayed while the parties discuss potential resolution of the matter.

The Registrants believe that the plants and generating units identified by the EPA and the Sierra Club have complied with all applicable federal environmental regulations. Depending upon the outcome of the litigation and further discussions with the EPA regarding the two NOV/FOVs, DTE Electric could be required to install additional pollution control equipment at some or all of the power plants in question, implement early retirement of facilities where control equipment is not economical, engage in supplemental environmental programs, and/or pay fines. The Registrants do not expect the outcome of this matter to have a material impact on their Consolidated Financial Statements.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The EPA has implemented regulatory actions under the Clean Air Act to address emissions of GHGs from the utility sector and other sectors of the economy. Among these actions, in 2015 the EPA finalized performance standards for emissions of carbon dioxide from new and existing fossil-fuel fired EGUs. The performance standards for existing EGUs, known as the EPA Clean Power Plan, were challenged by petitioners and stayed by the U.S. Supreme Court in February 2016 pending final review by the courts. On October 10, 2017, the EPA, under a new administration, proposed to rescind the Clean Power Plan, and in August 2018, the EPA proposed revised emission guidelines for GHGs from existing EGUs. On June 19, 2019, the EPA Administrator officially repealed the Clean Power Plan and finalized its replacement, named the ACE rule. The ACE Rule requires the state of Michigan to submit a plan in 2022 that includes GHG standards for existing coal-fired power plant units in Michigan. These final rules do not impact DTE Energy's revised commitment to reduce carbon emissions 32% by the early 2020s, 50% by 2030, and 80% by 2040, or its goal of net zero emissions by 2050 for DTE Electric, from the 2005 carbon emissions levels.

In addition to the GHG standards for existing EGUs, in December 2018, the EPA issued proposed revisions to the carbon dioxide performance standards for new, modified, or reconstructed fossil-fuel fired EGUs. The carbon standards for new sources are not expected to have a material impact on DTE Electric, since DTE Electric has no plans to build new coal-fired generation and any potential new gas generation will be able to comply with the standards.

Pending or future legislation or other regulatory actions could have a material impact on DTE Electric's operations and financial position and the rates charged to its customers. Impacts include expenditures for environmental equipment beyond what is currently planned, financing costs related to additional capital expenditures, the purchase of emission credits from market sources, higher costs of purchased power, and the retirement of facilities where control equipment is not economical. DTE Electric would seek to recover these incremental costs through increased rates charged to its utility customers, as authorized by the MPSC.

To comply with air pollution requirements, DTE Electric spent approximately \$2.4 billion through 2019. DTE Electric does not anticipate additional capital expenditures for air pollution requirements through 2026, subject to the results of future rulemakings.

Water — In response to an EPA regulation, DTE Electric was required to examine alternatives for reducing the environmental impacts of the cooling water intake structures at several of its facilities. Based on the results of completed studies and expected future studies, DTE Electric may be required to install technologies to reduce the impacts of the water intake structures. A final rule became effective in October 2014. The final rule requires studies to be completed and submitted as part of the National Pollutant Discharge Elimination System (NPDES) permit application process to determine the type of technology needed to reduce impacts to fish. DTE Electric has initiated the process of completing the required studies. Final compliance for the installation of any required technology will be determined by the state on a case by case, site specific basis. DTE Electric is currently evaluating the compliance options and working with the State of Michigan on evaluating whether any controls are needed. These evaluations/studies may require modifications to some existing intake structures. It is not possible to quantify the impact of this rulemaking at this time.

Contaminated and Other Sites — Prior to the construction of major interstate natural gas pipelines, gas for heating and other uses was manufactured locally from processes involving coal, coke, or oil. The facilities, which produced gas, have been designated as MGP sites. DTE Electric conducted remedial investigations at contaminated sites, including three former MGP sites. The investigations have revealed contamination related to the by-products of gas manufacturing at each MGP site. In addition to the MGP sites, DTE Electric is also in the process of cleaning up other contaminated sites, including the area surrounding an ash landfill, electrical distribution substations, electric generating power plants, and underground and aboveground storage tank locations. The findings of these investigations indicated that the estimated cost to remediate these sites is expected to be incurred over the next several years. At December 31, 2019 and 2018, DTE Electric had \$8 million and \$7 million, respectively, accrued for remediation. Any change in assumptions, such as remediation techniques, nature and extent of contamination, and regulatory requirements, could impact the estimate of remedial action costs for the sites and affect DTE Electric's financial position and cash flows. DTE Electric believes the likelihood of a material change to the accrued amount is remote based on current knowledge of the conditions at each site.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Coal Combustion Residuals and Effluent Limitations Guidelines — A final EPA rule for the disposal of coal combustion residuals, commonly known as coal ash, became effective in October 2015, and was revised in October 2016 and July 2018. The rule is based on the continued listing of coal ash as a non-hazardous waste and relies on various self-implementation design and performance standards. DTE Electric owns and operates three permitted engineered coal ash storage facilities to dispose of coal ash from coal-fired power plants and operates a number of smaller impoundments at its power plants subject to certain provisions in the CCR rule. At certain facilities, the rule currently requires the installation of monitoring wells, compliance with groundwater standards, and the closure of basins at the end of the useful life of the associated power plant. At other facilities, the rule requires ash laden waters be moved from earthen basins to steel and concrete tanks. DTE Electric has estimated the impact of the current rule to be \$608 million.

On December 2, 2019 a proposed revision to the CCR Rule was published in the Federal Register to address the D.C. Circuit's 2018 decision regarding CCR impoundments that are not lined with an engineered liner system. The rule proposes that all CCR impoundments that do not meet the engineered liner requirements must close by specific dates, and it further confirms that all clay lined impoundments are viewed as unlined. The EPA is also preparing a rulemaking, expected to be proposed early in 2020, that will provide mechanisms to determine if certain alternative liner systems may be as protective as the current liners specified in the CCR rule. DTE Electric is currently evaluating options based on the range of outcomes of the current proposed rule and the anticipated proposed rule to determine any changes to DTE Electric's plans in the operation and closure of coal ash impoundments.

At the State level, legislation was signed by the Governor in December 2018 and provides for further regulation of the CCR program in Michigan. Additionally, the bill provides the basis of a CCR program that EGLE will submit to the EPA for approval to fully regulate the CCR program in Michigan in lieu of a Federal permit program.

In November 2015, the EPA finalized the ELG Rule for the steam electric power generating industry which requires additional controls to be installed between 2018 and 2023. Compliance schedules for individual facilities and individual waste streams are determined through issuance of new National Pollutant Discharge Elimination System (NPDES) permits by the State of Michigan. The State of Michigan has issued a NPDES permit for the Belle River Power Plant establishing a compliance deadline of December 31, 2021. No new permits that would require ELG compliance have been issued for other facilities, consequently no compliance timelines have been established.

On April 12, 2017, the EPA granted a petition for reconsideration of the 2015 ELG Rule. The EPA also signed an administrative stay of the ELG Rule's compliance deadlines for fly ash transport water, bottom ash transport water, and flue gas desulfurization (FGD) wastewater, among others. On June 6, 2017, the EPA published in the Federal Register a proposed rule (Postponement Rule) to postpone certain applicable deadlines within the 2015 ELG rule. The Postponement Rule was published on September 18, 2017. The Postponement Rule nullified the administrative stay but also extended the earliest compliance deadlines for only FGD wastewater and bottom ash transport water until November 1, 2020 in order for the EPA to propose and finalize a new ruling. On November 22, 2019, the EPA issued a proposed rule to revise the technology-based effluent limitations guidelines and standards applicable to flue gas desulfurization wastewater and bottom ash transport water. The ELG compliance requirements and final deadlines for bottom ash transport water and FGD wastewater, and total ELG related compliance costs will not be known until the EPA completes its reconsideration of the ELG Rule expected by the end of 2020.

DTE Gas

Contaminated and Other Sites — DTE Gas owns or previously owned, 14 former MGP sites. Investigations have revealed contamination related to the by-products of gas manufacturing at each site. Cleanup of eight of the MGP sites is complete and the sites are closed. DTE Gas has also completed partial closure of four additional sites. Cleanup activities associated with the remaining sites will continue over the next several years. The MPSC has established a cost deferral and rate recovery mechanism for investigation and remediation costs incurred at former MGP sites. In addition to the MGP sites, DTE Gas is also in the process of cleaning up other contaminated sites, including gate stations, gas pipeline releases, and underground storage tank locations. As of December 31, 2019 and 2018, DTE Gas had \$25 million accrued for remediation. Any change in assumptions, such as remediation techniques, nature and extent of contamination, and regulatory requirements, could impact the estimate of remedial action costs for the sites and affect DTE Gas' financial position and cash flows. DTE Gas anticipates the cost amortization methodology approved by the MPSC, which allows for amortization of the MGP costs over a ten-year period beginning with the year subsequent to the year the MGP costs were incurred, will prevent the associated investigation and remediation costs from having a material adverse impact on DTE Gas' results of operations.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Non-utility

DTE Energy's non-utility businesses are subject to a number of environmental laws and regulations dealing with the protection of the environment from various pollutants.

In March 2019, the EPA issued a finding of violation to EES Coke, the Michigan coke battery facility that is a wholly-owned subsidiary of DTE Energy, alleging that the 2008 and 2014 permits issued by EGLE did not comply with the Clean Air Act. EES Coke evaluated the EPA's alleged violations and believes that the permits approved by EGLE complied with the Clean Air Act. Discussions with the EPA are ongoing. At the present time, DTE Energy does not believe this will have a material financial impact.

Other

In 2010, the EPA finalized a new one-hour SO₂ ambient air quality standard that requires states to submit plans and associated timelines for non-attainment areas that demonstrate attainment with the new SO₂ standard in phases. Phase 1 addresses non-attainment areas designated based on ambient monitoring data. Phase 2 addresses non-attainment areas with large sources of SO₂ and modeled concentrations exceeding the National Ambient Air Quality Standards for SO₂. Phase 3 addresses smaller sources of SO₂ with modeled or monitored exceedances of the new SO₂ standard.

Michigan's Phase 1 non-attainment area includes DTE Energy facilities in southwest Detroit and areas of Wayne County. Modeling runs by EGLE suggest that emission reductions may be required by significant sources of SO₂ emissions in these areas, including DTE Electric power plants and DTE Energy's Michigan coke battery facility. As part of the state implementation plan (SIP) process, DTE Energy has worked with EGLE to develop air permits reflecting significant SO₂ emission reductions that, in combination with other non-DTE Energy sources' emission reduction strategies, will help the state attain the standard and sustain its attainment. Since several non-DTE Energy sources are also part of the proposed compliance plan, DTE Energy is unable to determine the full impact of the final required emissions reductions on DTE's facilities at this time.

Michigan's Phase 2 non-attainment area includes DTE Electric facilities in St. Clair County. State implementation plan submittal and EPA approval describing the control strategy and timeline for demonstrating compliance with the new SO₂ standard is the next step in the process and is expected to be completed by first quarter 2020. DTE Energy is currently working with EGLE to develop the required SIP. DTE Energy is unable to determine the full impact of the SIP strategy.

Synthetic Fuel Guarantees

DTE Energy discontinued the operations of its synthetic fuel production facilities throughout the United States as of December 31, 2007. DTE Energy provided certain guarantees and indemnities in conjunction with the sales of interests in its synfuel facilities. The guarantees cover potential commercial, environmental, oil price, and tax-related obligations that will survive until 90 days after expiration of all applicable statutes of limitations. DTE Energy estimates that its maximum potential liability under these guarantees at December 31, 2019 was approximately \$400 million. Payment under these guarantees are considered remote.

REF Guarantees

DTE Energy has provided certain guarantees and indemnities in conjunction with the sales of interests in or lease of its REF facilities. The guarantees cover potential commercial, environmental, and tax-related obligations that will survive until 90 days after expiration of all applicable statutes of limitations. DTE Energy estimates that its maximum potential liability under these guarantees at December 31, 2019 was \$549 million. Payments under these guarantees are considered remote.

NEXUS Guarantees

NEXUS is party to certain 15-year capacity agreements for the transportation of natural gas with DTE Gas and Texas Eastern Transmission, LP, an unrelated third party. In conjunction with these agreements, DTE Energy provided certain guarantees on behalf of NEXUS to DTE Gas and Texas Eastern Transmission, LP, with maximum potential payments totaling \$226 million and \$360 million at December 31, 2019, respectively; each representing 50% of all payment obligations due and payable by NEXUS. Each guarantee terminates at the earlier of (i) such time as all of the guaranteed obligations have been fully performed, or (ii) two months following the end of the primary term of the capacity agreements. In October 2018, NEXUS Pipeline was placed in service. The amount of each guarantee decreases annually as payments are made by NEXUS to each of the aforementioned counterparties.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

NEXUS is also party to certain 15-year capacity agreements for the transportation of natural gas with Vector, an equity method investee of DTE Energy. Pursuant to the terms of those agreements, in October 2018, DTE Energy executed a guarantee agreement with Vector, with a maximum potential payment totaling \$7 million at December 31, 2019, representing 50% of the first-year payment obligations due and payable by NEXUS. The guarantee terminates at the earlier of (i) such time as all of the guaranteed obligations have been fully performed or (ii) 15 years from the date DTE Energy entered into the guarantee.

Should NEXUS fail to perform under the terms of these agreements, DTE Energy is required to perform on its behalf. Payments under these guarantees are considered remote.

Other Guarantees

In certain limited circumstances, the Registrants enter into contractual guarantees. The Registrants may guarantee another entity's obligation in the event it fails to perform and may provide guarantees in certain indemnification agreements. Finally, the Registrants may provide indirect guarantees for the indebtedness of others. DTE Energy's guarantees are not individually material with maximum potential payments totaling \$56 million at December 31, 2019. Payments under these guarantees are considered remote.

DTE Energy is periodically required to obtain performance surety bonds in support of obligations to various governmental entities and other companies in connection with its operations. As of December 31, 2019, DTE Energy had \$109 million of performance bonds outstanding. In the event that such bonds are called for nonperformance, DTE Energy would be obligated to reimburse the issuer of the performance bond. DTE Energy is released from the performance bonds as the contractual performance is completed and does not believe that a material amount of any currently outstanding performance bonds will be called.

Vector Line of Credit

In July 2019, DTE Energy, as lender, entered into a revolving term credit facility with Vector, as borrower, in the amount of C\$70 million. The credit facility was executed in response to the passage of Canadian regulations requiring oil and gas pipelines to demonstrate their financial ability to respond to a catastrophic event and exists for the sole purpose of satisfying these regulations. Vector may only draw upon the facility if the funds are required to respond to a catastrophic event. The maximum potential payments under the line of credit at December 31, 2019 is \$54 million. The funding of a loan under the terms of the credit facility is considered remote.

Labor Contracts

There are several bargaining units for DTE Energy subsidiaries' approximate 5,300 represented employees, including DTE Electric's approximate 2,800 represented employees. The majority of the represented employees are under contracts that expire in 2021 and 2022.

Purchase Commitments

As of December 31, 2019, the Registrants were party to numerous long-term purchase commitments relating to a variety of goods and services required for their businesses. These agreements primarily consist of fuel supply commitments and renewable energy contracts for the Registrants, as well as energy trading contracts for DTE Energy. The Registrants estimate the following commitments from 2020 through 2051 for DTE Energy, and 2020 through 2039 for DTE Electric, as detailed in the following table:

	<u>DTE Energy</u>	<u>DTE Electric</u>
	<u>(In millions)</u>	
2020	\$ 3,152	\$ 1,556
2021	1,055	299
2022	561	95
2023	418	96
2024	365	96
2025 and thereafter	1,503	688
	<u>\$ 7,054</u>	<u>\$ 2,830</u>

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Utility capital expenditures, expenditures for non-utility businesses, and contributions to equity method investees will be approximately \$4.5 billion and \$2.6 billion in 2020 for DTE Energy and DTE Electric, respectively. The Registrants have made certain commitments in connection with the estimated 2020 annual capital expenditures and contributions to equity method investees.

Bankruptcies

DTE Energy's Power and Industrial Projects segment holds ownership interests in, and operates, five generating plants that sell electric output from renewable sources under long-term power purchase agreements with PG&E. PG&E filed for Chapter 11 bankruptcy protection on January 29, 2019. As of December 31, 2019, PG&E's account is substantially current and outstanding accounts receivable from PG&E are not material. Therefore, DTE Energy determined no reserve was necessary.

As of December 31, 2019, the book value of long-lived assets used in producing electric output for sale to PG&E was approximately \$101 million. The Power and Industrial Projects segment also has equity investments, including a note receivable, of approximately \$74 million in entities that sell power to PG&E. In January 2019, following the bankruptcy filing, DTE Energy performed an impairment analysis on its long-lived assets. Based on its undiscounted cash flow projections, DTE Energy determined it did not have an impairment loss as of December 31, 2018. DTE Energy also determined there was not an other-than-temporary decline in its equity investments. DTE has not identified subsequent facts or circumstances that would cause a change to these conclusions through December 31, 2019. DTE Energy's assumptions and conclusions may change, and it could have impairment losses if any of the terms of the contracts are not honored by PG&E or the contracts are rejected through the bankruptcy process.

Other Contingencies

The Registrants are involved in certain other legal, regulatory, administrative, and environmental proceedings before various courts, arbitration panels, and governmental agencies concerning claims arising in the ordinary course of business. These proceedings include certain contract disputes, additional environmental reviews and investigations, audits, inquiries from various regulators, and pending judicial matters. The Registrants cannot predict the final disposition of such proceedings. The Registrants regularly review legal matters and record provisions for claims that they can estimate and are considered probable of loss. The resolution of these pending proceedings is not expected to have a material effect on the Registrants' Consolidated Financial Statements in the periods they are resolved.

For a discussion of contingencies related to regulatory matters and derivatives, see Notes 10 and 14 to the Consolidated Financial Statements, "Regulatory Matters" and "Financial and Other Derivative Instruments," respectively.

NOTE 20 — NUCLEAR OPERATIONS

Property Insurance

DTE Electric maintains property insurance policies specifically for the Fermi 2 plant. These policies cover such items as replacement power and property damage. NEIL is the primary supplier of the insurance policies.

DTE Electric maintains a policy for extra expenses, including replacement power costs necessitated by Fermi 2's unavailability due to an insured event. This policy has a 12-week waiting period and provides an aggregate \$490 million of coverage over a three-year period.

DTE Electric has \$1.5 billion in primary coverage and \$1.25 billion of excess coverage for stabilization, decontamination, debris removal, repair and/or replacement of property, and decommissioning. The combined coverage limit for total property damage is \$2.75 billion. The total limit for property damage for non-nuclear events is \$2.0 billion and an aggregate of \$328 million of coverage for extra expenses over a two-year period.

On January 13, 2015, the Terrorism Risk Insurance Program Reauthorization Act of 2015 was signed, extending TRIA through December 31, 2020. For multiple terrorism losses caused by acts of terrorism not covered under the TRIA occurring within one year after the first loss from terrorism, the NEIL policies would make available to all insured entities up to \$3.2 billion, plus any amounts recovered from reinsurance, government indemnity, or other sources to cover losses.

Under NEIL policies, DTE Electric could be liable for maximum assessments of up to \$42 million per event if the loss associated with any one event at any nuclear plant should exceed the accumulated funds available to NEIL.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Public Liability Insurance

As required by federal law, DTE Electric maintains \$450 million of public liability insurance for a nuclear incident. For liabilities arising from a terrorist act outside the scope of TRIA, the policy is subject to one industry aggregate limit of \$300 million. Further, under the Price-Anderson Amendments Act of 2005, deferred premium charges up to \$138 million could be levied against each licensed nuclear facility, but not more than \$20 million per year per facility. Thus, deferred premium charges could be levied against all owners of licensed nuclear facilities in the event of a nuclear incident at any of these facilities.

Nuclear Fuel Disposal Costs

In accordance with the Federal Nuclear Waste Policy Act of 1982, DTE Electric has a contract with the DOE for the future storage and disposal of spent nuclear fuel from Fermi 2 that required DTE Electric to pay the DOE a fee of 1 mill per kWh of Fermi 2 electricity generated and sold. The fee was a component of nuclear fuel expense. The 1 mill per kWh DOE fee was reduced to zero effective May 16, 2014.

The DOE's Yucca Mountain Nuclear Waste Repository program for the acceptance and disposal of spent nuclear fuel was terminated in 2011. DTE Electric is a party in the litigation against the DOE for both past and future costs associated with the DOE's failure to accept spent nuclear fuel under the timetable set forth in the Federal Nuclear Waste Policy Act of 1982. In July 2012, DTE Electric executed a settlement agreement with the federal government for costs associated with the DOE's delay in acceptance of spent nuclear fuel from Fermi 2 for permanent storage. The settlement agreement, including extensions, provides for a claims process and payment of delay-related costs experienced by DTE Electric through 2019. DTE Electric's claims are being settled and paid on a timely basis. The settlement proceeds reduce the cost of the dry cask storage facility assets and provide reimbursement for related operating expenses.

DTE Electric currently employs a spent nuclear fuel storage strategy utilizing a fuel pool and a dry cask storage facility. The spent nuclear fuel storage strategy is expected to provide sufficient spent fuel storage capability for the life of the plant as defined by DTE Electric's operating license agreement.

The federal government continues to maintain its legal obligation to accept spent nuclear fuel from Fermi 2 for permanent storage. Issues relating to long-term waste disposal policy and to the disposition of funds contributed by DTE Electric ratepayers to the federal waste fund await future governmental action.

NOTE 21 — RETIREMENT BENEFITS AND TRUSTEED ASSETS

DTE Energy's subsidiary, DTE Energy Corporate Services, LLC, sponsors defined benefit pension plans and other postretirement plans covering certain employees of the Registrants.

The table below represents the pension and other postretirement benefit plans of each Registrant at December 31, 2019:

	Registrants	
	DTE Energy	DTE Electric
Qualified Pension Plans		
DTE Energy Company Retirement Plan	X	X
DTE Gas Company Retirement Plan for Employees Covered by Collective Bargaining Agreements	X	
Shenango Inc. Pension Plan	X	
Nonqualified Pension Plans		
DTE Energy Company Supplemental Retirement Plan	X	X
DTE Energy Company Executive Supplemental Retirement Plan ^(a)	X	X
DTE Energy Company Supplemental Severance Benefit Plan	X	
Other Postretirement Benefit Plans		
The DTE Energy Company Comprehensive Non-Health Welfare Plan	X	X
The DTE Energy Company Comprehensive Retiree Group Health Care Plan	X	X
DTE Supplemental Retiree Benefit Plan	X	X
DTE Energy Company Retiree Reimbursement Arrangement Plan	X	X

(a) Sponsored by the DTE Energy subsidiary, DTE Energy Holding Company.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

DTE Electric participates in various plans that provide pension and other postretirement benefits for DTE Energy and its affiliates. The plans are sponsored by the LLC. DTE Electric accounts for its participation in DTE Energy's qualified and nonqualified pension plans by applying multiemployer accounting. DTE Electric accounts for its participation in other postretirement benefit plans by applying multiple-employer accounting. Within multiemployer and multiple-employer plans, participants pool plan assets for investment purposes and to reduce the cost of plan administration. The primary difference between plan types is assets contributed in multiemployer plans can be used to provide benefits for all participating employers, while assets contributed within a multiple-employer plan are restricted for use by the contributing employer. As a result of multiemployer accounting treatment, capitalized costs associated with these plans are reflected in Property, plant, and equipment in DTE Electric's Consolidated Statements of Financial Position. The same capitalized costs are reflected as Regulatory assets and liabilities in DTE Energy's Consolidated Statements of Financial Position. In addition, the service cost and non-service cost components are presented in Operation and maintenance in DTE Electric's Consolidated Statements of Operations. The same non-service cost components are presented in Other (Income) and Deductions — Non-operating retirement benefits, net in DTE Energy's Consolidated Statements of Operations. Plan participants of all plans are solely DTE Energy and affiliate participants.

Pension Plan Benefits

DTE Energy has qualified defined benefit retirement plans for eligible represented and non-represented employees. The plans are noncontributory and provide traditional retirement benefits based on the employee's years of benefit service, average final compensation, and age at retirement. In addition, certain represented and non-represented employees are covered under cash balance provisions that determine benefits on annual employer contributions and interest credits. DTE Energy also maintains supplemental nonqualified, noncontributory, retirement benefit plans for certain management employees. These plans provide for benefits that supplement those provided by DTE Energy's other retirement plans.

Net pension cost for DTE Energy includes the following components:

	2019	2018	2017
	(In millions)		
Service cost	\$ 84	\$ 99	\$ 92
Interest cost	219	202	214
Expected return on plan assets	(325)	(329)	(311)
Amortization of:			
Net actuarial loss	133	176	176
Prior service cost	1	—	1
Net pension cost	<u>\$ 112</u>	<u>\$ 148</u>	<u>\$ 172</u>

	2019	2018
	(In millions)	
Other changes in plan assets and benefit obligations recognized in Regulatory assets and Other comprehensive income (loss)		
Net actuarial loss	\$ 156	\$ 125
Amortization of net actuarial loss	(133)	(176)
Amortization of prior service cost	(1)	—
Total recognized in Regulatory assets and Other comprehensive income (loss)	<u>\$ 22</u>	<u>\$ (51)</u>
Total recognized in net periodic pension cost, Regulatory assets, and Other comprehensive income (loss)	<u>\$ 134</u>	<u>\$ 97</u>
Estimated amounts to be amortized from Regulatory assets and Accumulated other comprehensive income (loss) into net periodic benefit cost during next fiscal year		
Net actuarial loss	\$ 171	\$ 131
Prior service cost	\$ 1	\$ 1

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following table reconciles the obligations, assets, and funded status of the plans as well as the amounts recognized as prepaid pension cost or pension liability in DTE Energy's Consolidated Statements of Financial Position at December 31:

	DTE Energy	
	2019	2018
	(In millions)	
Accumulated benefit obligation, end of year	\$ 5,387	\$ 4,779
Change in projected benefit obligation		
Projected benefit obligation, beginning of year	\$ 5,124	\$ 5,576
Service cost	84	99
Interest cost	219	202
Actuarial (gain) loss	719	(438)
Benefits paid	(336)	(315)
Projected benefit obligation, end of year	\$ 5,810	\$ 5,124
Change in plan assets		
Plan assets at fair value, beginning of year	\$ 4,273	\$ 4,636
Actual return on plan assets	888	(233)
Company contributions	168	185
Benefits paid	(336)	(315)
Plan assets at fair value, end of year	\$ 4,993	\$ 4,273
Funded status	\$ (817)	\$ (851)
Amount recorded as:		
Current liabilities	\$ (9)	\$ (14)
Noncurrent liabilities	(808)	(837)
	\$ (817)	\$ (851)
Amounts recognized in Accumulated other comprehensive income (loss), pre-tax		
Net actuarial loss	\$ 153	\$ 152
Prior service cost	4	5
	\$ 157	\$ 157
Amounts recognized in Regulatory assets^(a)		
Net actuarial loss	\$ 1,995	\$ 1,973
Prior service credit	(12)	(12)
	\$ 1,983	\$ 1,961

(a) See Note 10 to the Consolidated Financial Statements, "Regulatory Matters."

The Registrants' policy is to fund pension costs by contributing amounts consistent with the provisions of the Pension Protection Act of 2006, and additional amounts when it deems appropriate. The following table provides contributions to the qualified pension plans in:

	2019			2018			2017		
	(In millions)								
DTE Energy	\$	150	\$	175	\$	223			
DTE Electric	\$	100	\$	175	\$	185			

During 2019, DTE Energy contributed the following amounts of DTE Energy common stock to the DTE Energy Company Affiliates Employee Benefit Plans Master Trust:

Date	Number of Shares	Price per Share	Amount	
(In millions)				
March 5, 2019	814,597	\$122.76	\$	100

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The above contribution was made on behalf of DTE Electric, for which DTE Electric paid DTE Energy cash consideration of \$100 million in March 2019. DTE Energy made additional cash contributions of \$50 million to the qualified pension plans in 2019.

At the discretion of management, and depending upon financial market conditions, DTE Energy anticipates making up to \$185 million in contributions, including \$160 million of DTE Electric contributions, to the qualified pension plans in 2020.

DTE Energy's subsidiaries are responsible for their share of qualified and nonqualified pension benefit costs. DTE Electric's allocated portion of pension benefit costs included in capital expenditures and operating and maintenance expense were \$93 million for the year ended December 31, 2019, \$120 million for the year ended December 31, 2018, and \$136 million for the year ended December 31, 2017. These amounts include recognized contractual termination benefit charges, curtailment gains, and settlement charges.

At December 31, 2019, the benefits related to DTE Energy's qualified and nonqualified pension plans expected to be paid in each of the next five years and in the aggregate for the five fiscal years thereafter are as follows:

		(In millions)
2020	\$	311
2021		319
2022		324
2023		330
2024		334
2025-2029		1,723
Total	\$	3,341

Assumptions used in determining the projected benefit obligation and net pension costs of DTE Energy are:

	2019	2018	2017
Projected benefit obligation			
Discount rate	3.28%	4.40%	3.70%
Rate of compensation increase	4.98%	4.98%	4.98%
Net pension costs			
Discount rate	4.40%	3.70%	4.25%
Rate of compensation increase	4.98%	4.98%	4.65%
Expected long-term rate of return on plan assets	7.30%	7.50%	7.50%

DTE Energy employs a formal process in determining the long-term rate of return for various asset classes. Management reviews historic financial market risks and returns and long-term historic relationships between the asset classes of equities, fixed income, and other assets, consistent with the widely accepted capital market principle that asset classes with higher volatility generate a greater return over the long-term. Current market factors such as inflation, interest rates, asset class risks, and asset class returns are evaluated and considered before long-term capital market assumptions are determined. The long-term portfolio return is also established employing a consistent formal process, with due consideration of diversification, active investment management, and rebalancing. Peer data is reviewed to check for reasonableness. As a result of this process, the Registrants have long-term rate of return assumptions for the pension plans of 7.10% and other postretirement benefit plans of 7.20% for 2020. The Registrants believe these rates are a reasonable assumption for the long-term rate of return on plan assets for 2020 given the current investment strategy.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The DTE Energy Company Affiliates Employee Benefit Plans Master Trust employs a liability driven investment program whereby the characteristics of plan liabilities are considered when determining investment policy. Risk tolerance is established through consideration of future plan cash flows, plan funded status, and corporate financial considerations. The investment portfolio contains a diversified blend of equity, fixed income, and other investments. Furthermore, equity investments are diversified across U.S. and non-U.S. stocks and large and small market capitalizations. Fixed income investments generally include U.S. Treasuries, other governmental debt, diversified corporate bonds, bank loans, and mortgage-backed securities. Other investments are used to enhance long-term returns while improving portfolio diversification. Derivatives may be utilized in a risk controlled manner, to potentially increase the portfolio beyond the market value of invested assets and/or reduce portfolio investment risk. Investment risk is measured and monitored on an ongoing basis through annual liability measurements, periodic asset/liability studies, and quarterly investment portfolio reviews.

Target allocations for DTE Energy's pension plan assets as of December 31, 2019 are listed below:

U.S. Large Capitalization (Cap) Equity Securities	16%
U.S. Small Cap and Mid Cap Equity Securities	4
Non-U.S. Equity Securities	15
Fixed Income Securities	42
Hedge Funds and Similar Investments	14
Private Equity and Other	9
	100%

The following tables provide the fair value measurement amounts for DTE Energy's pension plan assets at December 31, 2019 and 2018^(a):

	December 31, 2019				December 31, 2018			
	Level 1	Level 2	Other ^(b)	Total	Level 1	Level 2	Other ^(b)	Total
DTE Energy asset category:	(In millions)							
Short-term Investments ^(c)	\$ 99	\$ —	\$ —	\$ 99	\$ —	\$ 27	\$ —	\$ 27
Equity Securities								
Domestic ^(d)	172	—	870	1,042	729	4	—	733
International ^(e)	387	—	322	709	337	9	240	586
Fixed Income Securities								
Governmental ^(f)	569	—	—	569	—	868	—	868
Corporate ^(g)	—	1,452	—	1,452	6	1,024	—	1,030
Hedge Funds and Similar Investments ^(h)	169	—	502	671	88	—	542	630
Private Equity and Other ⁽ⁱ⁾	—	—	451	451	—	—	399	399
DTE Energy Total	\$ 1,396	\$ 1,452	\$ 2,145	\$ 4,993	\$ 1,160	\$ 1,932	\$ 1,181	\$ 4,273

(a) For a description of levels within the fair value hierarchy, see Note 13 to the Consolidated Financial Statements, "Fair Value."

(b) Amounts represent assets valued at NAV as a practical expedient for fair value.

(c) This category predominantly represents certain short-term fixed income securities and money market investments that are managed in separate accounts or commingled funds. Pricing for investments in this category are obtained from quoted prices in actively traded markets or valuations from brokers or pricing services.

(d) This category represents portfolios of large, medium and small capitalization domestic equities. Investments in this category include exchange-traded securities for which unadjusted quoted prices can be obtained and exchange-traded securities held in a commingled fund classified as NAV assets.

(e) This category primarily consists of portfolios of non-U.S. developed and emerging market equities. Investments in this category are exchange-traded securities whereby unadjusted quoted prices can be obtained. Exchange-traded securities held in a commingled fund are classified as NAV assets.

(f) This category includes U.S. Treasuries, bonds, and other governmental debt. Pricing for investments in this category is obtained from quoted prices in actively traded markets and quotations from broker or pricing services.

(g) This category primarily consists of corporate bonds from diversified industries, bank loans, and mortgage backed securities. Pricing for investments in this category is obtained from quoted prices in actively traded markets and quotations from broker or pricing services.

(h) This category utilizes a diversified group of strategies that attempt to capture financial market inefficiencies and includes publicly traded mutual funds, commingled funds and limited partnership funds. Pricing for mutual funds in this category is obtained from quoted prices in actively traded markets. Commingled funds and limited partnership funds are classified as NAV assets.

(i) This category includes a diversified group of funds and strategies that primarily invests in private equity partnerships. This category also includes investments in real estate and private debt. All pricing for investments in this category are classified as NAV assets.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The pension trust holds debt and equity securities directly and indirectly through commingled funds. Exchange-traded debt and equity securities held directly are valued using quoted market prices in actively traded markets. The commingled funds hold exchange-traded equity or debt securities and are valued based on stated NAVs. Non-exchange traded fixed income securities are valued by the trustee based upon quotations available from brokers or pricing services. A primary price source is identified by asset type, class, or issue for each security. The trustee monitors prices supplied by pricing services and may use a supplemental price source or change the primary price source of a given security if the trustee challenges an assigned price and determines that another price source is considered preferable. DTE Energy has obtained an understanding of how these prices are derived, including the nature and observability of the inputs used in deriving such prices.

Other Postretirement Benefits

The Registrants participate in defined benefit plans sponsored by the LLC that provide certain other postretirement health care and life insurance benefits for employees who are eligible for these benefits. The Registrants' policy is to fund certain trusts to meet its other postretirement benefit obligations. DTE Energy did not make any contributions to these trusts during 2019 and does not anticipate making any contributions to the trusts in 2020.

DTE Energy and DTE Electric offer a defined contribution VEBA for eligible represented and non-represented employees, in lieu of defined benefit post-employment health care benefits. The Registrants allocate a fixed amount per year to an account in a defined contribution VEBA for each employee. These accounts are managed either by the Registrant (for non-represented and certain represented groups) or by the Utility Workers of America for Local 223 employees. DTE Energy contributions to the VEBA for these accounts were \$13 million in 2019, \$11 million in 2018, and \$8 million in 2017, including DTE Electric contributions of \$6 million in 2019 and \$5 million in 2018 and 2017.

The Registrants also contribute a fixed amount to a Retiree Reimbursement Account, for certain non-represented and represented retirees, spouses, and surviving spouses when the youngest of the retiree's covered household becomes eligible for Medicare Part A based on age. The amount of the annual allocation to each participant is determined by the employee's retirement date and increases each year for each eligible participant at the lower of the rate of medical inflation or 2%.

Net other postretirement credit for DTE Energy includes the following components:

	2019	2018	2017
	(In millions)		
Service cost	\$ 22	\$ 27	\$ 27
Interest cost	70	69	73
Expected return on plan assets	(96)	(143)	(130)
Amortization of:			
Net actuarial loss	12	11	13
Prior service credit	(9)	—	(14)
Net other postretirement credit	<u>\$ (1)</u>	<u>\$ (36)</u>	<u>\$ (31)</u>
	2019	2018	
	(In millions)		
Other changes in plan assets and accumulated postretirement benefit obligation recognized in Regulatory assets and Other comprehensive income (loss)			
Net actuarial (gain) loss	\$ 34	\$ (8)	
Amortization of net actuarial loss	(12)	(11)	
Prior service credit	(53)	(44)	
Amortization of prior service credit	9	—	
Total recognized in Regulatory assets and Other comprehensive income (loss)	<u>\$ (22)</u>	<u>\$ (63)</u>	
Total recognized in net periodic benefit cost, Regulatory assets, and Other comprehensive income (loss)	<u>\$ (23)</u>	<u>\$ (99)</u>	
Estimated amounts to be amortized from Regulatory assets and Accumulated other comprehensive income (loss) into net periodic benefit cost during next fiscal year			
Net actuarial loss	\$ 16	\$ 12	
Prior service credit	\$ (19)	\$ (9)	

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Net other postretirement credit for DTE Electric includes the following components:

	2019	2018	2017
	(In millions)		
Service cost	\$ 16	\$ 20	\$ 20
Interest cost	53	53	56
Expected return on plan assets	(65)	(98)	(90)
Amortization of:			
Net actuarial loss	5	8	8
Prior service credit	(7)	—	(10)
Net other postretirement cost (credit)	<u>\$ 2</u>	<u>\$ (17)</u>	<u>\$ (16)</u>

	2019	2018
	(In millions)	
Other changes in plan assets and accumulated postretirement benefit obligation recognized in Regulatory assets		
Net actuarial (gain) loss	\$ 41	\$ (46)
Amortization of net actuarial loss	(5)	(8)
Prior service cost	(33)	—
Amortization of prior service (cost) credit	7	(35)
Total recognized in Regulatory assets	<u>\$ 10</u>	<u>\$ (89)</u>
Total recognized in net periodic benefit cost and Regulatory assets	<u>\$ 12</u>	<u>\$ (106)</u>
Estimated amounts to be amortized from Regulatory assets into net periodic benefit cost during next fiscal year		
Net actuarial loss	\$ 11	\$ 5
Prior service credit	\$ (14)	\$ (7)

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following table reconciles the obligations, assets, and funded status of the plans including amounts recorded as Accrued postretirement liability in the Registrants' Consolidated Statements of Financial Position at December 31:

	DTE Energy		DTE Electric	
	2019	2018	2019	2018
(In millions)				
Change in accumulated postretirement benefit obligation				
Accumulated postretirement benefit obligation, beginning of year	\$ 1,645	\$ 1,910	\$ 1,247	\$ 1,470
Service cost	22	27	16	20
Interest cost	70	69	53	53
Plan amendments	(53)	(44)	(33)	(35)
Actuarial (gain) loss	153	(227)	118	(196)
Benefits paid	(86)	(90)	(64)	(65)
Accumulated postretirement benefit obligation, end of year	\$ 1,751	\$ 1,645	\$ 1,337	\$ 1,247
Change in plan assets				
Plan assets at fair value, beginning of year	\$ 1,689	\$ 1,848	\$ 1,158	\$ 1,272
Actual return on plan assets	215	(75)	141	(52)
Benefits paid	(85)	(84)	(63)	(62)
Plan assets at fair value, end of year	\$ 1,819	\$ 1,689	\$ 1,236	\$ 1,158
Funded status	\$ 68	\$ 44	\$ (101)	\$ (89)
Amount recorded as:				
Noncurrent assets	\$ 69	\$ 45	\$ 266	\$ 189
Current liabilities	(1)	(1)	—	—
Noncurrent liabilities	—	—	(367)	(278)
	\$ 68	\$ 44	\$ (101)	\$ (89)
Amounts recognized in Accumulated other comprehensive income (loss), pre-tax				
Net actuarial (gain) loss	\$ (8)	\$ 1	\$ —	\$ —
	\$ (8)	\$ 1	\$ —	\$ —
Amounts recognized in Regulatory assets^(a)				
Net actuarial loss	\$ 289	\$ 257	\$ 193	\$ 156
Prior service credit	(88)	(44)	(62)	(35)
	\$ 201	\$ 213	\$ 131	\$ 121

(a) See Note 10 to the Consolidated Financial Statements, "Regulatory Matters."

At December 31, 2019, the benefits expected to be paid, including prescription drug benefits, in each of the next five years and in the aggregate for the five fiscal years thereafter for the Registrants are as follows:

	DTE Energy		DTE Electric	
	(In millions)			
2020	\$	84	\$	64
2021		88		67
2022		92		70
2023		94		72
2024		96		73
2025-2029		496		378
Total	\$	950	\$	724

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Assumptions used in determining the accumulated postretirement benefit obligation and net other postretirement benefit costs of the Registrants are:

	2019	2018	2017
Accumulated postretirement benefit obligation			
Discount rate	3.29%	4.40%	3.70%
Health care trend rate pre- and post- 65	6.75 / 7.25%	6.75 / 7.25%	6.75 / 7.25%
Ultimate health care trend rate	4.50%	4.50%	4.50%
Year in which ultimate reached pre- and post- 65	2032	2031	2030
Other postretirement benefit costs			
Discount rate	4.40%	3.70%	4.25%
Expected long-term rate of return on plan assets	7.30%	7.75%	7.75%
Health care trend rate pre- and post- 65	6.75 / 7.25%	6.75 / 7.25%	6.50 / 6.75%
Ultimate health care trend rate	4.50%	4.50%	4.50%
Year in which ultimate reached pre- and post- 65	2031	2030	2028

A one percentage point increase in health care cost trend rates would have increased the total service cost and interest cost components of benefit costs for DTE Energy by \$3 million, including \$2 million for DTE Electric, in 2019 and would have increased the accumulated benefit obligation for DTE Energy by \$62 million, including \$44 million for DTE Electric, at December 31, 2019. A one percentage point decrease in the health care cost trend rates would have decreased the total service and interest cost components of benefit costs for DTE Energy by \$3 million, including \$2 million for DTE Electric, in 2019 and would have decreased the accumulated benefit obligation for DTE Energy by \$54 million, including \$39 million for DTE Electric, at December 31, 2019.

The process used in determining the long-term rate of return on assets for the other postretirement benefit plans is similar to that previously described for the pension plans.

The DTE Energy Company Master VEBA Trust employs a liability driven investment program whereby the characteristics of plan liabilities are considered when determining investment policy. Risk tolerance is established through consideration of future plan cash flows, plan funded status, and corporate financial considerations. The investment portfolio contains a diversified blend of equity, fixed income, and other investments. Furthermore, equity investments are diversified across U.S. and non-U.S. stocks and large and small market capitalizations. Fixed income investments generally include U.S. Treasuries, other governmental debt, diversified corporate bonds, bank loans, and mortgage-backed securities. Other investments are used to enhance long-term returns while improving portfolio diversification. Derivatives may be utilized in a risk controlled manner to potentially increase the portfolio beyond the market value of invested assets and/or reduce portfolio investment risk. Investment risk is measured and monitored on an ongoing basis through annual liability measurements, periodic asset/liability studies, and quarterly investment portfolio reviews.

Target allocations for the Registrants' other postretirement benefit plan assets as of December 31, 2019 are listed below:

U.S. Large Cap Equity Securities	16%
U.S. Small Cap and Mid Cap Equity Securities	3
Non-U.S. Equity Securities	16
Fixed Income Securities	37
Hedge Funds and Similar Investments	14
Private Equity and Other	14
	100%

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The following tables provide the fair value measurement amounts for the Registrants' other postretirement benefit plan assets at December 31, 2019 and 2018^(a):

	December 31, 2019				December 31, 2018			
	Level 1	Level 2	Other ^(b)	Total	Level 1	Level 2	Other ^(b)	Total
DTE Energy asset category:	(In millions)							
Short-term Investments ^(c)	\$ 80	\$ —	\$ —	\$ 80	\$ 14	\$ 2	\$ —	\$ 16
Equity Securities								
Domestic ^(d)	51	—	273	324	300	—	—	300
International ^(e)	182	—	89	271	234	—	67	301
Fixed Income Securities								
Governmental ^(f)	74	—	—	74	—	85	—	85
Corporate ^(g)	—	256	251	507	11	265	130	406
Hedge Funds and Similar Investments ^(h)	71	—	182	253	97	—	203	300
Private Equity and Other ⁽ⁱ⁾	—	—	310	310	—	—	281	281
DTE Energy Total	\$ 458	\$ 256	\$ 1,105	\$ 1,819	\$ 656	\$ 352	\$ 681	\$ 1,689
DTE Electric asset category:								
Short-term Investments ^(c)	\$ 55	\$ —	\$ —	\$ 55	\$ 10	\$ 1	\$ —	\$ 11
Equity Securities								
Domestic ^(d)	34	—	185	219	206	—	—	206
International ^(e)	124	—	60	184	163	—	45	208
Fixed Income Securities								
Governmental ^(f)	48	—	—	48	—	53	—	53
Corporate ^(g)	—	168	176	344	7	179	92	278
Hedge Funds and Similar Investments ^(h)	49	—	123	172	68	—	139	207
Private Equity and Other ⁽ⁱ⁾	—	—	214	214	—	—	195	195
DTE Electric Total	\$ 310	\$ 168	\$ 758	\$ 1,236	\$ 454	\$ 233	\$ 471	\$ 1,158

(a) For a description of levels within the fair value hierarchy see Note 13 to the Consolidated Financial Statements, "Fair Value."

(b) Amounts represent assets valued at NAV as a practical expedient for fair value.

(c) This category predominantly represents certain short-term fixed income securities and money market investments that are managed in separate accounts or commingled funds. Pricing for investments in this category are obtained from quoted prices in actively traded markets or valuations from brokers or pricing services.

(d) This category represents portfolios of large, medium and small capitalization domestic equities. Investments in this category include exchange-traded securities for which unadjusted quoted prices can be obtained and exchange-traded securities held in a commingled fund classified as NAV assets.

(e) This category primarily consists of portfolios of non-U.S. developed and emerging market equities. Investments in this category are exchange-traded securities whereby unadjusted quoted prices can be obtained. Exchange-traded securities held in a commingled fund are classified as NAV assets.

(f) This category includes U.S. Treasuries, bonds and other governmental debt. Pricing for investments in this category is obtained from quoted prices in actively traded markets and quotations from broker or pricing services.

(g) This category primarily consists of corporate bonds from diversified industries, bank loans, and mortgage backed securities. Pricing for investments in this category is obtained from quoted prices in actively traded markets and quotations from broker or pricing services. Non-exchange traded securities and exchange-traded securities held in commingled funds are classified as NAV assets.

(h) This category utilizes a diversified group of strategies that attempt to capture financial market inefficiencies and includes publicly traded mutual funds, commingled funds and limited partnership funds. Pricing for mutual funds in this category is obtained from quoted prices in actively traded markets. Commingled funds and limited partnership funds are classified as NAV assets.

(i) This category includes a diversified group of funds and strategies that primarily invests in private equity partnerships. This category also includes investments in real estate and private debt. All investments in this category are classified as NAV assets.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

The DTE Energy Company Master VEBA Trust holds debt and equity securities directly and indirectly through commingled funds. Exchange-traded debt and equity securities held directly are valued using quoted market prices in actively traded markets. The commingled funds hold exchange-traded equity or debt securities and are valued based on NAVs. Non-exchange traded fixed income securities are valued by the trustee based upon quotations available from brokers or pricing services. A primary price source is identified by asset type, class, or issue for each security. The trustee monitors prices supplied by pricing services and may use a supplemental price source or change the primary price source of a given security if the trustee challenges an assigned price and determines that another price source is considered preferable. The Registrants have obtained an understanding of how these prices are derived, including the nature and observability of the inputs used in deriving such prices.

Defined Contribution Plans

The Registrants also sponsor defined contribution retirement savings plans. Participation in one of these plans is available to substantially all represented and non-represented employees. For substantially all employees, the Registrants match employee contributions up to certain predefined limits based upon eligible compensation and the employee's contribution rate. Additionally, for eligible represented and non-represented employees who do not participate in the Pension Plans, the Registrants annually contribute an amount equivalent to 4% (8% for certain DTE Gas represented employees) of an employee's eligible pay to the employee's defined contribution retirement savings plan. For DTE Energy, the cost of these plans was \$65 million, \$61 million, and \$57 million for the years ended December 31, 2019, 2018, and 2017, respectively. For DTE Electric, the cost of these plans was \$31 million, \$29 million, and \$27 million for the years ended December 31, 2019, 2018, and 2017, respectively.

NOTE 22 — STOCK-BASED COMPENSATION

DTE Energy's stock incentive program permits the grant of incentive stock options, non-qualifying stock options, stock awards, performance shares, and performance units to employees and members of its Board of Directors. As a result of a stock award, a settlement of an award of performance shares, or by exercise of a participant's stock option, DTE Energy may deliver common stock from its authorized but unissued common stock and/or from outstanding common stock acquired by or on behalf of DTE Energy in the name of the participant. Key provisions of the stock incentive program are:

- Authorized limit is 16,500,000 shares of common stock;
- Prohibits the grant of a stock option with an exercise price that is less than the fair market value of DTE Energy's stock on the date of the grant; and
- Imposes the following award limits to a single participant in a single calendar year, (1) options for more than 500,000 shares of common stock; (2) stock awards for more than 150,000 shares of common stock; (3) performance share awards for more than 300,000 shares of common stock (based on the maximum payout under the award); or (4) more than 1,000,000 performance units, which have a face amount of \$1.00 each.

DTE Energy records compensation expense at fair value over the vesting period for all awards it grants.

The following table summarizes the components of stock-based compensation for DTE Energy:

	2019		2018		2017
	(In millions)				
Stock-based compensation expense	\$ 71	\$	64	\$	58
Tax benefit	\$ 13	\$	13	\$	23
Stock-based compensation cost capitalized in Property, plant, and equipment	\$ 16	\$	11	\$	9

Stock Options

Options are exercisable according to the terms of the individual stock option award agreements and expire ten years after the date of the grant. The option exercise price equals the fair value of the stock on the date that the option was granted. Stock options vest ratably over a three-year period.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

There were no options granted and no options expensed during 2019, 2018, or 2017. The intrinsic value of options outstanding and options exercised for the years ended December 31, 2019, 2018, and 2017 were not material.

Restricted Stock Awards

Stock awards granted under the plan are restricted for varying periods, generally for three years. Participants have all rights of a shareholder with respect to a stock award, including the right to receive dividends and vote the shares. Prior to vesting in stock awards, the participant: (i) may not sell, transfer, pledge, exchange, or otherwise dispose of shares; (ii) shall not retain custody of the share certificates; and (iii) will deliver to DTE Energy a stock power with respect to each stock award upon request.

The stock awards are recorded at cost that approximates fair value on the date of grant. The cost is amortized to compensation expense over the vesting period.

The fair value of awards vested were not material for the years ended December 31, 2019, 2018, and 2017. Compensation cost charged against income was \$11 million for the years ended December 31, 2019, 2018, and 2017.

Performance Share Awards

Performance shares awarded under the plan are for a specified number of shares of DTE Energy common stock that entitle the holder to receive a cash payment, shares of DTE Energy common stock, or a combination thereof. The final value of the award is determined by the achievement of certain performance objectives and market conditions. The awards vest at the end of a specified period, usually three years. Awards granted in 2019, 2018, and 2017 were primarily deemed to be equity awards. The DTE Energy stock price and number of probable shares attributable to market conditions for such equity awards are fair valued only at the grant date. DTE Energy accounts for performance share awards by accruing compensation expense over the vesting period based on: (i) the number of shares expected to be paid which is based on the probable achievement of performance objectives; and (ii) the closing stock price market value. The settlement of the award is based on the closing price at the settlement date.

DTE Energy recorded compensation expense for performance share awards as follows:

	2019	2018	2017
	(In millions)		
Compensation expense	\$ 60	\$ 53	\$ 47
Cash settlements ^(a)	\$ 19	\$ 13	\$ 15
Stock settlements ^(a)	\$ 79	\$ 39	\$ 66

(a) Sum of cash and stock settlements approximates the intrinsic value of the awards.

During the vesting period, the recipient of a performance share award has no shareholder rights. During the period beginning on the date the performance shares are awarded and ending on the certification date of the performance objectives, the number of performance shares awarded will be increased, assuming full dividend reinvestment at the fair market value on the dividend payment date. The cumulative number of performance shares will be adjusted to determine the final payment based on the performance objectives achieved. Performance share awards are nontransferable and are subject to risk of forfeiture.

The following table summarizes DTE Energy's performance share activity for the period ended December 31, 2019:

	Performance Shares	Weighted Average Grant Date Fair Value
Balance at December 31, 2018	1,286,686	\$ 97.17
Grants	446,579	\$ 115.85
Forfeitures	(44,044)	\$ 102.42
Payouts	(463,190)	\$ 88.53
Balance at December 31, 2019	<u>1,226,031</u>	\$ 107.35

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Unrecognized Compensation Costs

As of December 31, 2019, DTE Energy's total unrecognized compensation cost related to non-vested stock incentive plan arrangements and the weighted average recognition period was as follows:

	Unrecognized Compensation Cost	Weighted Average to be Recognized
	(In millions)	(In years)
Stock awards	\$ 19	1.57
Performance shares	62	1.05
	<u>\$ 81</u>	1.17

Allocated Stock-Based Compensation

DTE Electric received an allocation of costs from DTE Energy associated with stock-based compensation. DTE Electric's allocation for 2019, 2018, and 2017 for stock-based compensation expense was \$43 million, \$38 million, and \$34 million, respectively.

NOTE 23 — SEGMENT AND RELATED INFORMATION

DTE Energy sets strategic goals, allocates resources, and evaluates performance based on the following structure:

Electric segment consists principally of DTE Electric, which is engaged in the generation, purchase, distribution, and sale of electricity to approximately 2.2 million residential, commercial, and industrial customers in southeastern Michigan.

Gas segment consists principally of DTE Gas, which is engaged in the purchase, storage, transportation, distribution, and sale of natural gas to approximately 1.3 million residential, commercial, and industrial customers throughout Michigan and the sale of storage and transportation capacity.

Gas Storage and Pipelines is primarily engaged in services related to the gathering, transportation, and storage of natural gas.

Power and Industrial Projects is comprised primarily of projects that deliver energy and utility-type products and services to industrial, commercial, and institutional customers, produce reduced emissions fuel, and sell electricity and pipeline-quality gas from renewable energy projects.

Energy Trading consists of energy marketing and trading operations.

Corporate and Other includes various holding company activities, holds certain non-utility debt, and holds energy-related investments.

The federal income tax provisions or benefits of DTE Energy's subsidiaries are determined on an individual company basis and recognize the tax benefit of tax credits and net operating losses, if applicable. The state and local income tax provisions of the utility subsidiaries are determined on an individual company basis and recognize the tax benefit of various tax credits and net operating losses, if applicable. The subsidiaries record federal, state, and local income taxes payable to or receivable from DTE Energy based on the federal, state, and local tax provisions of each company.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

Inter-segment billing for goods and services exchanged between segments is based upon tariffed or market-based prices of the provider and primarily consists of the sale of reduced emissions fuel, power sales, and natural gas sales in the following segments:

	Year Ended December 31,		
	2019	2018	2017
	(In millions)		
Electric	\$ 56	\$ 52	\$ 48
Gas	12	12	8
Gas Storage and Pipelines	27	36	42
Power and Industrial Projects	596	642	569
Energy Trading	22	27	35
Corporate and Other	2	2	2
	<u>\$ 715</u>	<u>\$ 771</u>	<u>\$ 704</u>

Financial data of DTE Energy's business segments follows:

	Electric	Gas	Gas Storage and Pipelines	Power and Industrial Projects	Energy Trading	Corporate and Other	Reclassifications and Eliminations	Total
	(In millions)							
2019								
Operating Revenues — Utility operations	\$ 5,224	1,482	—	—	—	—	(68)	\$ 6,638
Operating Revenues — Non-utility operations	\$ 5	—	501	1,560	4,610	2	(647)	\$ 6,031
Depreciation and amortization	\$ 949	144	94	69	6	1	—	\$ 1,263
Interest expense	\$ 315	78	73	33	8	266	(132)	\$ 641
Interest income	\$ (2)	(6)	(8)	(9)	(4)	(120)	132	\$ (17)
Equity in earnings of equity method investees	\$ 1	2	97	14	—	(3)	—	\$ 111
Income Tax Expense (Benefit)	\$ 137	62	74	(63)	17	(75)	—	\$ 152
Net Income (Loss) Attributable to DTE Energy Company	\$ 714	185	204	133	49	(116)	—	\$ 1,169
Investment in equity method investees	\$ 5	11	1,685	130	—	31	—	\$ 1,862
Capital expenditures and acquisitions	\$ 2,368	530	2,510	54	5	—	—	\$ 5,467
Goodwill	\$ 1,208	743	470	26	17	—	—	\$ 2,464
Total Assets	\$ 24,617	5,717	4,832	537	798	7,679	(2,298)	\$ 41,882

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

	Electric	Gas	Gas Storage and Pipelines	Power and Industrial Projects	Energy Trading	Corporate and Other	Reclassifications and Eliminations	Total
(In millions)								
2018								
Operating Revenues — Utility operations	\$ 5,298	1,436	—	—	—	—	(64)	\$ 6,670
Operating Revenues — Non-utility operations	\$ —		485	2,204	5,557	3	(707)	\$ 7,542
Depreciation and amortization	\$ 836	133	82	67	5	1	—	\$ 1,124
Interest expense	\$ 283	70	68	31	6	220	(119)	\$ 559
Interest income	\$ —	(6)	(9)	(9)	(3)	(104)	119	\$ (12)
Equity in earnings of equity method investees	\$ —	2	123	3	—	4	—	\$ 132
Income Tax Expense (Benefit)	\$ 193	67	68	(195)	13	(48)	—	\$ 98
Net Income (Loss) Attributable to DTE Energy Company	\$ 664	150	235	161	39	(129)	—	\$ 1,120
Investment in equity method investees	\$ 7	12	1,585	134	—	33	—	\$ 1,771
Capital expenditures and acquisitions	\$ 1,979	460	176	91	5	2	—	\$ 2,713
Goodwill	\$ 1,208	743	299	26	17	—	—	\$ 2,293
Total Assets	\$ 22,501	5,378	3,161	495	909	6,153	(2,309)	\$ 36,288

	Electric	Gas	Gas Storage and Pipelines	Power and Industrial Projects	Energy Trading	Corporate and Other	Reclassifications and Eliminations	Total
(In millions)								
2017								
Operating Revenues — Utility operations	\$ 5,102	1,388	—	—	—	—	(56)	\$ 6,434
Operating Revenues — Non-utility operations	\$ —	—	453	2,089	4,277	2	(648)	\$ 6,173
Depreciation and amortization	\$ 753	123	76	72	5	1	—	\$ 1,030
Interest expense	\$ 274	65	77	29	5	192	(106)	\$ 536
Interest income	\$ —	(7)	(14)	(7)	(2)	(88)	106	\$ (12)
Equity in earnings of equity method investees	\$ 1	2	90	9	—	—	—	\$ 102
Income Tax Expense (Benefit) ^(a)	\$ 321	78	(30)	(195)	49	(48)	—	\$ 175
Net Income (Loss) Attributable to DTE Energy Company	\$ 606	146	275	138	72	(103)	—	\$ 1,134
Investment in equity method investees	\$ 7	11	879	150	—	26	—	\$ 1,073
Capital expenditures and acquisitions	\$ 1,574	463	137	56	7	13	—	\$ 2,250
Goodwill	\$ 1,208	743	299	26	17	—	—	\$ 2,293
Total Assets	\$ 21,163	5,072	2,594	593	725	5,324	(1,704)	\$ 33,767

(a) Includes Income Tax Expense (Benefit) of \$(5) million, \$(115) million, \$(21) million, \$2 million, and \$34 million for Electric — non-utility, Gas Storage and Pipelines, Power and Industrial Projects, Energy Trading, and Corporate and Other, respectively, related to the enactment of the TCJA.

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

NOTE 24 — RELATED PARTY TRANSACTIONS

DTE Energy enters into related party transactions with certain equity method investees, primarily between DTE Gas and NEXUS. DTE Gas is party to a 15-year capacity lease agreement with NEXUS for the transportation of natural gas. Under the lease agreement, DTE Gas provides firm pipeline capacity in the DTE Gas system in order for NEXUS to provide service to its customers from an interconnect between NEXUS and DTE Gas. NEXUS is charged a fixed daily pipeline reservation charge. DTE Gas operating revenues from this agreement was \$32 million and \$6 million in 2019 and 2018, respectively. DTE Gas is also party to a 15-year service agreement with NEXUS for the transportation of natural gas. Under the service agreement, NEXUS provides firm pipeline capacity to transport natural gas to service DTE Gas customers. DTE Gas incurs a firm daily pipeline reservation charge, which totaled \$21 million and \$2 million in 2019 and 2018, respectively. These expenses are included in Fuel, purchased power, and gas - utility on the Consolidated Statements of Operations and are recovered through the GCR mechanism. Other related party transactions with equity method investees include transactions with Vector Pipeline and Millennium Pipeline. These transactions were not material for the years ended December 31, 2019, 2018, and 2017.

DTE Electric has agreements with affiliated companies to sell energy for resale, purchase fuel and power, provide fuel supply services, and provide power plant operation and maintenance services. DTE Electric has agreements with certain DTE Energy affiliates where DTE Electric charges the affiliates for their use of the shared capital assets of DTE Electric. A shared services company accumulates various corporate support services expenses and charges various subsidiaries of DTE Energy, including DTE Electric. DTE Electric records federal, state, and local income taxes payable to or receivable from DTE Energy based on its federal, state, and local tax provisions.

The following is a summary of DTE Electric's transactions with affiliated companies:

	2019		2018		2017
	(In millions)				
Revenues					
Energy sales	\$ 10		\$ 9		\$ 9
Other services	\$ 5		\$ 4		\$ 4
Shared capital assets	\$ 47		\$ 43		\$ 39
Costs					
Fuel and purchased power	\$ 9		\$ 7		\$ 6
Other services and interest	\$ 23		\$ 33		\$ (2)
Corporate expenses, net	\$ 372		\$ 377		\$ 370
Other					
Dividends declared	\$ 494		\$ 461		\$ 432
Dividends paid	\$ 494		\$ 461		\$ 432
Capital contribution from DTE Energy	\$ 180		\$ 325		\$ 100

DTE Electric's Accounts receivable and Accounts payable related to Affiliates are payable upon demand and are generally settled in cash within a monthly business cycle. Notes receivable and Short-term borrowings related to Affiliates are subject to a credit agreement with DTE Energy whereby short-term excess cash or cash shortfalls are remitted to or funded by DTE Energy. This credit arrangement involves the charge and payment of interest at market-based rates. Refer to DTE Electric's Consolidated Statements of Financial Position for affiliate balances at December 31, 2019 and 2018.

There were no contributions made by DTE Electric to the DTE Energy Foundation for the years ended December 31, 2019 and 2018. There were \$7 million in charitable contributions made by DTE Electric to the DTE Energy Foundation for the year ended December 31, 2017. The DTE Energy Foundation is a non-consolidated not-for-profit private foundation, the purpose of which is to contribute and assist charitable organizations.

See the following notes for other related party transactions impacting DTE Electric's Consolidated Financial Statements:

Note	Title
1	Organization and Basis of Presentation
21	Retirement Benefits and Trusteed Assets
22	Stock-Based Compensation

DTE Energy Company — DTE Electric Company
Combined Notes to Consolidated Financial Statements — (Continued)

NOTE 25 — SUPPLEMENTARY QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

DTE Energy

Quarterly earnings per share may not equal full year totals, since quarterly computations are based on weighted average common shares outstanding during each quarter.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
(In millions, except per share amounts)					
2019					
Operating Revenues	\$ 3,514	\$ 2,888	\$ 3,119	\$ 3,148	\$ 12,669
Operating Income	\$ 542	\$ 300	\$ 450	\$ 415	\$ 1,707
Net Income Attributable to DTE Energy Company	\$ 401	\$ 182	\$ 319	\$ 267	\$ 1,169
Basic Earnings per Share	\$ 2.20	\$ 0.99	\$ 1.74	\$ 1.40	\$ 6.32
Diluted Earnings per Share	\$ 2.19	\$ 0.99	\$ 1.73	\$ 1.40	\$ 6.31
2018					
Operating Revenues	\$ 3,753	\$ 3,159	\$ 3,550	\$ 3,750	\$ 14,212
Operating Income	\$ 504	\$ 329	\$ 429	\$ 332	\$ 1,594
Net Income Attributable to DTE Energy Company	\$ 361	\$ 234	\$ 334	\$ 191	\$ 1,120
Basic Earnings per Share	\$ 2.01	\$ 1.29	\$ 1.84	\$ 1.05	\$ 6.18
Diluted Earnings per Share	\$ 2.00	\$ 1.29	\$ 1.84	\$ 1.05	\$ 6.17

DTE Electric

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
(In millions)					
2019					
Operating Revenues	\$ 1,235	\$ 1,190	\$ 1,519	\$ 1,280	\$ 5,224
Operating Income	\$ 226	\$ 223	\$ 440	\$ 224	\$ 1,113
Net Income	\$ 147	\$ 133	\$ 307	\$ 129	\$ 716
2018					
Operating Revenues	\$ 1,205	\$ 1,276	\$ 1,521	\$ 1,296	\$ 5,298
Operating Income	\$ 253	\$ 269	\$ 444	\$ 168	\$ 1,134
Net Income	\$ 140	\$ 163	\$ 305	\$ 56	\$ 664

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

See Item 8. Financial Statements and Supplementary Data for management's evaluation of the Registrants' disclosure controls and procedures, their report on internal control over financial reporting, and their conclusion on changes in internal control over financial reporting.

Item 9B. Other Information

None.

Part III

Item 10. Directors, Executive Officers, and Corporate Governance

Item 11. Executive Compensation

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Item 13. Certain Relationships and Related Transactions, and Director Independence

DTE Electric

Information required of DTE Electric by Part III (Items 10, 11, 12, and 13) of this Form 10-K is omitted per General Instruction I (2) (c) of Form 10-K for wholly-owned subsidiaries (reduced disclosure format).

Item 14. Principal Accountant Fees and Services

DTE Energy

Information required of DTE Energy by Part III (Items 10, 11, 12, 13, and 14) of this Form 10-K is incorporated by reference from DTE Energy's definitive Proxy Statement for its 2020 Annual Meeting of Shareholders to be held May 7, 2020. The Proxy Statement will be filed with the SEC, pursuant to Regulation 14A, not later than 120 days after the end of DTE Energy's fiscal year covered by this report on Form 10-K, all of which information is hereby incorporated by reference in, and made part of, this Form 10-K.

DTE Electric

For the years ended December 31, 2019 and 2018, professional services were performed by PricewaterhouseCoopers LLP (PwC). The following table presents fees for professional services rendered by PwC for the audit of DTE Electric's annual financial statements for the years ended December 31, 2019 and 2018, respectively, and fees billed for other services rendered by PwC during those periods.

	2019	2018
Audit fees ^(a)	\$ 1,408,900	\$ 1,393,500
Audit-related fees ^(b)	52,000	52,000
Total	\$ 1,460,900	\$ 1,445,500

(a) Represents the aggregate fees for the audits of DTE Electric's annual financial statements included in the Annual Reports on Form 10-K and for the reviews of the financial statements included in the Quarterly Reports on Form 10-Q.

(b) Represents the aggregate fees billed for audit-related services for various attest services.

The above listed fees were pre-approved by the DTE Energy Audit Committee. Prior to engagement, the DTE Energy Audit Committee pre-approves these services by category of service. The DTE Energy Audit Committee may delegate to the chair of the Audit Committee, or to one or more other designated members of the Audit Committee, the authority to grant pre-approvals of all permitted services or classes of these permitted services to be provided by the independent auditor up to, but not exceeding, a pre-defined limit. The decision of the designated member to pre-approve a permitted service will be reported to the DTE Energy Audit Committee at the next scheduled meeting.

Part IV

Item 15. Exhibits and Financial Statement Schedules

A. The following documents are filed as part of this Annual Report on Form 10-K.

- (1) Consolidated Financial Statements. See "Item 8 — Financial Statements and Supplementary Data."
- (2) Financial statement schedule. See "Item 8 — Financial Statements and Supplementary Data."
- (3) Exhibits.

Exhibit Number	Description	DTE Energy	DTE Electric
<i>(i) Exhibits filed herewith:</i>			
4.310	Supplemental Indenture dated as of November 1, 2019, to the Amended and Restated Indenture, dated as of April 9, 2001, between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee. (2019 Series G and H)	X	
4.311	Description of the Company's Common stock	X	
4.312	Description of the Company's: 2012 Series C 5.25% Junior Subordinated Debentures due 2062; 2016 Series B 5.375% Junior Subordinated Debentures due 2076; 2016 Series F 6.00% Junior Subordinated Debentures due 2076; and 2017 Series E 5.25% Junior Subordinated Debentures due 2077	X	
4.313	Description of the Company's 2019 6.25% Corporate Units	X	
10.107	Certain arrangements pertaining to the employment of Gerardo Norcia, dated July 1, 2019	X	
21.15	Subsidiaries of DTE Energy	X	
23.38	Consent of PricewaterhouseCoopers LLP	X	
23.39	Consent of PricewaterhouseCoopers LLP		X
31.173	Chief Executive Officer Section 302 Form 10-K Certification of Periodic Report	X	
31.174	Chief Financial Officer Section 302 Form 10-K Certification of Periodic Report	X	
31.175	Chief Executive Officer Section 302 Form 10-K Certification of Periodic Report		X
31.176	Chief Financial Officer Section 302 Form 10-K Certification of Periodic Report		X
101.INS	XBRL Instance Document	X	X
101.SCH	XBRL Taxonomy Extension Schema	X	X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase	X	X
101.DEF	XBRL Taxonomy Extension Definition Database	X	X
101.LAB	XBRL Taxonomy Extension Label Linkbase	X	X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase	X	X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)	X	X
<i>(ii) Exhibits furnished herewith:</i>			
32.173	Chief Executive Officer Section 906 Form 10-K Certification of Periodic Report	X	
32.174	Chief Financial Officer Section 906 Form 10-K Certification of Periodic Report	X	
32.175	Chief Executive Officer Section 906 Form 10-K Certification of Periodic Report		X
32.176	Chief Financial Officer Section 906 Form 10-K Certification of Periodic Report		X

Exhibit Number	Description	DTE Energy	DTE Electric
<i>(iii) Exhibits incorporated by reference:</i>			
Certain exhibits listed below refer to "The Detroit Edison Company" and "Michigan Consolidated Gas Company" and were effective prior to the change to DTE Electric Company and DTE Gas Company, respectively, effective January 1, 2013.			
3(a)	Amended Bylaws of DTE Energy Company, as amended through September 17, 2015 (Exhibit 3.1 to DTE Energy's Form 8-K dated September 17, 2015).	X	
3(b)	Amended and Restated Articles of Incorporation of DTE Energy Company, dated December 13, 1995 and as amended from time to time (Exhibit 3-1 to DTE Energy's Form 8-K dated May 6, 2010).	X	
3(c)	Articles of Incorporation of DTE Electric Company, as amended effective January 1, 2013. (Exhibit 3-1 to DTE Electric's Form 8-K filed January 2, 2013).		X
3(d)	Bylaws of The Detroit Edison Company, as amended through September 22, 1999. (Exhibit 3-14 to DTE Electric's Form 10-Q for the quarter ended September 30, 1999).		X
4(a)	Amended and Restated Indenture, dated as of April 9, 2001, between DTE Energy Company and The Bank of New York, as trustee (Exhibit 4.1 to Registration Statement on Form S-3 (File No. 333-58834)) and indentures supplemental thereto, dated as of dates indicated below, and filed as exhibits to the filings set forth below:	X	
	Supplemental Indenture, dated as of April 1, 2003, between DTE Energy Company and The Bank of New York, as trustee (Exhibit 4(o) to DTE Energy's Form 10-Q for the quarter ended March 31, 2003). (2003 Series A 6 3/8% Senior Notes due 2033)	X	
	Supplemental Indenture, dated as of September 1, 2012, between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-275 to DTE Energy's Form 8-K dated October 1, 2012). (2012 Series C 5.25% Junior Subordinated Debentures due 2062)	X	
	Supplemental Indenture, dated as of December 1, 2013, between DTE Energy and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-282 to DTE Energy's Form 10-K for the year ended December 31, 2013). (2013 Series F Senior Notes due 2023)	X	
	Supplemental Indenture, dated as of May 1, 2014, between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-284 to DTE Energy's Form 10-Q for the quarter ended June 30, 2014). (2014 Series C due 2024)	X	
	Supplemental Indenture, dated as of May 15, 2016, between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.1 to DTE Energy's Form 8-K dated May 27, 2016). (2016 Series B)	X	
	Supplemental Indenture, dated as of June 1, 2016, between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-294 to DTE Energy's Form 10-Q for the quarter ended June 30, 2016). (2015 Series BR)	X	
	Supplemental Indenture, dated as of September 1, 2016, to the Amended and Restated Indenture, dated as of April 9, 2001, by and between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.1 to DTE Energy's Form 8-K dated October 5, 2016). (2016 Series C)	X	
	Supplemental Indenture, dated as of October 1, 2016, to the Amended and Restated Indenture, dated as of April 9, 2001, by and between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.2 to DTE Energy's Form 8-K dated October 5, 2016). (2016 Series E)	X	
	Supplemental Indenture, dated as of December 1, 2016, to the Amended and Restated Indenture, dated as of April 9, 2001, by and between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.1 to DTE Energy's Form 8-K dated December 7, 2016). (2016 Series F)	X	

Exhibit Number	Description	DTE Energy	DTE Electric
	Supplemental Indenture, dated as of March 1, 2017 to the Amended and Restated Indenture, dated as of April 9, 2001, by and between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-298 to DTE Energy's Form 10-Q for the quarter ended March 31, 2017). (2017 Series A)	X	
	Supplemental Indenture, dated as of November 1, 2017, to the Amended and Restated Indenture, dated as of April 9, 2001, by and between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.1 to DTE Energy's Form 8-K dated November 17, 2017). (2017 Series E)	X	
	Supplemental Indenture dated as of August 1, 2018, to the Amended and Restated Indenture, dated as of April 9, 1924, between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-301 to DTE Energy's Form 10-Q for the quarter ended September 30, 2018). (2018 Series D)	X	
	Supplemental Indenture dated as of June 1, 2019, to the Amended and Restated Indenture, dated as of April 9, 2001, between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-306 to DTE Energy's Form 10-Q for the quarter ended June 30, 2019). (2019 Series B and C)	X	
	Supplemental Indenture, dated as of November 1, 2019, to the Amended and Restated Indenture, dated as of April 9, 2001, by and between DTE Energy Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee creating the Remarketable Notes (Exhibit 4.1 to DTE Energy's Form 8-K dated November 1, 2019). (2019 Series F)	X	
4(b)	Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit B-1 to Detroit Edison's Registration Statement on Form A-2 (File No. 2-1630)) and indentures supplemental thereto, dated as of dates indicated below, and filed as exhibits to the filings set forth below:	X	X
	Supplemental Indenture, dated as of December 1, 1940, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit B-14 to Detroit Edison's Registration Statement on Form A-2 (File No. 2-4609)). (amendment)	X	X
	Supplemental Indenture, dated as of September 1, 1947, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit B-20 to Detroit Edison's Registration Statement on Form S-1 (File No. 2-7136)). (amendment)	X	X
	Supplemental Indenture, dated as of March 1, 1950, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit B-22 to Detroit Edison's Registration Statement on Form S-1 (File No. 2-8290)). (amendment)	X	X
	Supplemental Indenture, dated as of November 15, 1951, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit B-23 to Detroit Edison's Registration Statement on Form S-1 (File No. 2-9226)). (amendment)	X	X
	Supplemental Indenture, dated as of August 15, 1957, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 3-B-30 to Detroit Edison's Form 8-K dated September 11, 1957). (amendment)	X	X
	Supplemental Indenture, dated as of December 1, 1966, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 2-B-32 to Detroit Edison's Registration Statement on Form S-9 (File No. 2-25664)). (amendment)	X	X
	Supplemental Indenture, dated as of May 1, 1991, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-178 to Detroit Edison's Form 10-K for the year ended December 31, 1996). (1991 Series CP)	X	X

Exhibit Number	Description	DTE Energy	DTE Electric
	Supplemental Indenture, dated as of May 15, 1991, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-179 to Detroit Edison's Form 10-K for the year ended December 31, 1996). (1991 Series DP)	X	X
	Supplemental Indenture, dated as of February 29, 1992, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-187 to Detroit Edison's Form 10-Q for the quarter ended March 31, 1998). (1992 Series AP)	X	X
	Supplemental Indenture, dated as of April 26, 1993, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-215 to Detroit Edison's Form 10-K for the year ended December 31, 2000). (amendment)	X	X
	Supplemental Indenture, dated as of September 17, 2002, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.1 to Detroit Edison's Registration Statement on Form S-3 (File No. 333-100000)). (amendment and successor trustee)	X	X
	Supplemental Indenture, dated as of October 15, 2002, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-230 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2002). (2002 Series B)	X	X
	Supplemental Indenture, dated as of April 1, 2005, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between Detroit Edison and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.3 to Detroit Edison's Registration Statement on Form S-4 (File No. 333-123926)). (2005 Series BR)	X	X
	Supplemental Indenture, dated as of September 15, 2005, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.2 to Detroit Edison's Form 8-K dated September 29, 2005). (2005 Series C)	X	X
	Supplemental Indenture, dated as of September 30, 2005, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between Detroit Edison and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-248 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2005). (2005 Series E)	X	X
	Supplemental Indenture, dated as of May 15, 2006, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-250 to Detroit Edison's Form 10-Q for the quarter ended June 30, 2006). (2006 Series A)	X	X
	Supplemental Indenture, dated as of December 1, 2007, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and J.P. Morgan Trust Company, National Association, as successor trustee (Exhibit 4.2 to Detroit Edison's Form 8-K dated December 18, 2007). (2007 Series A)	X	X
	Supplemental Indenture, dated as of May 1, 2008 to Mortgage and Deed of Trust, dated as of October 1, 1924 between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-253 to Detroit Edison's Form 10-Q for the quarter ended June 30, 2008). (2008 Series ET)	X	X
	Supplemental Indenture, dated as of July 1, 2008 to Mortgage and Deed of Trust, dated as of October 1, 1924 between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-257 to Detroit Edison's Form 10-Q for the quarter ended June 30, 2008). (2008 Series KT)	X	X
	Supplemental Indenture, dated as of August 1, 2010, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-269 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2010). (2010 Series B)	X	X

Exhibit Number	Description	DTE Energy	DTE Electric
	<u>Supplemental Indenture, dated as of September 1, 2010, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-271 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2010). (2010 Series A)</u>	X	X
	<u>Supplemental Indenture, dated as of May 15, 2011, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A. as successor trustee (Exhibit 4-275 to Detroit Edison's Form 10-Q for the quarter ended June 30, 2011). (2011 Series B)</u>	X	X
	<u>Supplemental Indenture, dated as of August 1, 2011, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A. as successor trustee (Exhibit 4-276 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2011). (2011 Series GT)</u>	X	X
	<u>Supplemental Indenture, dated as of August 15, 2011, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A. as successor trustee (Exhibit 4-277 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2011). (2011 Series D, 2011 Series E, 2011 Series F)</u>	X	X
	<u>Supplemental Indenture, dated as of September 1, 2011, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A. as successor trustee (Exhibit 4-278 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2011). (2011 Series H)</u>	X	X
	<u>Supplemental Indenture dated as of June 20, 2012, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-279 to Detroit Edison's Form 10-Q for the quarter ended June 30, 2012). (2012 Series A and B)</u>	X	X
	<u>Supplemental Indenture, dated as of March 15, 2013, to the Mortgage and Deed of Trust dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon, N.A., as successor trustee (Exhibit 4-280 to DTE Electric Form 10-Q for the quarter ended March 31, 2013). (2013 Series A)</u>	X	X
	<u>Supplemental Indenture, dated as of August 1, 2013, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-281 to DTE Electric's Form 10-Q for the quarter ended September 30, 2013). (2013 Series B)</u>	X	X
	<u>Supplemental Indenture, dated as of June 1, 2014, to the Mortgage and Deed of Trust dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon, N.A., as successor trustee (Exhibit 4-282 to DTE Electric's Form 10-Q for the quarter ended June 30, 2014). (2014 Series A and B)</u>	X	X
	<u>Supplemental Indenture, dated as of July 1, 2014, to the Mortgage and Deed of Trust dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon, N.A., as successor trustee (Exhibit 4-283 to DTE Electric's Form 10-Q for the quarter ended June 30, 2014). (2014 Series D and E)</u>	X	X
	<u>Supplemental Indenture, dated as of March 1, 2015, to the Mortgage and Deed of Trust dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee. (Exhibit 4-289 to DTE Electric's Form 10-Q for the quarter ended March 31, 2015). (2015 Series A)</u>	X	X
	<u>Supplemental Indenture, dated as of May 1, 2016, to the Mortgage and Deed of Trust dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee. (Exhibit 4-293 to DTE Electric's Form 10-Q for the quarter ended June 30, 2016). (2016 Series A)</u>	X	X
	<u>Supplemental Indenture, dated as of August 1, 2017, to the Mortgage and Deed of Trust dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee. (Exhibit 10-107 to DTE Electric's Form 10-Q for the quarter ended September 30, 2017). (2017 Series B)</u>	X	X

Exhibit Number	Description	DTE Energy	DTE Electric
	<u>Supplemental Indenture dated as of May 1, 2018, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-299 to DTE Energy's Form 10-Q for the quarter ended June 30, 2018). (2018 Series A)</u>	X	X
	<u>Supplemental Indenture dated as of February 1, 2019, to the Mortgage and Deed of Trust, dated as of October 1, 1924, between DTE Electric Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-70 to DTE Energy's Form S-3 filed on April 1, 2019). (2019 Series A)</u>	X	X
4(c)	Collateral Trust Indenture, dated as of June 30, 1993, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-152 to Detroit Edison's Registration Statement (File No. 33-50325)) and indentures supplemental thereto, dated as of dates indicated below, and filed as exhibits to the filings set forth below:	X	X
	<u>Tenth Supplemental Indenture, dated as of October 23, 2002, to the Collateral Trust Indenture, dated as of June 30, 1993, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-231 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2002). (6.35% Senior Notes due 2032)</u>	X	X
	<u>Sixteenth Supplemental Indenture, dated as of April 1, 2005, to the Collateral Trust Indenture, dated as of June 30, 1993, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.1 to Detroit Edison's Registration Statement on Form S-4 (File No. 333-123926)). (2005 Series BR 5.45% Senior Notes due 2035)</u>	X	X
	<u>Eighteenth Supplemental Indenture, dated as of September 15, 2005, to the Collateral Trust Indenture, dated as of June 30, 1993, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.1 to Detroit Edison's Form 8-K dated September 29, 2005). (2005 Series C 5.19% Senior Notes due October 1, 2023)</u>	X	X
	<u>Nineteenth Supplemental Indenture, dated as of September 30, 2005, to the Collateral Trust Indenture, dated as of June 30, 1993, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-247 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2005). (2005 Series E 5.70% Senior Notes due 2037)</u>	X	X
	<u>Twentieth Supplemental Indenture, dated as of May 15, 2006, to the Collateral Trust Indenture dated as of June 30, 1993, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-249 to Detroit Edison's Form 10-Q for the quarter ended June 30, 2006). (2006 Series A Senior Notes due 2036)</u>	X	X
	<u>Twenty-second Supplemental Indenture, dated as of December 1, 2007, to the Collateral Trust Indenture, dated as of June 30, 1993, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4.1 to Detroit Edison's Form 8-K dated December 18, 2007). (2007 Series A Senior Notes due 2038)</u>	X	X
	<u>Twenty-fourth Supplemental Indenture, dated as of May 1, 2008 to the Collateral Trust Indenture, dated as of June 30, 1993 between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A. as successor trustee (Exhibit 4-254 to Detroit Edison's Form 10-Q for the quarter ended June 30, 2008). (2008 Series ET Variable Rate Senior Notes due 2029)</u>	X	X
	<u>Twenty-sixth Supplemental Indenture, dated as of July 1, 2008 to the Collateral Trust Indenture, dated as of June 30, 1993 between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-258 to Detroit Edison's Form 10-Q for the quarter ended June 30, 2008). (2008 Series KT Variable Rate Senior Notes due 2020)</u>	X	X

Exhibit Number	Description	DTE Energy	DTE Electric
	<u>Thirty-first Supplemental Indenture, dated as of August 1, 2010 to the Collateral Trust Indenture, dated as of June 1, 1993 between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-270 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2010). (2010 Series B 3.45% Senior Notes due 2020)</u>	X	X
	<u>Thirty-second Supplemental Indenture, dated as of September 1, 2010, between The Detroit Edison Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (Exhibit 4-272 to Detroit Edison's Form 10-Q for the quarter ended September 30, 2010). (2010 Series A 4.89% Senior Notes due 2020)</u>	X	X
4(d)	<u>Indenture dated as of June 1, 1998 between Michigan Consolidated Gas Company and Citibank, N.A., as trustee, related to Senior Debt Securities (Exhibit 4-1 to Michigan Consolidated Gas Company Registration Statement on Form S-3 (File No. 333-63370)) and indentures supplemental thereto, dated as of dates indicated below, and filed as exhibits to the filings set forth below:</u>	X	
	<u>Fourth Supplemental Indenture dated as of February 15, 2003, to the Indenture dated as of June 1, 1998 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-3 to Michigan Consolidated Gas Company Form 10-Q for the quarter ended March 31, 2003). (5.70% Senior Notes, 2003 Series A due 2033)</u>	X	
	<u>Fifth Supplemental Indenture dated as of October 1, 2004, to the Indenture dated as of June 1, 1998 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-6 to Michigan Consolidated Gas Company Form 10-Q for the quarter ended September 31, 2004). (5.00% Senior Notes, 2004 Series E due 2019)</u>	X	
	<u>Sixth Supplemental Indenture dated as of April 1, 2008, to the Indenture dated as of June 1, 1998 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-241 to DTE Energy's Form 10-Q for the quarter ended March 31, 2008). (6.04% Senior Notes, 2008 Series B due 2018 and 6.44% Senior Notes, 2008 Series C due 2023)</u>	X	
	<u>Seventh Supplemental Indenture, dated as of June 1, 2008 to Indenture dated as of June 1, 1998 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-243 to DTE Energy's Form 10-Q for the quarter ended June 30, 2008). (6.78% Senior Notes, 2008 Series F due 2028)</u>	X	
	<u>Eighth Supplemental Indenture, dated as of August 1, 2008 to Indenture dated as of June 1, 1998 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-251 to DTE Energy's Form 10-Q for the quarter ended September 30, 2008). (6.36% Senior Notes, 2008 Series I due 2020)</u>	X	
4(e)	<u>Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 (Exhibit 7-D to Michigan Consolidated Gas Company Registration Statement No. 2-5252) and indentures supplemental thereto, dated as of dates indicated below, and filed as exhibits to the filings set forth below:</u>	X	
	<u>Thirty-seventh Supplemental Indenture dated as of February 15, 2003 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-4 to Michigan Consolidated Gas Company Form 10-Q for the quarter ended March 31, 2003). (5.70% collateral bonds due 2033)</u>	X	
	<u>Thirty-ninth Supplemental Indenture, dated as of April 1, 2008 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-240 to DTE Energy's Form 10-Q for the quarter ended March 31, 2008). (2008 Series B and C Collateral Bonds)</u>	X	
	<u>Fortieth Supplemental Indenture, dated as of June 1, 2008 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-242 to DTE Energy's Form 10-Q for the quarter ended June 30, 2008). (2008 Series F Collateral Bonds)</u>	X	

Exhibit Number	Description	DTE Energy	DTE Electric
	<u>Forty-first Supplemental Indenture, dated as of August 1, 2008 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-250 to DTE Energy's Form 10-Q for the quarter ended September 30, 2008). (2008 Series I Collateral Bonds)</u>	X	
	<u>Forty-third Supplemental Indenture, dated as of December 1, 2012 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between Michigan Consolidated Gas Company and Citibank, N.A., trustee (Exhibit 4-279 to DTE Energy's Form 10-K for the year ended December 31, 2012). (2012 First Mortgage Bonds Series D)</u>	X	
	<u>Forty-fourth Supplemental Indenture, dated as of December 1, 2013 to Indenture of Mortgage and Deed of Trust dated March 1, 1944 between DTE Gas Company and Citibank, N.A., (Exhibit 4-283 to DTE Energy's Form 10-K for the year ended December 31, 2013). (2013 First Mortgage Bonds Series C, D, and E)</u>	X	
	<u>Forty-fifth Supplemental Indenture, dated as of December 1, 2014 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between DTE Gas Company and Citibank, N.A. (Exhibit 4-288 to DTE Energy's Form 10-K for the year ended December 31, 2014). (2014 First Mortgage Bonds Series F)</u>	X	
	<u>Forty-sixth Supplemental Indenture, dated as of August 1, 2015 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between DTE Gas Company and Citibank, N.A. (Exhibit 4-292 to DTE Energy's Form 10-Q for the quarter ended September 30, 2015). (2015 First Mortgage Bonds Series C and D)</u>	X	
	<u>Forty-seventh Supplemental Indenture, dated as of December 1, 2016 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between DTE Gas Company and Citibank, N.A. (Exhibit 4-297 to DTE Energy's Form 10-K for the year ended December 31, 2016). (2016 First Mortgage Bonds Series G)</u>	X	
	<u>Forty-eighth Supplemental Indenture, dated as of September 1, 2017 to Indenture of Mortgage and Deed of Trust dated as of March 1, 1944 between DTE Gas Company and Citibank, N.A. (Exhibit 10-108 to DTE Energy's Form 10-Q for the quarter ended September 30, 2017). (2017 First Mortgage Bonds Series C and D)</u>	X	
	<u>Forty-ninth Supplemental Indenture dated as of August 1, 2018, to Indenture of Mortgage and Deed of Trust, dated as of March 1, 1944, between DTE Gas Company and Citibank, N.A., trustee (Exhibit 4-300 to DTE Energy's Form 10-Q for the quarter ended September 30, 2018). (2018 Series B and C)</u>	X	
	<u>Fiftieth Supplemental Indenture dated as of October 1, 2019, to Indenture of Mortgage and Deed of Trust, dated as of March 1, 1944, between DTE Gas Company and Citibank, N.A., trustee (Exhibit 4-307 to DTE Energy's Form 10-Q for the quarter ended September 30, 2019). (2019 Series D and E)</u>	X	
10(a)	<u>Form of Indemnification Agreement between DTE Energy Company and each of Gerard M. Anderson, JoAnn Chavez, David E. Meador, Gerardo Norcia, Peter B. Oleksiak and non-employee Directors (Exhibit 10-1 to DTE Energy's Form 8-K dated December 6, 2007)</u>	X	
10(b)	Certain arrangements pertaining to the employment of Gerard M. Anderson with The Detroit Edison Company, dated October 6, 1993 (Exhibit 10-48 to The Detroit Edison Company's Form 10-K for the year ended December 31, 1993)	X	X
10(c)	<u>Certain arrangements pertaining to the employment of David E. Meador with The Detroit Edison Company, dated January 14, 1997 (Exhibit 10-5 to The Detroit Edison Company's Form 10-K for the year ended December 31, 1996)</u>	X	X
10(d)	<u>DTE Energy Company Annual Incentive Plan (Exhibit 10-44 to DTE Energy's Form 10-Q for the quarter ended March 31, 2001)</u>	X	
10(e)	<u>DTE Energy Company Long-Term Incentive Plan Amended and Restated Effective May 3, 2018 (Exhibit 4-3 to DTE Energy's Form S-8 filed on June 27, 2018)</u>	X	
10(f)	<u>DTE Energy Company Retirement Plan for Non-Employee Directors' Fees (as Amended and Restated effective as of December 31, 1998) (Exhibit 10-31 to DTE Energy's Form 10-K for the year ended December 31, 1998)</u>	X	

Exhibit Number	Description	DTE Energy	DTE Electric
10(g)	The Detroit Edison Company Supplemental Long-Term Disability Plan, dated January 27, 1997 (Exhibit 10-4 to The Detroit Edison Company's Form 10-K for the year ended December 31, 1996)	X	X
10(h)	Description of Executive Life Insurance Plan (Exhibit 10-47 to DTE Energy's Form 10-Q for the quarter ended June 30, 2002)	X	
10(i)	DTE Energy Affiliates Nonqualified Plans Master Trust, effective as of August 15, 2013 (Exhibit 10-87 to DTE Energy's Form 10-Q for the quarter ended September 30, 2013)	X	
10(j)	First Amendment to DTE Energy Affiliates Nonqualified Plans Master Trust, effective as of March 15, 2015 (Exhibit 10-94 to DTE Energy's Form 10-Q for the quarter ended March 15, 2015)	X	
	Form of Director Restricted Stock Agreement (Exhibit 10.1 to DTE Energy's Form 8-K dated June 23, 2005)	X	
10(k)	Form of Director Restricted Stock Agreement pursuant to the DTE Energy Company Long-Term Incentive Plan (Exhibit 10.1 to DTE Energy's Form 8-K dated June 29, 2006)	X	
10(l)	DTE Energy Company Executive Supplemental Retirement Plan as Amended and Restated, effective as of January 1, 2005 (Exhibit 10.75 to DTE Energy's Form 10-K for the year ended December 31, 2008)	X	
10(m)	First Amendment to the DTE Energy Company Executive Supplemental Retirement Plan (Amended and Restated Effective January 1, 2005) dated as of December 2, 2009 (Exhibit 10.1 to DTE Energy's Form 8-K dated December 8, 2009)	X	
	Second Amendment to the DTE Energy Company Executive Supplemental Retirement Plan (Amended and Restated Effective January 1, 2005) dated as of May 5, 2011 (Exhibit 10.80 to DTE Energy's Form 10-Q for the quarter ended March 31, 2012)	X	
	Third Amendment to the DTE Energy Company Executive Supplemental Retirement Plan (Amended and Restated Effective January 1, 2005) dated as of February 3, 2016 (Exhibit 10.96 to DTE Energy's Form 10-K for the year ended December 31, 2015)	X	
	DTE Energy Company Supplemental Retirement Plan as Amended and Restated, effective as of January 1, 2005 (Exhibit 10.76 to DTE Energy's Form 10-K for the year ended December 31, 2008)	X	
10(n)	First Amendment to the DTE Energy Company Supplemental Retirement Plan (Amended and Restated, effective as of January 1, 2005) dated as of March 19, 2013 (Exhibit 10.92 to Form DTE Energy's 10-K for the year ended December 31, 2014)	X	
	Second Amendment to the DTE Energy Company Supplemental Retirement Plan (Amended and Restated, effective as of January 1, 2005) dated as of November 11, 2014 (Exhibit 10.93 to DTE Energy's Form 10-K for the year ended December 31, 2014)	X	
	DTE Energy Company Supplemental Savings Plan as Amended and Restated, effective as of January 1, 2005 (Exhibit 10.77 to DTE Energy's Form 10-K for the year ended December 31, 2008)	X	
10(o)	Second Amendment to the DTE Energy Supplemental Savings Plan dated as of November 13, 2012 (Exhibit 10.81 to DTE Energy's Form 10-K for the year ended December 31, 2012)	X	
	DTE Energy Company Executive Deferred Compensation Plan as Amended and Restated, effective as of January 1, 2005 (Exhibit 10.78 to DTE Energy's Form 10-K for the year ended December 31, 2008)	X	
10(p)	First Amendment to DTE Energy Company Executive Deferred Compensation Plan as Amended and Restated, effective as of January 1, 2005, dated as of February 4, 2016 (Exhibit 10.98 to DTE Energy's Form 10-K for the year ended December 31, 2015)	X	
	DTE Energy Company Plan for Deferring the Payment of Directors' Fees as Amended and Restated, effective as of January 1, 2005 (Exhibit 10.79 to DTE Energy's Form 10-K for the year ended December 31, 2008)	X	

Exhibit Number	Description	DTE Energy	DTE Electric
10(q)	First Amendment, dated as of June 25, 2015, to the DTE Energy Company Plan for Deferring the Payment of Directors' Fees (as Amended and Restated effective as of January 1, 2005) (Exhibit 10.95 to DTE Energy's Form 10-Q for the quarter ended June 30, 2015)	X	
	DTE Energy Company Deferred Stock Compensation Plan for Non-Employee Directors as Amended and Restated, effective January 1, 2005 (Exhibit 10.80 to DTE Energy's Form 10-K for the year ended December 31, 2008)	X	
10(r)	Form of Third Amended and Restated DTE Energy Company Five-Year Credit Agreement, dated as of October 21, 2011 and amended and restated as of April 16, 2015, by and among DTE Energy Company, the lenders party thereto, Citibank, N.A., as Administrative Agent, and Barclays Bank PLC, The Bank of Nova Scotia and JPMorgan Chase Bank, N.A. as Co-Syndication Agents (Exhibit 10.01 to DTE Energy Company's Form 8-K filed on April 21, 2015)	X	
10(s)	Request for Extension of Termination Date, dated as of April 16, 2017, to the Third Amended and Restated Five-Year Credit Agreement, dated as of October 21, 2011, amended and restated as of April 5, 2013, and amended and restated as of April 16, 2015, by and among DTE Energy, the lenders party thereto, Citibank, N.A., as Administrative Agent, and Barclays Bank PLC, The Bank of Nova Scotia and JPMorgan Chase Bank, N.A. as Co-Syndication Agents (Exhibit 10.104 to DTE Energy's Form 10-Q for the quarter ended June 30, 2017)	X	
	Form of Third Amended and Restated DTE Gas Company Five-Year Credit Agreement, dated as of October 21, 2011 and amended and restated as of April 16, 2015, by and among DTE Gas Company, the lenders party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, and Barclays Bank PLC, Citibank, N.A., and Bank of America, N.A., as Co-Syndication Agents (Exhibit 10.02 to DTE Energy Company's Form 8-K filed on April 21, 2015)	X	
10(t)	Request for Extension of Termination Date, dated as of April 16, 2017, to the Third Amended and Restated Five-Year Credit Agreement, dated as of October 21, 2011, amended and restated as of April 5, 2013, and amended and restated as of April 16, 2015, by and among DTE Gas the lenders party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, and Barclays Bank PLC, Citibank, N.A. and Bank of America, N.A., as Co-Syndication Agents (Exhibit 10.105 to DTE Energy's Form 10-Q for the quarter ended June 30, 2017)	X	
	Form of Third Amended and Restated DTE Electric Company Five-Year Credit Agreement, dated as of October 21, 2011 and amended and restated as of April 16, 2015, by and among DTE Electric Company, the lenders party thereto, Barclays Bank PLC, as Administrative Agent, and Citibank N.A., JPMorgan Chase Bank, N.A., and Wells Fargo Bank, National Association as Co-Syndication Agents (Exhibit 10.01 to DTE Energy Company's and DTE Electric Company's Form 8-K filed on April 21, 2015)	X	X
10(u)	Request for Extension of Termination Date, dated as of April 16, 2017, to the Third Amended and Restated Five-Year Credit Agreement, dated as of October 21, 2011, amended and restated as of April 5, 2013, and further amended and restated as of April 16, 2015, by and among DTE Electric Company, the lenders party thereto, Barclays Bank PLC., as Administrative Agent, and Citibank, N.A., JPMorgan Chase Bank, N.A. and Wells Fargo Bank, National Association as Co-Syndication Agents (Exhibit 10.106 to DTE Energy's and DTE Electric Company's Form 10-Q for the quarter ended June 30, 2017)	X	X
	Form of Change-in-Control Agreement, dated as of March 3, 2014, between DTE Energy Company and each of Gerard M. Anderson, JoAnn Chavez, Trevor F. Lauer, David E. Meador, Peter B. Oleksiak and Gerardo Norcia (Exhibit 10.1 to DTE Energy Company's Form 8-K filed on March 3, 2014)	X	
10(v)	Form of Change-In-Control Severance Agreement dated as of July 1, 2014, between DTE Energy Company and each of Lisa A. Muschong, Matthew T. Paul, Mark C. Rolling, David Slater and Mark W. Stiers (Exhibit 10-91 to DTE Energy's Form 10-Q for the quarter ended June 30, 2014)	X	

Exhibit Number	Description	DTE Energy	DTE Electric
10(w)	<u>First Amendment to DTE Energy Company Executive Performance Plan Effective May 7, 2015, dated as of February 3, 2016 (Exhibit 10.97 to DTE Energy's Form 10-K for the year ended December 31, 2015)</u>	X	

Item 16. Form 10-K Summary

None.

DTE Energy Company
Schedule II — Valuation and Qualifying Accounts

	Year Ending December 31,		
	2019	2018	2017
	(In millions)		
Allowance for Doubtful Accounts (shown as deduction from Accounts receivable in DTE Energy's Consolidated Statements of Financial Position)			
Balance at Beginning of Period	\$ 91	\$ 49	\$ 41
Additions:			
Charged to costs and expenses	111	140	80
Charged to other accounts ^(a)	56	55	26
Deductions ^(b)	(167)	(153)	(98)
Balance at End of Period	<u>\$ 91</u>	<u>\$ 91</u>	<u>\$ 49</u>

(a) Collection of accounts previously written off.

(b) Uncollectible accounts written off.

DTE Electric Company
Schedule II — Valuation and Qualifying Accounts

	Year Ending December 31,		
	2019	2018	2017
	(In millions)		
Allowance for Doubtful Accounts (shown as deduction from Accounts receivable in DTE Electric's Consolidated Statements of Financial Position)			
Balance at Beginning of Period	\$ 53	\$ 31	\$ 25
Additions:			
Charged to costs and expenses	65	85	55
Charged to other accounts ^(a)	36	36	14
Deductions ^(b)	(108)	(99)	(63)
Balance at End of Period	<u>\$ 46</u>	<u>\$ 53</u>	<u>\$ 31</u>

(a) Collection of accounts previously written off.

(b) Uncollectible accounts written off.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, DTE Energy Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DTE ENERGY COMPANY
(Registrant)

By:

/S/ GERARDO NORCIA

Gerardo Norcia
President and
Chief Executive Officer

Date: February 5, 2020

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of DTE Energy Company and in the capacities and on the date indicated.

By: /S/ GERARDO NORCIA
Gerardo Norcia
President,
Chief Executive Officer, and Director
(Principal Executive Officer)

By: /S/ PETER B. OLEKSIK
Peter B. Oleksiak
Senior Vice President and
Chief Financial Officer
(Principal Financial Officer)

By: /S/ MARK C. ROLLING
Mark C. Rolling
Vice President, Controller, and Chief Accounting Officer
(Principal Accounting Officer)

By: /S/ RUTH G. SHAW
Ruth G. Shaw, Director

By: /S/ GERARD M. ANDERSON
Gerard M. Anderson
Executive Chairman, and Director

By: /S/ ROBERT C. SKAGGS, JR.
Robert C. Skaggs, Jr., Director

By: /S/ DAVID A. BRANDON
David A. Brandon, Director

By: /S/ DAVID A. THOMAS
David A. Thomas, Director

By: /S/ W. FRANK FOUNTAIN, JR.
W. Frank Fountain, Jr., Director

By: /S/ GARY TORGOW
Gary Torgow, Director

By: /S/ CHARLES G. MCCLURE JR.
Charles G. McClure Jr., Director

By: /S/ JAMES H. VANDENBERGHE
James H. Vandenberghe, Director

By: /S/ GAIL J. MCGOVERN
Gail J. McGovern, Director

By: /S/ VALERIE M. WILLIAMS
Valerie M. Williams, Director

By: /S/ MARK A. MURRAY
Mark A. Murray, Director

Date: February 5, 2020

DTE ENERGY COMPANY
AND
THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,
TRUSTEE

SUPPLEMENTAL INDENTURE
DATED AS OF NOVEMBER 1, 2019

SUPPLEMENTING THE AMENDED AND RESTATED INDENTURE
DATED AS OF APRIL 9, 2001

PROVIDING FOR

2019 SERIES G 2.25% SENIOR NOTES DUE 2022

AND

2019 SERIES H 2.95% SENIOR NOTES DUE 2030

SUPPLEMENTAL INDENTURE, dated as of the 1st day of November, 2019, between DTE ENERGY COMPANY, a corporation organized and existing under the laws of the State of Michigan (the “Company”), and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “Trustee”);

WHEREAS, the Company has heretofore executed and delivered to the Trustee an Amended and Restated Indenture, dated as of April 9, 2001 (the “Original Indenture”), as amended, supplemented or modified (as so amended, supplemented or modified, the “Indenture”) providing for the issuance by the Company from time to time of its debt securities; and

WHEREAS, the Company now desires to provide for the issuance of two series of its unsecured, senior debt securities pursuant to the Original Indenture; and

WHEREAS, the Company, in the exercise of the power and authority conferred upon and reserved to it under the provisions of the Original Indenture, including Section 901 thereof, and pursuant to appropriate resolutions of the Board of Directors, has duly determined to make, execute and deliver to the Trustee this Supplemental Indenture to the Original Indenture as permitted by Section 201 and Section 301 of the Original Indenture in order to establish the forms or terms of, and to provide for the creation and issue of, two series of its debt securities under the Original Indenture, the first of which shall be known as the “2019 Series G 2.25% Senior Notes due 2022” and the second of which shall be known as the “2019 Series H 2.95% Senior Notes due 2030”; and

WHEREAS, all things necessary to make such debt securities, when executed by the Company and authenticated and delivered by the Trustee or any Authenticating Agent and issued upon the terms and subject to the conditions hereinafter and in the Original Indenture set forth against payment therefor, the valid, binding and legal obligations of the Company and to make this Supplemental Indenture a valid, binding and legal agreement of the Company, have been done;

NOW, THEREFORE, THIS SUPPLEMENTAL INDENTURE WITNESSETH that, in order to establish the terms of two series of debt securities, and for and in consideration of the premises and of the covenants contained in the Original Indenture and in this Supplemental Indenture and for other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, it is mutually covenanted and agreed as follows:

article 1

DEFINITIONS AND OTHER
PROVISIONS OF GENERAL APPLICATION

SECTION 101. Definitions. Each capitalized term that is used herein and is defined in the Original Indenture shall have the meaning specified in the Original Indenture unless such term is otherwise defined herein. The following terms shall have the meanings set forth below:

“Business Day” means any day other than a Saturday or Sunday or a day on which commercial banks in the state of New York or the state of Michigan are required or authorized by law or executive order to be closed.

“Transaction” means the transaction contemplated by the Transaction Agreement.

“Transaction Agreement” means the Membership Interest Purchase Agreement, dated October 17, 2019, by and between M5 Louisiana Holdings, LLC and DTE Pipeline Company.

SECTION 102. Section References. Each reference to a particular section set forth in this Supplemental Indenture shall, unless the context otherwise requires, refer to this Supplemental Indenture.

ARTICLE 2

TITLE AND TERMS OF THE 2019 SERIES G 2.25% SENIOR NOTES DUE 2022

SECTION 201. Title of the Series G Notes; Stated Maturity. This Supplemental Indenture hereby establishes a series of Securities, which shall be known as the Company's “2019 Series G 2.25% Senior Notes due 2022” (the “Series G Notes”). The Stated Maturity on which the principal of the Series G Notes shall be due and payable will be November 1, 2022.

SECTION 202. Rank. The Series G Notes shall rank equally with all other unsecured and unsubordinated indebtedness of the Company from time to time outstanding.

SECTION 203. Variations from the Original Indenture. Section 1009 of the Original Indenture shall be applicable to the Series G Notes. Section 403(2) and Section 403(3) shall be applicable to the Series G Notes; the Company's obligations under Section 1009, without limitation, shall be subject to defeasance in accordance with Section 403(3).

SECTION 204. Amount and Denominations; DTC. (a) The aggregate principal amount of the Series G Notes that may be issued under this Supplemental Indenture is limited initially to \$500,000,000 (except as provided in Section 301(2) of the Original Indenture); provided that the Company may, without the consent of the Holders of the Outstanding Series G Notes, “reopen” the Series G Notes so as to increase the aggregate principal amount of the Series G Notes Outstanding in compliance with the procedures set forth in the Original Indenture, including Section 301 and Section 303 thereof, so long as any such additional Series G Notes have the same tenor and terms (including, without limitation, rights to receive accrued and unpaid interest) as the Series G Notes then Outstanding. No additional Series G Notes may be issued if an Event of Default has occurred. The Series G Notes shall be issuable only in fully registered form and, as permitted by Section 301 and Section 302 of the Original Indenture, in denominations of \$2,000 and integral multiples of \$1,000 in excess thereof. The Series G Notes will initially be issued in global form (the “Global Series G Notes”) under a book-entry system, registered in the name of The Depository Trust Company, as depository (“DTC”), or its nominee, which is hereby designated as “Depository” under the Indenture.

(a) Further to Section 305 of the Original Indenture, any Global Series G Note shall be exchangeable for Series G Notes registered in the name of, and a transfer of a Global Series G Note may be registered to, any Person other than the Depository for such Series G Note or its nominee only if (i) such Depository notifies the Company that it is unwilling or unable to continue as

Depository for such Global Series G Note or if at any time such Depository ceases to be a clearing agency registered under the Exchange Act, and, in either such case, the Company does not appoint a successor Depository within 90 days thereafter, (ii) the Company executes and delivers to the Trustee a Company Order that such Global Series G Note shall be so exchangeable and the transfer thereof so registrable or (iii) there shall have occurred and be continuing an Event of Default or an event which, with the giving of notice or lapse of time, or both, would constitute an Event of Default with respect to the Series G Notes. Upon the occurrence in respect of a Global Series G Note of any or more of the conditions specified in clause (i), (ii) or (iii) of the preceding sentence, such Global Series G Note may be exchanged for Series G Notes registered in the name of, and the transfer of such Global Series G Note may be registered to, such Persons (including Persons other than the Depository and its nominees) as such Depository, in the case of an exchange, and the Company, in the case of a transfer, shall direct.

SECTION 205. Terms of the Series G Notes.

(a) The Series G Notes shall bear interest at the rate of 2.25% per annum on the principal amount thereof from November 5, 2019, or from the most recent Interest Payment Date to which interest has been paid or duly provided for, until the principal of the Series G Notes becomes due and payable, and on any overdue principal and premium and (to the extent that payment of such interest is enforceable under applicable law) on any overdue installment of interest at the same rate per annum during such overdue period. Interest on the Series G Notes will be payable semiannually in arrears on May 1 and November 1 of each year (each such date, an “Interest Payment Date”), commencing May 1, 2020. The amount of interest payable for any period shall be computed on the basis of twelve 30-day months and a 360-day year.

(b) In the event that any Interest Payment Date, redemption date or other date of Maturity of the Series G Notes is not a Business Day, then payment of the amount payable on such date will be made on the next succeeding day which is a Business Day (and without any interest or other payment in respect of any such delay), in each case with the same force and effect as if made on such date. The interest installment so payable, and punctually paid or duly provided for, on any Interest Payment Date with respect to any Series G Note will, as provided in the Original Indenture, be paid to the person in whose name the Series G Note (or one or more Predecessor Securities, as defined in said Indenture) is registered at the close of business on the relevant record date for such interest installment, which shall be the fifteenth calendar day (whether or not a Business Day) prior to the relevant Interest Payment Date (the “Regular Record Date”). Any such interest installment not punctually paid or duly provided for shall forthwith cease to be payable to the registered Holders on such Regular Record Date, and may either be paid to the person in whose name the Series G Note (or one or more Predecessor Securities) is registered at the close of business on a Special Record Date to be fixed by the Trustee for the payment of such defaulted interest, notice whereof shall be given to the registered Holders of the Series G Notes not less than ten days prior to such Special Record Date, or may be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Series G Notes may be listed, and upon such notice as may be required by such exchange, all as more fully provided in the Original Indenture. The principal of, and premium, if any, and the interest on the Series G Notes shall be payable at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, City

of New York, in any coin or currency of the United States of America which at the time of payment is legal tender for payment of public and private debts; provided, however, that payment of interest may be made at the option of the Company by check mailed to the registered Holder at the close of business on the Regular Record Date at such address as shall appear in the Security Register.

(c) The Series G Notes are not subject to repayment at the option of the Holders thereof and are not subject to any sinking fund. As provided in the form of Series G Note attached hereto as Exhibit A, the Series G Notes are subject to optional redemption, as a whole or in part, and special optional redemption and special mandatory redemption, as a whole, by the Company prior to Stated Maturity of the principal thereof on the terms set forth therein. Except as modified in the form of the Series G Note, redemption shall be effected in accordance with Article Eleven of the Original Indenture.

(a) The Series G Notes shall have such other terms and provisions as are set forth in the form of Series G Note attached hereto as Exhibit A (which is incorporated by reference in and made a part of this Supplemental Indenture as if set forth in full at this place).

SECTION 206. Form of Series G Notes. Attached hereto as Exhibit A is the form of the Series G Notes.

ARTICLE 3

TITLE AND TERMS OF THE 2019 SERIES H 2.95% SENIOR NOTES DUE 2030

SECTION 301. Title of the Series H Notes; Stated Maturity. This Supplemental Indenture hereby establishes a series of Securities, which shall be known as the Company's "2019 Series H 2.95% Senior Notes due 2030" (the "Series H Notes" and together with the Series G Notes, the "Notes"). The Stated Maturity on which the principal of the Series H Notes shall be due and payable will be March 1, 2030.

SECTION 302. Rank. The Series H Notes shall rank equally with all other unsecured and unsubordinated indebtedness of the Company from time to time outstanding.

SECTION 303. Variations from the Original Indenture. Section 1009 of the Original Indenture shall be applicable to the Series H Notes. Section 403(2) and Section 403(3) shall be applicable to the Series H Notes; the Company's obligations under Section 1009, without limitation, shall be subject to defeasance in accordance with Section 403(3).

SECTION 304. Amount and Denominations; DTC. (a) The aggregate principal amount of the Series H Notes that may be issued under this Supplemental Indenture is limited initially to \$300,000,000 (except as provided in Section 301(2) of the Original Indenture); provided that the Company may, without the consent of the Holders of the Outstanding Series H Notes, "reopen" the Series H Notes so as to increase the aggregate principal amount of the Series H Notes Outstanding in compliance with the procedures set forth in the Original Indenture, including Section 301 and Section 303 thereof, so long as any such additional Series H Notes have the same tenor and terms (including, without limitation, rights to receive accrued and unpaid interest) as the Series

H Notes then Outstanding. No additional Series H Notes may be issued if an Event of Default has occurred. The Series H Notes shall be issuable only in fully registered form and, as permitted by Section 301 and Section 302 of the Original Indenture, in denominations of \$2,000 and integral multiples of \$1,000 in excess thereof. The Series H Notes will initially be issued in global form (the “Global Series H Notes”) under a book-entry system, registered in the name of DTC, as depository, or its nominee, which is hereby designated as “Depository” under the Indenture.

(a) Further to Section 305 of the Original Indenture, any Global Series H Note shall be exchangeable for Series H Notes registered in the name of, and a transfer of a Global Series H Note may be registered to, any Person other than the Depository for such Series H Note or its nominee only if (i) such Depository notifies the Company that it is unwilling or unable to continue as Depository for such Global Series H Note or if at any time such Depository ceases to be a clearing agency registered under the Exchange Act, and, in either such case, the Company does not appoint a successor Depository within 90 days thereafter, (ii) the Company executes and delivers to the Trustee a Company Order that such Global Series H Note shall be so exchangeable and the transfer thereof so registrable or (iii) there shall have occurred and be continuing an Event of Default or an event which, with the giving of notice or lapse of time, or both, would constitute an Event of Default with respect to the Series H Notes. Upon the occurrence in respect of a Global Series H Note of any or more of the conditions specified in clause (i), (ii) or (iii) of the preceding sentence, such Global Series H Note may be exchanged for Series H Notes registered in the name of, and the transfer of such Global Series H Note may be registered to, such Persons (including Persons other than the Depository and its nominees) as such Depository, in the case of an exchange, and the Company, in the case of a transfer, shall direct.

SECTION 305. Terms of the Series H Notes.

(a) The Series H Notes shall bear interest at the rate of 2.95% per annum on the principal amount thereof from November 5, 2019, or from the most recent Interest Payment Date to which interest has been paid or duly provided for, until the principal of the Series H Notes becomes due and payable, and on any overdue principal and premium and (to the extent that payment of such interest is enforceable under applicable law) on any overdue installment of interest at the same rate per annum during such overdue period. Interest on the Series H Notes will be payable semiannually in arrears on March 1 and September 1 of each year (each such date, an “Interest Payment Date”), commencing March 1, 2020. The amount of interest payable for any period shall be computed on the basis of twelve 30-day months and a 360-day year.

(b) In the event that any Interest Payment Date, redemption date or other date of Maturity of the Series H Notes is not a Business Day, then payment of the amount payable on such date will be made on the next succeeding day which is a Business Day (and without any interest or other payment in respect of any such delay), in each case with the same force and effect as if made on such date. The interest installment so payable, and punctually paid or duly provided for, on any Interest Payment Date with respect to any Series H Note will, as provided in the Original Indenture, be paid to the person in whose name the Series H Note (or one or more Predecessor Securities, as defined in said Indenture) is registered at the close of business on the relevant record date for such interest installment, which shall be the fifteenth calendar day (whether or not a Business Day) prior

to the relevant Interest Payment Date (the “Regular Record Date”). Any such interest installment not punctually paid or duly provided for shall forthwith cease to be payable to the registered Holders on such Regular Record Date, and may either be paid to the person in whose name the Series H Note (or one or more Predecessor Securities) is registered at the close of business on a Special Record Date to be fixed by the Trustee for the payment of such defaulted interest, notice whereof shall be given to the registered Holders of the Series H Notes not less than ten days prior to such Special Record Date, or may be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Series H Notes may be listed, and upon such notice as may be required by such exchange, all as more fully provided in the Original Indenture. The principal of, and premium, if any, and the interest on the Series H Notes shall be payable at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, City of New York, in any coin or currency of the United States of America which at the time of payment is legal tender for payment of public and private debts; provided, however, that payment of interest may be made at the option of the Company by check mailed to the registered Holder at the close of business on the Regular Record Date at such address as shall appear in the Security Register.

(c) The Series H Notes are not subject to repayment at the option of the Holders thereof and are not subject to any sinking fund. As provided in the form of Series H Note attached hereto as Exhibit B, the Series H Notes are subject to optional redemption, as a whole or in part, and special optional redemption and special mandatory redemption, as a whole, by the Company prior to Stated Maturity of the principal thereof on the terms set forth therein. Except as modified in the form of the Series H Note, redemption shall be effected in accordance with Article Eleven of the Original Indenture.

(d) The Series H Notes shall have such other terms and provisions as are set forth in the form of Series H Note attached hereto as Exhibit B (which is incorporated by reference in and made a part of this Supplemental Indenture as if set forth in full at this place).

SECTION 306. Form of Series H Notes. Attached hereto as Exhibit B is the form of the Series H Notes.

ARTICLE 4

MISCELLANEOUS PROVISIONS

The Trustee makes no undertaking or representations in respect of, and shall not be responsible in any manner whatsoever for and in respect of, the validity or sufficiency of this Supplemental Indenture or the proper authorization or the due execution hereof by the Company or for or in respect of the recitals and statements contained herein, all of which recitals and statements are made solely by the Company.

Except as expressly amended hereby, the Original Indenture shall continue in full force and effect in accordance with the provisions thereof and the Original Indenture is in all respects hereby ratified and confirmed. This Supplemental Indenture and all its provisions shall be deemed a part of the Original Indenture in the manner and to the extent herein and therein provided.

This Supplemental Indenture and the Series G and Series H Notes shall be governed by, and construed in accordance with, the laws of the State of New York.

This Supplemental Indenture may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed, all as of the day and year first above written.

DTE ENERGY COMPANY

By: /s/Jeffrey A. Jewell

Name: Jeffrey A. Jewell

Title: Vice President, Treasurer
and Chief Risk Officer

ATTEST:

By: /s/Lisa A. Muschong

Name: Lisa A. Muschong

Title: Vice President, Corporate Secretary
and Chief of Staff

[Signature Page to Supplemental Indenture]

By: /s/Lawrence M. Kusch

Name: Lawrence M. Kusch

Title: Vice President

[Signature Page to Supplemental Indenture]

FORM OF SERIES G NOTE

THIS NOTE IS A GLOBAL NOTE WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITARY OR A NOMINEE OF A DEPOSITARY. UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR NOTES IN CERTIFICATED FORM, THIS NOTE MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE DEPOSITARY TRUST COMPANY (“DTC”), TO A NOMINEE OF DTC OR BY DTC OR ANY SUCH NOMINEE TO A SUCCESSOR OF DTC OR A NOMINEE OF SUCH SUCCESSOR. UNLESS THIS NOTE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF DTC TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY NOTE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO., OR IN SUCH OTHER NAME AS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT HEREON IS MADE TO CEDE & CO., OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY A PERSON IS WRONGFUL, INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

CUSIP NO. 233331 BE6

\$ _____

NO. : _____

DTE ENERGY COMPANY
2019 SERIES G 2.25% SENIOR NOTES DUE 2022

DTE ENERGY COMPANY, a corporation duly organized and existing under the laws of the State of Michigan (herein referred to as the “Company”, which term includes any successor Person under the Indenture hereinafter referred to), for value received, hereby promises to pay to CEDE & CO., or registered assigns, the principal sum of \$_____ on November 1, 2022 (“Stated Maturity” with respect to the principal of this Note), unless previously redeemed, and to pay interest at the rate of 2.25% per annum on said principal sum from November 5, 2019, or from the most recent Interest Payment Date to which interest has been paid or duly provided for, until the principal of this Note becomes due and payable, and on any overdue principal and premium and (to the extent that payment of such interest is enforceable under applicable law) on any overdue installment of interest at the same rate per annum during such overdue period. Interest on this Note will be payable semiannually in arrears on May 1 and November 1 of each year (each such date, an “Interest Payment Date”), commencing May 1, 2020. The amount of interest payable for any period shall be computed on the basis of twelve 30-day months and a 360-day year.

In the event that any Interest Payment Date, redemption date or other date of Maturity of the Notes is not a Business Day, then payment of the amount payable on such date will be made on the next succeeding day which is a Business Day (and without any interest or other payment in respect of any such delay), in each case with the same force and effect as if made on such date. A

“Business Day” means any day other than a Saturday or Sunday or a day on which commercial banks in the state of New York or the state of Michigan are required or authorized by law or executive order to be closed. The interest installment so payable, and punctually paid or duly provided for, on any Interest Payment Date with respect to this Note will, as provided in the Indenture, be paid to the person in whose name this Note is registered at the close of business on the relevant record date for such interest installment, which shall be the fifteenth calendar day (whether or not a Business Day) prior to the relevant Interest Payment Date (the “Regular Record Date”). Any such interest installment not punctually paid or duly provided for shall forthwith cease to be payable to the registered Holders on such Regular Record Date, and may either be paid to the person in whose name this Note is registered at the close of business on a Special Record Date to be fixed by the Trustee for the payment of such defaulted interest, notice whereof shall be given to the registered Holders of the Notes not less than ten days prior to such Special Record Date, or may be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Notes may be listed, and upon such notice as may be required by such exchange, all as more fully provided in the Indenture. The principal of, and premium, if any, and the interest on the Notes shall be payable at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, City of New York, in any coin or currency of the United States of America which at the time of payment is legal tender for payment of public and private debts; provided, however, that payment of interest may be made at the option of the Company by check mailed to the registered Holder at the close of business on the Regular Record Date at such address as shall appear in the Security Register. Notwithstanding anything else contained herein, if this Note is a Global Note and is held in book-entry form through the facilities of the Depository, payments on this Note will be made to the Depository or its nominee in accordance with arrangements then in effect between the Trustee and the Depository.

This Note is one of a duly authorized series of Securities of the Company, designated as the “2019 Series G 2.25% Senior Notes due 2022” (the “Notes”), initially limited to an aggregate principal amount of \$500,000,000 (except for Notes authenticated and delivered upon transfer of, or in exchange for, or in lieu of other Notes, and except as further provided in the Indenture), all issued or to be issued under and pursuant to an Amended and Restated Indenture, dated as of April 9, 2001, as supplemented through and including the Supplemental Indenture dated as of November 1, 2019 (together, as amended, supplemented or modified, the “Indenture”), duly executed and delivered between the Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (herein referred to as the “Trustee”, which term includes any successor trustee under the Indenture), to which Indenture reference is hereby made for a description of the respective rights, limitations of rights, obligations, duties and immunities thereunder of the Trustee, the Company and the registered Holders of the Notes and of the terms upon which the Notes are, and are to be, authenticated and delivered.

This Note is not subject to repayment at the option of the Holder hereof. This Note is not subject to any sinking fund.

This Note will be redeemable at the option of the Company, in whole at any time or in part from time to time (any such date of optional redemption, an “Optional Redemption Date,” which shall be a “Redemption Date” for purposes of the Indenture) at the redemption prices set forth below.

Unless stated otherwise in this Note, the optional redemption price (which shall be a “Redemption Price” for purposes of the Indenture) will be equal to the greater of (i) 100% of the principal amount of this Note to be redeemed and (ii) the sum of the present values of the principal amount of this Note to be redeemed and the remaining scheduled payments of interest on the principal amount of this Note to be redeemed (exclusive of interest accrued to the related Optional Redemption Date) until Stated Maturity, in each case discounted from their respective scheduled payment dates to such Optional Redemption Date on a semiannual basis (assuming a 360-day year consisting of 30-day months) at the Adjusted Treasury Rate (as defined below) plus 10 basis points, as determined by the Quotation Agent (as defined below), plus in either case, accrued interest thereon to the date of redemption.

Upon the first to occur of either (i) July 1, 2020, if the Transaction (as defined in the Supplemental Indenture) is not consummated on or prior to such date, or (ii) the date on which the Transaction Agreement (as defined in the Supplemental Indenture) is terminated (each, a “Special Mandatory Redemption Trigger”), the Company shall redeem this Note, in whole, at a Redemption Price equal to 101% of the aggregate principal amount of this Note, plus accrued and unpaid interest thereon to but not including the date of such redemption.

Within five Business Days after the occurrence of the Special Mandatory Redemption Trigger, the Company shall provide notice of the Special Mandatory Redemption to each Holder of the Notes and to the Trustee, stating, among other matters prescribed in the Indenture, that a Special Mandatory Redemption Trigger has occurred and that all of the Notes of this series shall be redeemed on the Redemption Date set forth in such notice (which shall be no earlier than three Business Days and no later than 30 days from the date such notice is given). This notice provision shall apply in lieu of the notice provision in Section 1102 of the Indenture. Upon the occurrence of the closing of the Transaction, the foregoing provisions regarding the Special Mandatory Redemption will cease to apply.

At any time prior to July 1, 2020, the Notes of this series shall be redeemable, in whole, at a redemption price equal to 101% of the aggregate principal amount of the Notes, plus accrued and unpaid interest thereon to but not including the date of redemption, if, in the Company’s judgment, the Transaction will not be consummated on or prior to July 1, 2020 (“Special Optional Redemption”). If the Company exercises the Special Optional Redemption right provided herein, the Company shall provide notice to each Holder of the Notes and to the Trustee, stating, among other matters prescribed in the Indenture, that it is exercising this Special Optional Redemption right and that all of the Notes will be redeemed on the Redemption Date set forth in such notice (which will be no earlier than three Business Days and no later than 30 days from the date such notice is given). This notice provision shall apply in lieu of the notice provision in Section 1102 of the Indenture. Upon the occurrence of the closing of the Transaction, the foregoing provisions regarding the Special Optional Redemption will cease to apply.

The election of the Company to redeem this Note shall be evidenced by a Board Resolution. The Company shall furnish the Trustee with an Officer’s Certificate evidencing compliance with the conditions specified above.

Notwithstanding the foregoing, installments of interest on this Note that are due and payable on Interest Payment Dates falling on or prior to a Redemption Date will be payable on the Interest Payment Date to the registered Holders as of the close of business on the relevant Record Date.

“Adjusted Treasury Rate” means, with respect to any Optional Redemption Date, the rate per annum equal to the semiannual equivalent yield to maturity of the Comparable Treasury Issue, calculated on the third Business Day preceding such Optional Redemption Date, using a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such Optional Redemption Date.

“Comparable Treasury Issue” means the United States Treasury security selected by the Quotation Agent as having a maturity comparable to the remaining term of this Note that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity with the remaining term of this Note.

“Comparable Treasury Price” means, with respect to any Optional Redemption Date, (i) the average of the Reference Treasury Dealer Quotations for such Optional Redemption Date, after excluding the highest and lowest such Reference Treasury Dealer Quotations, or (ii) if the Quotation Agent obtains fewer than three such Reference Treasury Dealer Quotations, the average of all such quotations, or (iii) if only one Reference Treasury Dealer Quotation is received, such quotation.

“Quotation Agent” means one of the Reference Treasury Dealers appointed by the Company.

“Reference Treasury Dealer” means: (i) each of Barclays Capital Inc., Citigroup Global Markets Inc. and Scotia Capital (USA) Inc. (or one of their respective affiliates that is a primary U.S. government securities dealer in the United States (a “Primary Treasury Dealer”)), or their respective successors; provided, however, that if any of the foregoing shall cease to be a Primary Treasury Dealer, the Company shall substitute therefor another Primary Treasury Dealer; and (ii) any other Primary Treasury Dealer(s) selected by the Company.

“Reference Treasury Dealer Quotation” means, with respect to each Reference Treasury Dealer and any Optional Redemption Date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Quotation Agent by such Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding such Optional Redemption Date.

Notice of any optional redemption will be mailed at least 30 days but not more than 60 days before the Optional Redemption Date to the Holder hereof at its registered address.

If money sufficient to pay the applicable Redemption Price with respect to the principal amount of and accrued interest on the principal amount of this Note to be redeemed on the applicable Redemption Date is deposited with the Trustee or Paying Agent on or before the related Redemption Date and certain other conditions are satisfied, then on or after such Redemption Date, interest will cease to accrue on the principal amount of this Note called for redemption. If the Notes are only

partially redeemed by the Company, the Trustee shall select which Notes are to be redeemed by lot or in a manner it deems fair and appropriate in accordance with the terms of the Indenture.

In the event of redemption of this Note in part only, a new Note or Notes for the unredeemed portion hereof will be issued in the name of the registered Holder hereof upon the cancellation hereof.

In case an Event of Default, as defined in the Indenture, shall have occurred and be continuing, the principal hereof may be declared, and upon such declaration shall become, due and payable, in the manner, with the effect and subject to the conditions provided in the Indenture.

The Indenture contains provisions for defeasance at any time of the entire indebtedness of this Note upon compliance by the Company with certain conditions set forth therein.

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the rights of the Holders of the Notes under the Indenture at any time by the Company and the Trustee with the consent of the Holders of a majority of the aggregate principal amount of all Notes issued under the Indenture at the time outstanding and affected thereby; provided, however, that no such amendment shall without the consent of the Holder of each Note so affected, among other things (i) change the stated maturity of the principal of, or any installment of principal of or interest on any Notes, or reduce the principal amount thereof, or reduce the rate of interest thereon, or reduce any premium payable upon the redemption thereof or (ii) reduce the percentage of Notes, the Holders of which are required to consent to any amendment or waiver or for certain other matters as set forth in the Indenture. The Indenture also contains provisions permitting (i) the registered Holders of 66 2/3% in aggregate principal amount of the Securities at the time outstanding affected thereby, on behalf of the registered Holders of the Securities, to waive compliance by the Company with certain provisions of the Indenture and (ii) the registered Holders of not less than a majority in aggregate principal amount of the Securities at the time outstanding affected thereby, on behalf of the registered Holders of the Securities, to waive certain past defaults under the Indenture and their consequences. Any such consent or waiver by the registered Holder of this Note (unless revoked as provided in the Indenture) shall be conclusive and binding upon such registered Holder and upon all future registered Holders and owners of this Note and of any Note issued in exchange hereof or in place hereof (whether by registration of transfer or otherwise), irrespective of whether or not any notation of such consent or waiver is made upon this Note.

No reference herein to the Indenture and no provision of this Note or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of and premium, if any, and interest on this Note at the time and place and at the rate and in the coin or currency herein prescribed.

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Note is registrable in the Security Register of the Company, upon surrender of this Note for registration of transfer at the office or agency of the Company in any place where the principal of and any interest on this Note are payable or at such other offices or agencies as the Company may designate, duly endorsed by or accompanied by a written instrument or instruments of transfer in

form satisfactory to the Company and the Security Registrar or any transfer agent duly executed by the registered Holder hereof or his or her attorney duly authorized in writing, and thereupon one or more new Notes of this series and of like tenor, of authorized denominations and for the same aggregate principal amount will be issued to the designated transferee or transferees. No service charge will be made for any such transfer, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in relation thereto.

Prior to due presentment for registration of transfer of this Note, the Company, the Trustee, any paying agent and any Security Registrar may deem and treat the registered Holder hereof as the absolute owner hereof (whether or not this Note shall be overdue and notwithstanding any notice of ownership or writing hereon made by anyone other than the Security Registrar) for the purpose of receiving payment of or on account of the principal hereof and interest due hereon and for all other purposes, and neither the Company nor the Trustee nor any paying agent nor any Security Registrar shall be affected by any notice to the contrary.

This Global Note is exchangeable for Notes in definitive form only under certain limited circumstances set forth in the Indenture. The Notes are issuable only in registered form without coupons in denominations of \$2,000 and any integral multiple of \$1,000 in excess thereof. As provided in the Indenture and subject to certain limitations therein set forth, the Notes are exchangeable for a like aggregate principal amount of the Notes of a different authorized denomination, as requested by the registered Holder surrendering the same.

As set forth in, and subject to the provisions of, the Indenture, no registered owner of any Note will have any right to institute any proceeding with respect to the Indenture or for any remedy thereunder, unless (i) such registered owner shall have previously given to the Trustee written notice of a continuing Event of Default with respect to the Notes, (ii) the registered owners of not less than 25% in principal amount of the outstanding Notes shall have made written request, and offered reasonable indemnity, to the Trustee to institute such proceeding as trustee, (iii) the Trustee shall have failed to institute such proceeding within 60 days and (iv) the Trustee shall not have received from the registered owners of a majority in principal amount of the outstanding Notes a direction inconsistent with such request within such 60-day period; provided, however, that such limitations do not apply to a suit instituted by the registered owner hereof for the enforcement of payment of the principal of or premium, if any, or any interest on this Note on or after the respective due dates expressed herein.

Unless the Certificate of Authentication hereon has been executed by the Trustee or a duly appointed Authentication Agent referred to herein, this Note shall not be entitled to any benefit under the Indenture or be valid or obligatory for any purpose.

The Indenture and this Note shall be governed by and construed in accordance with the laws of the State of New York.

All terms used in this Note which are defined in the Indenture shall have the meanings assigned to them in the Indenture.

IN WITNESS WHEREOF, the Company has caused this Instrument to be duly executed.

DTE ENERGY COMPANY

By: _____
Name:
Title:

Date: November 5, 2019

Attest:

By: _____
Name:
Title:

CERTIFICATE OF AUTHENTICATION

This is one of the Notes described in the within mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.
as Trustee

By _____
Authorized Signatory

Date: November 5, 2019

In the event that any Interest Payment Date, redemption date or other date of Maturity of the Notes is not a Business Day, then payment of the amount payable on such date will be made on the next succeeding day which is a Business Day (and without any interest or other payment in respect of any such delay), in each case with the same force and effect as if made on such date. A “Business Day” means any day other than a Saturday or Sunday or a day on which commercial banks in the state of New York or the state of Michigan are required or authorized by law or executive order to be closed. The interest installment so payable, and punctually paid or duly provided for, on any Interest Payment Date with respect to this Note will, as provided in the Indenture, be paid to the person in whose name this Note is registered at the close of business on the relevant record date for such interest installment, which shall be the fifteenth calendar day (whether or not a Business Day) prior to the relevant Interest Payment Date (the “Regular Record Date”). Any such interest installment not punctually paid or duly provided for shall forthwith cease to be payable to the registered Holders on such Regular Record Date, and may either be paid to the person in whose name this Note is registered at the close of business on a Special Record Date to be fixed by the Trustee for the payment of such defaulted interest, notice whereof shall be given to the registered Holders of the Notes not less than ten days prior to such Special Record Date, or may be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Notes may be listed, and upon such notice as may be required by such exchange, all as more fully provided in the Indenture. The principal of, and premium, if any, and the interest on the Notes shall be payable at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, City of New York, in any coin or currency of the United States of America which at the time of payment is legal tender for payment of public and private debts; provided, however, that payment of interest may be made at the option of the Company by check mailed to the registered Holder at the close of business on the Regular Record Date at such address as shall appear in the Security Register. Notwithstanding anything else contained herein, if this Note is a Global Note and is held in book-entry form through the facilities of the Depository, payments on this Note will be made to the Depository or its nominee in accordance with arrangements then in effect between the Trustee and the Depository.

This Note is one of a duly authorized series of Securities of the Company, designated as the “2019 Series H 2.95% Senior Notes due 2030” (the “Notes”), initially limited to an aggregate principal amount of \$300,000,000 (except for Notes authenticated and delivered upon transfer of, or in exchange for, or in lieu of other Notes, and except as further provided in the Indenture), all issued or to be issued under and pursuant to an Amended and Restated Indenture, dated as of April 9, 2001, as supplemented through and including the Supplemental Indenture (the “Supplemental Indenture”) dated as of November 1, 2019 (together, as amended, supplemented or modified, the “Indenture”), duly executed and delivered between the Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (herein referred to as the “Trustee”, which term includes any successor trustee under the Indenture), to which Indenture reference is hereby made for a description of the respective rights, limitations of rights, obligations, duties and immunities thereunder of the Trustee, the Company and the registered Holders of the Notes and of the terms upon which the Notes are, and are to be, authenticated and delivered.

This Note is not subject to repayment at the option of the Holder hereof. This Note is not subject to any sinking fund.

This Note will be redeemable at the option of the Company, in whole at any time or in part from time to time (any such date of optional redemption, an “Optional Redemption Date,” which shall be a “Redemption Date” for purposes of the Indenture) at the redemption prices set forth below. Unless stated otherwise in this Note, at any time prior to the Par Call Date (as defined below) the optional redemption price (which shall be a “Redemption Price” for purposes of the Indenture) will be equal to the greater of (i) 100% of the principal amount of this Note to be redeemed and (ii) the sum of the present values of the principal amount of this Note to be redeemed and the remaining scheduled payments of interest on the principal amount of this Note to be redeemed that would be due if this Note matured on the Par Call Date (exclusive of interest accrued to the related Optional Redemption Date), in each case discounted from their respective scheduled payment dates to such Optional Redemption Date on a semiannual basis (assuming a 360-day year consisting of 30-day months) at the Adjusted Treasury Rate (as defined below) plus 20 basis points, as determined by the Quotation Agent (as defined below), plus in either case, accrued interest thereon to the date of redemption. At any time on or after the Par Call Date, the optional redemption price will be equal to 100% of the principal amount of this bond to be redeemed plus accrued and unpaid interest thereon to the redemption date.

Upon the first to occur of either (i) July 1, 2020, if the Transaction (as defined in the Supplemental Indenture) is not consummated on or prior to such date, or (ii) the date on which the Transaction Agreement (as defined in the Supplemental Indenture) is terminated (each, a “Special Mandatory Redemption Trigger”), the Company shall redeem this Note, in whole, at a Redemption Price equal to 101% of the aggregate principal amount of this Note, plus accrued and unpaid interest thereon to but not including the date of such redemption.

Within five Business Days after the occurrence of the Special Mandatory Redemption Trigger, the Company shall provide notice of the Special Mandatory Redemption to each Holder of the Notes and to the Trustee, stating, among other matters prescribed in the Indenture, that a Special Mandatory Redemption Trigger has occurred and that all of the Notes of this series shall be redeemed on the Redemption Date set forth in such notice (which shall be no earlier than three Business Days and no later than 30 days from the date such notice is given). This notice provision shall apply in lieu of the notice provision in Section 1102 of the Indenture. Upon

the occurrence of the closing of the Transaction, the foregoing provisions regarding the Special Mandatory Redemption will cease to apply.

At any time prior to July 1, 2020, the Notes of this series shall be redeemable, in whole, at a redemption price equal to 101% of the aggregate principal amount of the Notes, plus accrued and unpaid interest thereon to but not including the date of redemption, if, in the Company's judgment, the Transaction will not be consummated on or prior to July 1, 2020 ("Special Optional Redemption"). If the Company exercises the Special Optional Redemption right provided herein, the Company shall provide notice to each Holder of the Notes and to the Trustee, stating, among other matters prescribed in the Indenture, that it is exercising this Special Optional Redemption right and that all of the Notes will be redeemed on the Redemption Date set forth in such notice (which will be no earlier than three Business Days and no later than 30 days from the date such notice is given). This notice provision shall apply in lieu of the notice provision in Section 1102 of the Indenture. Upon the occurrence of the closing of the Transaction, the foregoing provisions regarding the Special Optional Redemption will cease to apply.

The election of the Company to redeem this Note shall be evidenced by a Board Resolution. The Company shall furnish the Trustee with an Officer's Certificate evidencing compliance with the conditions specified above.

Notwithstanding the foregoing, installments of interest on this Note that are due and payable on Interest Payment Dates falling on or prior to a Redemption Date will be payable on the Interest Payment Date to the registered Holders as of the close of business on the relevant Record Date.

"Adjusted Treasury Rate" means, with respect to any Optional Redemption Date, the rate per annum equal to the semiannual equivalent yield to maturity of the Comparable Treasury Issue, calculated on the third Business Day preceding such Optional Redemption Date, using a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such Optional Redemption Date.

"Comparable Treasury Issue" means the United States Treasury security selected by the Quotation Agent as having a maturity comparable to the remaining term of this Note that would be utilized (assuming for this purpose that the stated maturity of this Note is the Par Call Date) at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity with the remaining term of this Note.

"Comparable Treasury Price" means, with respect to any Optional Redemption Date, (i) the average of the Reference Treasury Dealer Quotations for such Optional Redemption Date, after excluding the highest and lowest such Reference Treasury Dealer Quotations, or (ii) if the Quotation Agent obtains fewer than three such Reference Treasury Dealer Quotations, the average of all such quotations, or (iii) if only one Reference Treasury Dealer Quotation is received, such quotation.

"Par Call Date" means December 1, 2029.

"Quotation Agent" means one of the Reference Treasury Dealers appointed by the Company.

"Reference Treasury Dealer" means: (i) each of Barclays Capital Inc., Citigroup Global Markets Inc. and Scotia Capital (USA) Inc. (or one of their respective affiliates that is a primary U.S. government securities dealer in the United States (a "Primary Treasury Dealer")), or their respective successors; provided, however, that if any of the foregoing shall cease to be a Primary Treasury Dealer, the Company shall substitute therefor another Primary Treasury Dealer; and (ii) any other Primary Treasury Dealer(s) selected by the Company.

"Reference Treasury Dealer Quotation" means, with respect to each Reference Treasury Dealer and any Optional Redemption Date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Quotation Agent by such Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding such Optional Redemption Date.

Notice of any optional redemption will be mailed at least 30 days but not more than 60 days before the Optional Redemption Date to the Holder hereof at its registered address.

If money sufficient to pay the applicable Redemption Price with respect to the principal amount of and accrued interest on the principal amount of this Note to be redeemed on the applicable Redemption Date is deposited with the Trustee or Paying Agent on or before the related Redemption Date and certain other conditions are satisfied, then on or after such Redemption Date, interest will cease to accrue on the principal amount of this Note called for redemption. If the Notes are only partially redeemed by the Company, the Trustee shall select which Notes are to be redeemed by lot or in a manner it deems fair and appropriate in accordance with the terms of the Indenture.

In the event of redemption of this Note in part only, a new Note or Notes for the unredeemed portion hereof will be issued in

the name of the registered Holder hereof upon the cancellation hereof.

In case an Event of Default, as defined in the Indenture, shall have occurred and be continuing, the principal hereof may be declared, and upon such declaration shall become, due and payable, in the manner, with the effect and subject to the conditions provided in the Indenture.

The Indenture contains provisions for defeasance at any time of the entire indebtedness of this Note upon compliance by the Company with certain conditions set forth therein.

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the rights of the Holders of the Notes under the Indenture at any time by the Company and the Trustee with the consent of the Holders of a majority of the aggregate principal amount of all Notes issued under the Indenture at the time outstanding and affected thereby; provided, however, that no such amendment shall without the consent of the Holder of each Note so affected, among other things (i) change the stated maturity of the principal of, or any installment of principal of or interest on any Notes, or reduce the principal amount thereof, or reduce the rate of interest thereon, or reduce any premium payable upon the redemption thereof or (ii) reduce the percentage of Notes, the Holders of which are required to consent to any amendment or waiver or for certain other matters as set forth in the Indenture. The Indenture also contains provisions permitting (i) the registered Holders of 66 2/3% in aggregate principal amount of the Securities at the time outstanding affected thereby, on behalf of the registered Holders of the Securities, to waive compliance by the Company with certain provisions of the Indenture and (ii) the registered Holders of not less than a majority in aggregate principal amount of the Securities at the time outstanding affected thereby, on behalf of the registered Holders of the Securities, to waive certain past defaults under the Indenture and their consequences. Any such consent or waiver by the registered Holder of this Note (unless revoked as provided in the Indenture) shall be conclusive and binding upon such registered Holder and upon all future registered Holders and owners of this Note and of any Note issued in exchange hereof or in place hereof (whether by registration of transfer or otherwise), irrespective of whether or not any notation of such consent or waiver is made upon this Note.

No reference herein to the Indenture and no provision of this Note or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of and premium, if any, and interest on this Note at the time and place and at the rate and in the coin or currency herein prescribed.

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Note is registrable in the Security Register of the Company, upon surrender of this Note for registration of transfer at the office or agency of the Company in any place where the principal of and any interest on this Note are payable or at such other offices or agencies as the Company may designate, duly endorsed by or accompanied by a written instrument or instruments of transfer in form satisfactory to the Company and the Security Registrar or any transfer agent duly executed by the registered Holder hereof or his or her attorney duly authorized in writing, and thereupon one or more new Notes of this series and of like tenor, of authorized denominations and for the same aggregate principal amount will be issued to the designated transferee or transferees. No service charge will be made for any such transfer, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in relation thereto.

Prior to due presentment for registration of transfer of this Note, the Company, the Trustee, any paying agent and any Security Registrar may deem and treat the registered Holder hereof as the absolute owner hereof (whether or not this Note shall be overdue and notwithstanding any notice of ownership or writing hereon made by anyone other than the Security Registrar) for the purpose of receiving payment of or on account of the principal hereof and interest due hereon and for all other purposes, and neither the Company nor the Trustee nor any paying agent nor any Security Registrar shall be affected by any notice to the contrary.

This Global Note is exchangeable for Notes in definitive form only under certain limited circumstances set forth in the Indenture. The Notes are issuable only in registered form without coupons in denominations of \$2,000 and any integral multiple of \$1,000 in excess thereof. As provided in the Indenture and subject to certain limitations therein set forth, the Notes are exchangeable for a like aggregate principal amount of the Notes of a different authorized denomination, as requested by the registered Holder surrendering the same.

As set forth in, and subject to the provisions of, the Indenture, no registered owner of any Note will have any right to institute any proceeding with respect to the Indenture or for any remedy thereunder, unless (i) such registered owner shall have previously given to the Trustee written notice of a continuing Event of Default with respect to the Notes, (ii) the registered owners of not less than 25% in principal amount of the outstanding Notes shall have made written request, and offered reasonable indemnity, to the Trustee to institute such proceeding as trustee, (iii) the Trustee shall have failed to institute such proceeding within 60 days and (iv) the Trustee shall not have received from the registered owners of a majority in principal amount of the outstanding Notes a direction inconsistent with such request within such 60-day period; provided, however, that such limitations do not apply to a suit instituted by the registered owner hereof for the enforcement of payment of the principal of or premium, if any, or any interest on this Note on or

after the respective due dates expressed herein.

Unless the Certificate of Authentication hereon has been executed by the Trustee or a duly appointed Authentication Agent referred to herein, this Note shall not be entitled to any benefit under the Indenture or be valid or obligatory for any purpose.

The Indenture and this Note shall be governed by and construed in accordance with the laws of the State of New York.

All terms used in this Note which are defined in the Indenture shall have the meanings assigned to them in the Indenture.

IN WITNESS WHEREOF, the Company has caused this Instrument to be duly executed.

DTE ENERGY COMPANY

By: _____
Name:
Title:

Date: November 5, 2019

Attest:

By: _____
Name:
Title:

CERTIFICATE OF AUTHENTICATION

This is one of the Notes described in the within mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.
as Trustee

By _____
Authorized Signatory

Date: November 5, 2019

FOR VALUE RECEIVED, the undersigned hereby sell(s), assign(s) and transfer(s) unto

(Please insert Social Security or Other Identifying Number of Assignee)

(Please print or type name and address, including zip code of assignee)

the within Note and all rights thereunder, hereby irrevocably constituting and appointing such person attorneys to transfer the within Note on the books of the Issuer, with full power of substitution in the premises.

Dated: _____

NOTICE: The signature of this assignment must correspond with the name as written upon the face of the within Note in every particular, without alteration or enlargement or any change whatever and NOTICE: Signature(s) must be guaranteed by a financial

institution that is a member of the Securities Transfer Agents Medallion Program (“STAMP”), the Stock Exchange, Inc. Medallion Signature Program (“MSP”). When assignment is made by a guardian, trustee, executor or administrator, an officer of a corporation, or anyone in a representative capacity, proof of his or her authority to act must accompany this Note.

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES
EXCHANGE ACT OF 1934**

DESCRIPTION OF COMMON STOCK

The following summary of the terms of our common stock and capital stock is based upon our Restated Articles of Incorporation (the "Articles of Incorporation") and our Amended and Restated Bylaws (the "Bylaws"). The summary is not complete, and is qualified by reference to our Articles of Incorporation and our Bylaws, which are filed as exhibits to the Annual Report on Form 10-K of which this exhibit is a part. We encourage you to read our Articles of Incorporation, our Bylaws and the applicable provisions of the Michigan Business Corporation Act for additional information.

Authorized Capital Stock

The authorized capital stock of DTE Energy consists of 400,000,000 shares of DTE Energy common stock, without par value, and 5,000,000 shares of preferred stock, without par value. All outstanding shares of common stock are fully paid and nonassessable.

Under the DTE Energy amended and restated articles of incorporation, which we refer to as the articles of incorporation, our board of directors may cause the issuance of one or more new series of the authorized shares of preferred stock, determine the number of shares constituting any such new series and fix the voting, distribution, dividend, liquidation and all other rights and limitations of the preferred stock. These rights may be superior to those of the DTE Energy common stock. To the extent any shares of DTE Energy's preferred stock have voting rights, no share of preferred stock may be entitled to more than one vote per share.

Common Stock

Dividends

Holders of common stock are entitled to participate equally in respect to dividends as, when and if dividends are declared by our board of directors out of funds legally available for their payment. However, this dividend right is subject to any preferential dividend rights we may grant to future holders of preferred stock and to the prior rights of DTE Energy's debt holders and other creditors. As a Michigan corporation, we are subject to statutory limitations on the declaration and payment of dividends. Dividends on DTE Energy common stock will depend primarily on the earnings and financial condition of DTE Energy. DTE Energy is a holding company and its assets consist primarily of its investment in its operating subsidiaries. Thus, as a practical matter, dividends on common stock of DTE Energy will depend in the foreseeable future primarily upon the earnings, financial condition and capital requirements of DTE Electric, DTE Gas and our other subsidiaries, and the distribution of such earnings to DTE Energy in the form of dividends. The subsidiaries are separate and distinct legal entities and have no obligation to make payments with respect to any of DTE Energy's securities, or to pay dividends to or make funds available to DTE Energy so that DTE Energy can make payments on its securities, including its common stock. In addition, existing or future covenants limiting the right of DTE Electric, DTE Gas or our other subsidiaries to pay dividends on or make other distributions with respect to their common stock may affect DTE Energy's ability to pay dividends on our common stock.

Voting

Subject to any special voting rights that may vest in the holders of preferred stock, the holders of DTE Energy common stock are entitled to vote as a class and are entitled to one vote per share for each share held of record on all matters voted on by shareholders. All questions are decided by a majority of the votes cast by the holders of shares entitled to vote on that question, unless a greater or different vote is required by the articles of incorporation or Michigan law. However, if the number of director nominees for any director election exceeds the number of directors to be elected, the nominees receiving a plurality of the votes cast by holders of the shares entitled to vote at any meeting for the election of directors at which a quorum is present will be elected.

We are subject to Chapter 7A of the Michigan Business Corporation Act, which we refer to as the Corporation Act, which provides that business combinations subject to Chapter 7A between a Michigan corporation and a beneficial owner of shares entitled to 10% or more of the voting power of such corporation generally require the affirmative vote of 90% of the votes of each class of stock entitled to vote, and not less than 2/3 of each class of stock entitled to vote (excluding voting shares owned by such 10% owner), voting as a separate class. These requirements do not apply if (1) the corporation's board of directors approves the transaction prior to the time the 10% owner becomes such or (2) the transaction satisfies certain fairness standards, certain other conditions are met and the 10% owner has been such for at least five years.

Board of Directors

The number of directors is fixed by the board of directors from time to time. Directors are elected annually for terms which expire upon election of their successor at the next year's annual shareholder meeting.

Amendments to DTE Energy's Articles of Incorporation

Under Michigan law, our articles of incorporation may be amended by the affirmative vote of the holders of a majority of the outstanding shares entitled to vote on the proposed amendment (which would include the common stock and any series of preferred stock which, by its terms or applicable law, was so entitled to vote), and, if any class or series of shares is entitled to vote as a class, then the proposed amendment must be approved by the required vote of each class or series of shares entitled to vote as a class.

Liquidation Rights

In the event of a liquidation, dissolution or winding-up of DTE Energy, holders of our common stock have the right to share in DTE Energy's assets remaining after satisfaction in full of the prior rights of creditors, and all liabilities and the aggregate liquidation preferences of any outstanding shares of DTE Energy preferred stock.

Preemptive Rights

The holders of DTE Energy common stock have no conversion or redemption rights, or any rights to subscribe for or purchase other stock of DTE Energy.

Listing

Our common stock is listed on the New York Stock Exchange under the symbol “DTE.”

Advance Notice Requirements; Possible Anti-Takeover Effects

Certain provisions of our articles of incorporation and bylaws may have the effect of discouraging unilateral tender offers or other attempts to take over and acquire the business of DTE Energy. Our bylaws provide that shareholders seeking to nominate candidates for election as directors or to bring business before an annual meeting of shareholders or a shareholder-requested special meeting of shareholders must deliver timely notice of their proposal in writing to our principal executive offices. Our bylaws also specify requirements as to the form and content of a shareholder’s notice. These provisions may impede shareholders’ ability to bring matters before an annual meeting of shareholders, a shareholder requested special meeting of shareholders or make nominations for directors. These provisions may limit the ability of individuals to bring matters before shareholder meetings, change the composition of the board of directors and pursue a merger, takeover, business combination or tender offer involving DTE Energy, which, under certain circumstances, could encourage a potentially interested purchaser to negotiate with the board of directors rather than pursue a non-negotiated takeover attempt, including one that shareholders might favor, and could reduce the market value of our common stock.

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES
EXCHANGE ACT OF 1934**

As of the end of its most recent fiscal year, DTE Energy Company ("DTE Energy," "we," "our," or "us") had four series of junior subordinated debentures registered under Section 12 of the Securities Exchange Act of 1934, as amended:

- 2012 Series C 5.25% Junior Subordinated Debentures due 2062 (the "2012 Series C debentures");
- 2016 Series B 5.375% Junior Subordinated Debentures due 2076 (the "2016 Series B debentures");
- 2016 Series F 6.00% Junior Subordinated Debentures due 2076 (the "2016 Series F debentures"); and
- 2017 Series E 5.25% Junior Subordinated Debentures due 2077 (the "2017 Series E debentures").

DESCRIPTION OF JUNIOR SUBORDINATED DEBENTURES

The following summary sets forth the specific terms and provisions of the junior subordinated debentures. The summary is not complete, and is qualified by reference to the terms and provisions of the junior subordinated debentures and the indenture described below, which have been incorporated by reference as exhibits to the Annual Report on Form 10-K of which this exhibit forms a part. We encourage you to read the below-referenced indenture, as supplemented, for additional information.

General

Each series of junior subordinated debentures were issued under the Indenture, dated as of April 9, 2001, between DTE Energy and The Bank of New York Mellon Trust Company, N.A., as successor trustee, as supplemented. The junior subordinated debentures are our unsecured obligations and will be subordinate in right of payment to our Senior Indebtedness (as described below under "Subordination"). The 2012 Series C debentures were initially issued in an aggregate principal amount of \$200,000,000. The 2016 Series B debentures were initially issued in an aggregate principal amount of \$300,000,000. The 2016 Series F debentures were initially issued in an aggregate principal amount of \$280,000,000. The 2017 Series E debentures were initially issued in an aggregate principal amount of \$400,000,000.

The 2012 Series C debentures, the 2016 Series B debentures, the 2016 Series F debentures and the 2017 Series E debentures are each listed on the New York Stock Exchange under the trading symbols "DTQ," "DTJ," "DTY" and "DTW," respectively.

The indenture does not limit the amount of indebtedness that we may issue. As of December 31, 2019, approximately \$6.6 billion aggregate principal amount of senior debt securities, excluding current maturities, and \$1.2 billion of junior subordinated debentures were issued and outstanding under the indenture. On December 31, 2019, we and our subsidiaries had consolidated long-term indebtedness of approximately \$15.6 billion, substantially all of which would be effectively senior to the junior subordinated debentures.

The authorized denominations for each series of junior subordinated debentures are \$25 and integral multiples thereof.

Interest and Principal

The 2012 Series C debentures bear interest at a rate of 5.25% per year, payable in arrears quarterly March 1, June 1, September 1 and December 1 of each year, subject to deferral as described below under "Deferral of Payment Periods." The 2016 Series B debentures bear interest at a rate of 5.375% per year, payable in arrears quarterly March 1, June 1, September 1 and December 1 of each year, subject to deferral as described below under "Deferral of Payment Periods." The 2016 Series F debentures bear interest at a rate of 6.00% per year, payable in arrears quarterly March 15, June 15, September 15 and December 15 of each year, subject to deferral as described below under "Deferral of Payment Periods." The 2017 Series E debentures bear interest at a rate of 5.25% per year, payable in arrears quarterly March 1, June 1, September 1 and December 1 of each year, subject to deferral as described below under "Deferral of Payment Periods."

The 2012 Series C debentures will mature and become due and payable, together with any accrued and unpaid interest thereon, on December 1, 2062. The 2016 Series B debentures will mature and become due and payable, together with any accrued and unpaid interest thereon, on June 1, 2076. The 2016 Series F debentures will mature and become due and payable, together with any accrued and unpaid interest thereon, on December 15, 2076. The 2017 Series E debentures will mature and become due and payable, together with any accrued and unpaid interest thereon, on December 1, 2077.

Interest will be paid to the person in whose name the applicable junior subordinated debenture is registered at the close of business on the date (whether or not such day is a business day) fifteen calendar days immediately preceding the applicable interest payment date, except that interest not punctually paid will be payable to the person in whose name the applicable junior subordinated debenture is registered as of the close of business on a special record date established in accordance with the provisions of the indenture, or otherwise as provided in the indenture. The amount of interest payable will be computed on the basis of a 360-day year consisting of twelve 30-day months and, for any period shorter than a quarter, on the basis of the actual number of days elapsed per 30-day month.

"Business day" means any day other than a Saturday or Sunday or a day on which commercial banks in the state of New York are required or authorized by law or executive order to be closed. In the event that any interest payment date, redemption date or maturity date is not a business day, then the required payment of principal and interest will be made on the next succeeding day that is a business day (and without any interest or other payment in respect of any such delay). If, however, that business day is in the next calendar year, payment will be made on the immediately preceding business day, in each case with the same force and effect as if made on the payment date.

Redemption

We may redeem the junior subordinated debentures at our option, in whole or in part, (i) at any time, in the case of the 2012 Series C debentures, (ii) on or after June 1, 2021 in the case of the 2016 Series B debentures, (iii) on or after December 15, 2021 in the case of the 2016 Series F debentures and (iv) on or after December 1, 2022 in the case of the 2017 Series E debentures. In each case, the redemption price will be 100% of the principal amount of such junior subordinated debentures being redeemed plus accrued and unpaid interest to, but excluding, the redemption date.

In addition, we may redeem the 2016 Series B, 2016 Series F and 2017 Series E debentures before such dates in whole, but not in part, within 90 days following the occurrence and continuance of a Tax Event (defined below). In such case, the redemption price will be (i) 100% of the principal amount of such junior subordinated debentures being redeemed plus accrued and unpaid interest to, but excluding, the redemption date in the case of the 2016 Series B debentures and the 2016 Series F debentures, and (ii) 101% of the principal amount of such junior subordinated debentures being redeemed plus accrued and unpaid interest

to, but excluding, the redemption date in the case of the 2017 Series E debentures.

We may also redeem the junior subordinated debentures at our option, in whole but not in part, before such dates stated above, at any time within 90 days after the conclusion of any review or appeal process instituted by us following the occurrence and continuance of a Rating Agency Event (defined below). In this event, the redemption price will be 102% of the principal amount of such junior subordinated debentures being redeemed plus accrued and unpaid interest to, but excluding, the redemption date.

Notice of any redemption will be mailed at least 30 days but not more than 60 days before the redemption date to each holder of junior subordinated debentures to be redeemed at such holder's registered address. Unless DTE Energy defaults in payment of the redemption price, on and after the redemption date interest shall cease to accrue on the junior subordinated debentures called for redemption. If the junior subordinated debentures are only partially redeemed, the junior subordinated debentures will be redeemed pro rata or by lot or by any other method utilized by the trustee; provided that if, at the time of redemption, the junior subordinated debentures are registered as a global certificate held by a depository, the depository shall determine, in accordance with its procedures, the principal amount of such junior subordinated debentures held by each depository participant to be redeemed.

The junior subordinated debentures will not be entitled to the benefit of a sinking fund or be subject to redemption at the option of the holder.

Redemption following a Tax Event

We will have the right to redeem all, but not fewer than all, of each series of junior subordinated debentures, at the redemption prices and prior to the dates described above, at any time within 90 days following the occurrence and continuation of a Tax Event. A Tax Event means that DTE Energy has received an opinion of nationally recognized independent tax counsel experienced in such matters to the effect that, as a result of:

- any amendment to, change or announced proposed change in the laws or regulations of the United States or any of its political subdivisions or taxing authorities affecting taxation,
- any amendment to or change in an interpretation or application of such laws or regulations by any legislative body, court, governmental agency or regulatory authority, or
- any interpretation or pronouncement that provides for a position with respect to those laws or regulations that differs from the generally accepted position on the date the junior subordinated debentures are issued

which amendment or change becomes effective or proposed change, pronouncement, interpretation, action or decision is announced on or after the date of the applicable prospectus supplement relating to the junior subordinated debentures, there is more than an insubstantial risk that interest payable on the junior subordinated debentures is not or within 90 days of the date of the opinion would not be deductible, in whole or in part, by us for United States federal income tax purposes.

Our right to redeem the junior subordinated debentures due to a Tax Event is subject to the condition that, if we have the opportunity to eliminate, within the 90-day period, the Tax Event by taking some ministerial action that will have no adverse effect on us or the holders of the junior subordinated debentures and will involve no material cost, we will pursue such measures in lieu of redemption. We cannot redeem the junior subordinated debentures while we are pursuing any such ministerial action.

Redemption following a Rating Agency Event

We will have the right to redeem each series of junior subordinated debentures, in whole but not in part, prior to the dates described above at any time within 90 days after the conclusion of any review or appeal process instituted by us following the occurrence and continuation of a Rating Agency Event (as defined below), at a redemption price equal to 102% of the principal amount of such junior subordinated debentures being redeemed plus accrued and unpaid interest to the redemption date.

"Rating Agency Event" means a change in the methodology published by any nationally recognized statistical rating organization within the meaning of Section 3(a)(62) of the Exchange Act (sometimes referred to in this exhibit as a "rating agency") that currently publishes a rating for us in assigning equity credit to securities such as the junior subordinated debentures, as such methodology is in effect on the date of issuance of the applicable prospectus supplement relating to the series of junior subordinated debenture (the "current criteria"), which change results in (a) a lower equity credit being assigned by such rating agency to the junior subordinated debentures as of the date of such change than the equity credit that would have been assigned to the junior subordinated debentures as of the date of such change by such rating agency pursuant to its current criteria or (b) only in the case of the 2012 Series C debentures, shortening the length of time for which such current criteria are scheduled to be in effect with respect to the junior subordinated debentures.

Deferral of Payment Periods

So long as there is no event of default under the indenture with respect to the applicable series of junior subordinated debentures, we may defer interest payments on each series junior subordinated debentures for a period of up to (i) 20 consecutive quarters in the case of the 2012 Series C debentures and (ii) 40 consecutive quarters in the case of the 2016 Series B debentures, the 2016 Series F debentures and the 2017 Series E debentures; except that no such deferral period may extend beyond the maturity of the junior subordinated debentures. During this period, the interest on the junior subordinated debentures will still accrue at the applicable annual rate. In addition, interest on the deferred interest will accrue at the applicable annual rate, compounded quarterly, to the extent permitted by law.

Before the end of any deferral period that is shorter than (i) 20 consecutive quarters in the case of the 2012 Series C debentures or (ii) 40 consecutive quarters in the case of the other junior subordinated debentures, we may further defer the period, so long as the entire deferral period does not exceed 20 or 40 consecutive quarters (as applicable) or extend beyond the maturity or redemption date, if earlier, of the junior subordinated debentures. We may also elect to shorten the length of any deferral period. At the end of any deferral period, if all amounts then due on the junior subordinated debentures, including interest on unpaid interest, have been paid, we may elect to begin a new deferral period.

If we defer payment on the junior subordinated debentures, neither we nor our majority-owned subsidiaries may:

- ;
- redeem, purchase, acquire or make a liquidation payment with respect to, any DTE Energy Company capital stock;
- make any payment of principal of or interest or premium, if any, on or repay, repurchase or redeem any DTE Energy Company indebtedness that is equal in right of payment with, or junior to, the junior subordinated debentures; or
- make any guarantee payments with respect to any DTE Energy Company guarantee of indebtedness of our subsidiaries or any other party that is equal in right of payment with, or junior to, the junior subordinated debentures.

However, during an interest deferral period, we may (a) pay dividends or distributions payable solely in shares of common stock or options, warrants or rights to subscribe for or purchase shares of our common stock, (b) declare any dividend in connection with the implementation of a plan providing for the issuance by us to all holders of our common stock of rights entitling them to subscribe for or purchase common stock or any class or series of preferred stock, which rights (1) are deemed to be transferred with such common stock, (2) are not exercisable and (3) are also issued in respect of future issuances of common stock, in each case until the occurrence of a specified event or events (a "Rights Plan"), (c) issue any of our shares of capital stock under any Rights Plan or redeem or repurchase any rights distributed pursuant to a Rights Plan, (d) reclassify our capital stock or exchange or convert one class or series of our capital stock for another class or series of our capital stock, (e) purchase fractional interests in shares of our capital stock pursuant to the conversion or exchange provisions of such capital stock or the security being converted or exchanged, and (f) purchase common stock related to the issuance of common stock or rights under our dividend reinvestment plan or any of our benefit plans for our directors, officers, employees, consultants or advisors.

We will give the holders of the junior subordinated debentures and the trustee notice of our election or any shortening or extension of the deferral period at least ten business days prior to the earlier of (1) the next succeeding interest payment date or (2) the date upon which we are required to give notice to the New York Stock Exchange or any applicable self-regulatory organization or to holders of the junior subordinated debentures of the record or payment date of the related interest payment.

Subordination

The junior subordinated debentures are our unsecured obligations and will be subordinate and junior in right of payment, to the extent set forth in the indenture, to all our Senior Indebtedness as defined below. If:

- we make a payment or distribution of any of our assets to creditors upon our dissolution, winding-up, liquidation or reorganization, whether in bankruptcy, insolvency or otherwise,
- a default beyond any grace period has occurred and is continuing with respect to the payment of principal, interest or any other monetary amounts due and payable on any Senior Indebtedness, or
- the maturity of any Senior Indebtedness has been accelerated because of a default on that Senior Indebtedness,

then the holders of Senior Indebtedness generally will have the right to receive payment, in the case of the first event above, of all amounts due or to become due upon that Senior Indebtedness, and, in the case of the second and third events above, of all amounts due on that Senior Indebtedness, or we must make provision for those payments, before the holders of any junior subordinated debentures have the right to receive any payments of principal or interest on their junior subordinated debentures.

If the trustee or any holder of junior subordinated debentures receives any payment or distribution on account of the junior subordinated debentures before all of our Senior Indebtedness is paid in full, then that payment or distribution will be paid over, or delivered and transferred to, the holders of our Senior Indebtedness at the time outstanding.

The rights of the holders of the junior subordinated debentures will be subrogated to the rights of the holders of our Senior Indebtedness to the extent of any payment we made to the holders of our Senior Indebtedness that otherwise would have been made to the holders of the junior subordinated debentures but for the subordination provisions. No payments on account of principal or any premium or interest in respect of the junior subordinated debentures may be made if there has occurred and is continuing a default in any payment with respect to Senior Indebtedness or an event of default with respect to any Senior Indebtedness resulting in the acceleration of its maturity, or if any judicial proceeding is pending with respect to any default.

Each series of junior subordinated debentures will rank equally with each other and any of our other outstanding junior subordinated debentures and any other pari passu junior subordinated debentures we may issue from time to time. The junior subordinated debentures will be effectively junior to all obligations of our subsidiaries. Our obligations under the junior subordinated debentures are not guaranteed by our subsidiaries.

Senior Indebtedness will be entitled to the benefits of the subordination provisions in the indenture irrespective of the amendment, modification or waiver of any term of the Senior Indebtedness. We may not amend the indenture to change adversely the subordination provisions applicable to any outstanding junior subordinated debentures without the consent of each holder of Senior Indebtedness that the amendment would adversely affect.

"Senior Indebtedness," for purposes of the junior subordinated debentures of each series, means all Indebtedness, whether outstanding on the date of issuance of the junior subordinated debentures of the applicable series or thereafter created, assumed or incurred, except Indebtedness ranking equally with the junior subordinated debentures or Indebtedness ranking junior to the junior subordinated debentures. Senior Indebtedness does not include obligations to trade creditors or indebtedness of DTE Energy to its subsidiaries. Senior Indebtedness with respect to the junior subordinated debentures of any particular series will continue to be Senior Indebtedness with respect to the junior subordinated debentures of such series and be entitled to the benefits of the subordination provisions irrespective of any amendment, modification or waiver of any term of such Senior Indebtedness.

"Indebtedness ranking equally with the junior subordinated debentures," for purposes of junior subordinated debentures of the applicable series, means Indebtedness, whether outstanding on the date of issuance of the junior subordinated debentures or thereafter created, assumed or incurred, to the extent the Indebtedness specifically by its terms ranks equally with and not prior to the junior subordinated debentures in the right of payment upon the happening of the

dissolution, winding-up, liquidation or reorganization of DTE Energy. The securing of any Indebtedness otherwise constituting Indebtedness ranking equally with the junior subordinated debentures will not prevent the Indebtedness from constituting Indebtedness ranking equally with the junior subordinated debentures.

“Indebtedness ranking junior to the junior subordinated debentures,” for purposes of junior subordinated debentures of the applicable series, means any Indebtedness, whether outstanding on the date of issuance of the junior subordinated debentures of the applicable series or thereafter created, assumed or incurred, to the extent the Indebtedness by its terms ranks junior to and not equally with or prior to:

- the junior subordinated debentures, and
- any other Indebtedness ranking equally with the junior subordinated debentures,

in right of payment upon the happening of the dissolution, winding-up, liquidation or reorganization of DTE Energy. The securing of any Indebtedness otherwise constituting Indebtedness ranking junior to the junior subordinated debentures will not prevent the Indebtedness from constituting Indebtedness ranking junior to the junior subordinated debentures.

“Indebtedness” means:

- indebtedness for borrowed money;
- obligations for the deferred purchase price of property or services (other than trade payables not overdue by more than 60 days incurred in the ordinary course of business);
- obligations evidenced by notes, bonds, debentures or other similar instruments;
- obligations created or arising under any conditional sale or other title retention agreement with respect to acquired property;
- obligations as lessee under leases that have been or should be, in accordance with accounting principles generally accepted in the United States, recorded as capital leases;
- obligations, contingent or otherwise, in respect of acceptances, letters of credit or similar extensions of credit;
- obligations in respect of interest rate swap, cap or collar agreements, interest rate future or option contracts, currency swap agreements, currency future or option contracts and other similar agreements;
- guarantees of Indebtedness of others, directly or indirectly, or Indebtedness in effect guaranteed directly or indirectly through an agreement (1) to pay or purchase such Indebtedness or to advance or supply funds for the payment or purchase of such Indebtedness, (2) to purchase, sell or lease property, or to purchase or sell services, primarily for the purpose of enabling the debtor to make payment of such Indebtedness or to assure the holder of such Indebtedness against loss, (3) to supply funds to or in any other manner invest in the debtor or (4) otherwise to assure a creditor against loss; and
- Indebtedness described above secured by any lien (as defined in the indenture) on property.

Consolidation, Merger and Sale of Assets

DTE Energy may, without the consent of the holders of the junior subordinated debentures, consolidate or merge with or into, or convey, transfer or lease our properties and assets as an entirety or substantially as an entirety to, any person or permit any person to consolidate with or merge into us or convey, transfer or lease its properties and assets substantially as an entirety to us, as long as:

- if DTE Energy merges into or consolidates with, or transfers its properties and assets as an entirety (or substantially as an entirety) to any person, such person is a corporation, partnership or trust, organized and validly existing under the laws of the United States of America, any state thereof or the District of Columbia;
- any successor person (if not DTE Energy) assumes by supplemental indenture, the due and punctual payment of the principal of, any premium and interest on and any additional amounts with respect to all the junior subordinated debentures issued thereunder, and the performance of our obligations under the indenture and the junior subordinated debentures issued thereunder, and provides for conversion or exchange rights in accordance with the provisions of the junior subordinated debentures of any series that are convertible or exchangeable into common stock or other securities;
- no event of default under the indenture has occurred and is continuing after giving effect to the transaction;

- no event which, after notice or lapse of time or both, would become an event of default under the indenture has occurred and is continuing after giving effect to the transaction; and
- certain other conditions are met.

Upon any merger or consolidation described above or conveyance or transfer of the properties and assets of DTE Energy as or substantially as an entirety as described above, the successor person will succeed to DTE Energy's obligations under the indenture and, except in the case of a lease, the predecessor person will be relieved of such obligations.

The indenture does not prevent or restrict any conveyance or other transfer, or lease, of any part of the properties of DTE Energy which does not constitute the entirety, or substantially the entirety, thereof.

Events of Default under the Indenture

The following are the "events of default" applicable to each series of junior subordinated debentures:

- default for 30 days in the payment of any installment of interest payable on the junior subordinated debentures when due and payable (except for the deferral of interest payments as discussed above in "Deferral of Payment Periods");
- default in the payment of the principal of the junior subordinated debentures when due and payable; or
- certain events of bankruptcy, insolvency or similar reorganization, receivership or liquidation of DTE Energy.

With respect to the junior subordinated debentures, a failure to comply with covenants under the indenture does not constitute an event of default.

If an event of default with respect to the junior subordinated debentures of any series occurs and is continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding junior subordinated debentures of that series may declare the principal amount of the junior subordinated debentures of that series to be due and payable immediately. At any time after a declaration of acceleration has been made, but before a judgment or decree for payment of money has been obtained by the trustee, and subject to applicable law and certain other provisions of the indenture, the holders of a majority in aggregate principal amount of the junior subordinated debentures of that series may, under certain circumstances, rescind and annul the acceleration. If an event of default occurs pertaining to certain events of bankruptcy, insolvency or reorganization specified in the indenture as described in the third bullet point above, the principal amount and accrued and unpaid interest and any additional amounts payable in respect of the junior subordinated debentures of that series, or a lesser amount as provided for in the junior subordinated debentures of that series, will be immediately due and payable without any declaration or other act by the trustee or any holder.

The indenture provides that within 90 days after the occurrence of any default under the indenture with respect to the junior subordinated debentures of any series, the trustee must transmit to the holders of the junior subordinated debentures of such series, in the manner set forth in the indenture, notice of the default known to the trustee, unless the default has been cured or waived. However, except in the case of a default in the payment of the principal of (or premium, if any) or interest or any additional amounts or in the payment of any sinking fund installment with respect to, any debt security of such series, the trustee may withhold such notice if and so long as the board of directors, the executive committee or a trust committee of directors or responsible officers of the trustee has in good faith determined that the withholding of such notice is in the interest of the holders of junior subordinated debentures of such series.

If an event of default occurs and is continuing with respect to the junior subordinated debentures of any series, the trustee may in its discretion proceed to protect and enforce its rights and the rights of the holders of junior subordinated debentures of such series by all appropriate judicial proceedings.

The indenture further provides that, subject to the duty of the trustee during any default to act with the required standard of care, the trustee will be under no obligation to exercise any of its rights or powers under the indenture at the request or direction of any of the holders of junior subordinated debentures, unless that requesting holder has offered to the trustee reasonable indemnity. Subject to such provisions for the indemnification of the trustee, and subject to applicable law and certain other provisions of the indenture, the holders of a majority in aggregate principal amount of the outstanding junior subordinated debentures of a series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the junior subordinated debentures of such series.

The indenture provides that no holder of any junior subordinated debentures of a series will have any right to institute any proceeding with respect to the indenture for the appointment of a receiver or for any other remedy thereunder unless:

- that holder has previously given the trustee written notice of a continuing event of default;
- the holders of 25% in aggregate principal amount of the outstanding junior subordinated debentures of that series have made written request to the trustee to institute proceedings in respect of that event of default and have offered the trustee reasonable indemnity against costs and liabilities incurred in complying with such request; and
- for 60 days after receipt of such notice, the trustee has failed to institute any such proceeding and no direction inconsistent with such request has been given to the trustee during such 60-day period by the holders of a majority in aggregate principal amount of outstanding junior subordinated debentures of that series.

Furthermore, no holder will be entitled to institute any such action if and to the extent that such action would disturb or prejudice the rights of other holders. However, each holder has an absolute and unconditional right to receive payment when due and to bring a suit to enforce that right.

Under the indenture, we are required to furnish to the trustee annually a statement as to our performance of certain of our obligations under the indenture and as to any default in such performance. We are also required to deliver to the trustee, within five days after occurrence thereof, written notice of any event that after notice or lapse of time or both would constitute an event of default.

Modification and Waiver

DTE Energy and the trustee may generally modify certain provisions of the indenture with the consent of the holders of not less than a majority in aggregate principal amount of the junior subordinated debentures of each series affected by the modification, except that no such modification or amendment may, without the consent of the holder of each debt security affected thereby:

- change the stated maturity of the principal of, or any installment of principal of, or any premium or interest on, or any additional amounts with respect to, any junior subordinated debenture issued under the indenture;
- reduce the principal amount of, or premium or interest on, or any additional amounts with respect to, any junior subordinated debenture issued under the indenture;
- change the place of payment or the coin or currency in which any junior subordinated debenture issued under that indenture or any premium or any interest on that junior subordinated debenture or any additional amounts with respect to that debt security is payable;
- reduce the percentage in principal amount of the outstanding junior subordinated debentures, the consent of whose holders is required under the indenture in order to take certain actions;
- change any of our obligations to maintain an office or agency in the places and for the purposes required by the indenture;
- modify any conversion or exchange provision in a manner adverse to holders of that debt security;
- ;
- impair the right to institute suit for the enforcement of any payment on or after the stated maturity of any junior subordinated debentures issued under that indenture or, in the case of redemption, exchange or conversion, if applicable, on or after the redemption, exchange or conversion date or, in the case of repayment at the option of any holder, if applicable, on or after the date for repayment; or
- modify any of the above provisions or certain provisions regarding the waiver of past defaults or the waiver of certain covenants, with limited exceptions.

In addition, we and the trustee may, without the consent of any holders, modify provisions of the indenture for certain purposes, including, among other things:

- ;
- ;
- adding any additional events of default with respect to the junior subordinated debentures (and, if such event of default is applicable to less than all series of junior subordinated debentures, specifying the series to which such event of default is applicable);
- adding to or changing any provisions of the indenture to provide that bearer junior subordinated debentures may be registrable, changing or eliminating any restrictions on the payment of principal of (or premium, if any) or interest on or any additional amounts with respect to bearer junior subordinated debentures, permitting bearer junior subordinated debentures to be issued in exchange for registered junior subordinated debentures, permitting bearer junior subordinated debentures to be issued in exchange for bearer junior subordinated debenture of other authorized denominations or facilitating the issuance of junior subordinated debenture in uncertificated form provided that any such action shall not adversely affect the interests of the holders of the junior subordinated debentures in any material respect;
- establishing the form or terms of junior subordinated debentures of any series;
- evidencing and providing for the acceptance of appointment of a successor trustee and adding to or changing any of the provisions of the indenture to

facilitate the administration of the trusts;

- curing any ambiguity, correcting or supplementing any provision in the indenture that may be defective or inconsistent with any other provision therein, or making or amending any other provisions with respect to matters or questions arising under the indenture which shall not adversely affect the interests of the holders of junior subordinated debentures of any series in any material respect;
- modifying, eliminating or adding to the provisions of the indenture to maintain the qualification of the indenture under the Trust Indenture Act as the same may be amended from time to time;
- adding to, deleting from or revising the conditions, limitations and restrictions on the authorized amount, terms or purposes of issue, authentication and delivery of junior subordinated debentures, as therein set forth;
- modifying, eliminating or adding to the provisions of any security to allow for such security to be held in certificated form;
- ;
- making provisions with respect to conversion or exchange rights of holders of securities of any series;
- amending or supplementing any provision contained therein or in any supplemental indenture, provided that no such amendment or supplement will adversely affect the interests of the holders of any junior subordinated debentures then outstanding in any material respect; or
- modifying, deleting or adding to any of the provisions of the indenture other than as contemplated above.

The holders of at least $66\frac{2}{3}\%$ in aggregate principal amount of junior subordinated debentures of any series issued under the indenture may, on behalf of the holders of all junior subordinated debentures of that series, waive our compliance with certain restrictive provisions of the indenture. The holders of not less than a majority in aggregate principal amount of junior subordinated debentures of any series issued under the indenture may, on behalf of all holders of junior subordinated debentures of that series, waive any past default and its consequences under the indenture with respect to the junior subordinated debentures of that series, except:

- payment default with respect to junior subordinated debentures of that series; or
- a default of a covenant or provision of the indenture that cannot be modified or amended without the consent of the holder of each junior subordinated debenture of that series.

Governing Law

The indenture is, and the junior subordinated debentures will be, governed by, and construed in accordance with, the laws of the State of New York.

Concerning the Trustee

The Bank of New York Mellon Trust Company, N.A. is the successor trustee under the indenture. Affiliates of The Bank of New York Mellon Trust Company, N.A. also act as a lender and provide other banking, trust and investment services in the ordinary course of business to DTE Energy and its affiliates.

Book-Entry Securities

The junior subordinated debentures trade through The Depository Trust Company (“DTC”). Each series of junior subordinated debentures is represented by one or more global certificates and is registered in the name of Cede & Co., as DTC’s nominee. DTC may discontinue providing its services as securities depository with respect to the junior subordinated debentures at any time by giving reasonable notice to us. Under those circumstances, in the event that a successor securities depository is not obtained, securities certificates will be printed and delivered to the holders of record. Additionally, we may decide to discontinue use of the system of book entry transfers through DTC (or a successor depository) with respect to the junior subordinated debentures. Upon receipt of a withdrawal request from us, DTC will notify its participants of the receipt of a withdrawal request from us reminding participants that they may utilize DTC’s withdrawal procedures if they wish to withdraw their securities from DTC, and DTC will process withdrawal requests submitted by participants in the ordinary course of business. To the extent that the book-entry system is discontinued, certificates for the junior subordinated debentures will be printed and delivered to the holders of record. Both we and the trustee have no responsibility for the performance by DTC or its direct and indirect participants of their respective obligations as described herein or under the rules and procedures governing their respective operations. Payments of principal and interest will be made to DTC in immediately available funds.

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES
EXCHANGE ACT OF 1934**

DESCRIPTION OF THE EQUITY UNITS

The following is a summary of some of the terms of the Equity Units. This summary, together with the summaries of the terms of the purchase contracts, the purchase contract and pledge agreement and the Notes set forth under the captions "Description of the Purchase Contracts," "Certain Provisions of the Purchase Contract and Pledge Agreement" and "Description of the Remarketable Senior Notes" below, contain a description of the material terms of the Equity Units, but are only summaries and are not complete. This summary is qualified by reference to all the provisions of the purchase contract and pledge agreement, the base indenture (as defined under "Description of the Remarketable Senior Notes—Ranking"), the supplemental indenture (as defined under "Description of the Remarketable Senior Notes—Ranking"), the Notes and the form of remarketing agreement, which has been attached as an exhibit to the purchase contract and pledge agreement, including the definitions of certain terms used therein, which have been incorporated by reference as exhibits to the Annual Report on Form 10-K of which this exhibit forms a part. We encourage you to read these documents for additional information.

General

The Equity Units were issued in 2019 under the purchase contract and pledge agreement among us and The Bank of New York Mellon Trust Company, N.A., as purchase contract agent (the "purchase contract agent"), collateral agent (the "collateral agent"), custodial agent (the "custodial agent") and securities intermediary. The Equity Units may be either Corporate Units or Treasury Units. The Equity Units initially consisted of 26,000,000 Corporate Units, each with a stated amount of \$50.

Each Corporate Unit consists of:

- a purchase contract under which
 - the holder will agree to purchase from us, and we will agree to sell to the holder, on November 1, 2022 (or if such day is not a business day, the following business day), which we refer to as the "purchase contract settlement date," or earlier upon early settlement, for \$50, a number of shares of our common stock equal to the applicable settlement rate described under "Description of the Purchase Contracts—Purchase of Common Stock," "Description of the Purchase Contracts—Early Settlement" or "Description of the Purchase Contracts—Early Settlement Upon a Fundamental Change," as the case may be, *plus*, in the case of an early settlement upon a fundamental change, the number of make-whole shares; and
 - we will pay the holder quarterly contract adjustment payments at the rate of 4.00% per year on the stated amount of \$50, or \$2.00 per year, subject to our right to defer such contract adjustment payments as described under "Description of the Purchase Contracts—Contract Adjustment Payments," and

either:

- a 1/20, or 5%, undivided beneficial ownership interest in a \$1,000 principal amount 2019 Series F 2.25% Remarketable Senior Note due 2025 issued by us, and under which we will pay to the holder 1/20, or 5%, of the interest payment on a \$1,000 principal amount Note at the initial rate of 2.25%, or \$22.50 per year per \$1,000 principal amount of Notes, or

- following a successful optional remarketing, the applicable ownership interest in a portfolio of U.S. Treasury securities, which we refer to as the “Treasury portfolio.” “Applicable ownership interest” means, with respect to the Treasury portfolio,
 - (1) a 1/20, or 5%, undivided beneficial ownership interest in \$1,000 face amount of U.S. Treasury securities (or principal or interest strips thereof) included in the Treasury portfolio that mature on or prior to the purchase contract settlement date; and
 - (2) for the scheduled interest payment occurring on the purchase contract settlement date, a .028125% undivided beneficial ownership interest in \$1,000 face amount of U.S. Treasury securities (or principal or interest strips thereof) that mature on or prior to the purchase contract settlement date.

If U.S. Treasury securities (or principal or interest strips thereof) that are to be included in the Treasury portfolio in connection with a successful optional remarketing have a yield that is less than zero, the Treasury portfolio will consist of an amount in cash equal to the aggregate principal amount at maturity of the U.S. Treasury securities described in clauses (1) and (2) above. If the provisions set forth in this paragraph apply, references to “Treasury security” and “U.S. Treasury securities (or principal or interest strips thereof)” in connection with the Treasury portfolio will, thereafter, be deemed to be references to such amount of cash.

So long as the Equity Units are in the form of Corporate Units, the related undivided beneficial ownership interest in the Note or the applicable ownership interest in the Treasury portfolio described in clause (1) of the definition of “applicable ownership interest” above (or \$50 in cash, if the immediately preceding paragraph applies), as the case may be, will be pledged to us through the collateral agent to secure the holders’ obligations to purchase our common stock under the related purchase contracts.

Creating Treasury Units by Substituting a Treasury Security for a Note

Each holder of 20 Corporate Units may create, at any time other than after a successful remarketing or during a blackout period (as defined below), 20 Treasury Units by substituting for a Note a zero-coupon U.S. Treasury security (for example, CUSIP No. 9128203T2) with a principal amount at maturity equal to \$1,000 and maturing on October 31, 2022, which we refer to as a “Treasury security.” This substitution would create 20 Treasury Units and the Note would be released from the pledge under the purchase contract and pledge agreement and delivered to the holder and would be tradable and transferable separately from the Treasury Units. Because Treasury securities and Notes are issued in integral multiples of \$1,000, holders of Corporate Units may make the substitution only in integral multiples of 20 Corporate Units. After a successful remarketing, holders may not create Treasury Units from Corporate Units or recreate Corporate Units from Treasury Units.

Each Treasury Unit will consist of:

- a purchase contract under which
 - the holder will agree to purchase from us, and we will agree to sell to the holder, on the purchase contract settlement date, or earlier upon early settlement, for \$50, a number of shares of our common stock equal to the applicable settlement rate, *plus*, in the case of an early settlement upon a fundamental change, the number of make-whole shares; and
 - we will pay the holder quarterly contract adjustment payments at the rate of 4.00% per year on the stated amount of \$50, or \$2.00 per year, subject to our right to defer the contract adjustment payments; and

- a 1/20, or 5%, undivided beneficial ownership interest in a Treasury security.

The term “blackout period” means the period (1) if we elect to conduct an optional remarketing, from 4:00 p.m., New York City time, on the second business day (as defined below) immediately preceding the first day of the optional remarketing until the settlement date of such optional remarketing or the date we announce that such remarketing was unsuccessful and (2) after 4:00 p.m., New York City time, on the second business day immediately preceding the first day of the final remarketing period.

The term “business day” means any day, other than a Saturday or Sunday, which is not a day on which banking institutions or trust companies in the City of New York, New York are generally authorized or required by law, regulation or executive order to remain closed.

The Treasury Unit holder’s beneficial ownership interest in the Treasury security will be pledged to us through the collateral agent to secure the holder’s obligation to purchase our common stock under the related purchase contracts.

To create 20 Treasury Units, a holder is required to:

- deposit with the collateral agent a Treasury security that has a principal amount at maturity of \$1,000 that matures on October 31, 2022, which must be purchased in the open market at the expense of the Corporate Unit holder, unless otherwise owned by the holder; and
- transfer to the purchase contract agent 20 Corporate Units, accompanied by a notice stating that the holder of the Corporate Units has deposited a Treasury security with the collateral agent, and requesting that the purchase contract agent instruct the collateral agent to release the related Note.

If the Corporate Units are in global form, a holder is required to comply with applicable depository procedures for the creation of Treasury Units.

Upon receiving instructions from the purchase contract agent and receipt of the Treasury security, the collateral agent will release the related Note from the pledge and deliver it to the purchase contract agent on behalf of the holder, free and clear of our security interest. The purchase contract agent then will:

- cancel the 20 Corporate Units;
- transfer the related Note to the holder; and
- deliver 20 Treasury Units to the holder.

If the Corporate Units are in global form, the purchase contract agent will transfer the related Notes and deliver Treasury Units in accordance with applicable depository procedures.

The Treasury security will be substituted for the Note and will be pledged to us through the collateral agent to secure the holder’s obligation to purchase shares of our common stock under the related purchase contracts. The Note thereafter will trade and be transferable separately from the Treasury Units.

Holders who create Treasury Units will be responsible for any taxes, governmental charges or other fees or expenses (including, without limitation, fees and expenses payable to the collateral agent) attributable to such collateral substitution. See “Certain Provisions of the Purchase Contract and Pledge Agreement—Miscellaneous.”

Recreating Corporate Units

Each holder of 20 Treasury Units will have the right, at any time, other than during a blackout period or after a successful remarketing, to substitute for the related Treasury security held by the collateral agent a Note having a principal amount equal to \$1,000. This substitution would recreate 20 Corporate Units and the applicable Treasury security would be released from the pledge under the purchase contract and pledge agreement and delivered to the holder and would be tradable and transferable separately from the Corporate Units. Because Treasury securities and Notes are issued in integral multiples of \$1,000, holders of Treasury Units may make this substitution only in integral multiples of 20 Treasury Units. After a successful remarketing, holders may not recreate Corporate Units from Treasury Units.

To recreate 20 Corporate Units, a holder is required to:

- deposit with the collateral agent a Note having a principal amount of \$1,000, which must be purchased in the open market at the expense of the Treasury Unit holder, unless otherwise owned by the holder; and
- transfer to the purchase contract agent 20 Treasury Units, accompanied by a notice stating that the holder of the Treasury Units has deposited a Note having a principal amount of \$1,000 with the collateral agent and requesting that the purchase contract agent instruct the collateral agent to release the related Treasury security.

If the Treasury Units are in global form, a holder is required to comply with applicable depository procedures to recreate Corporate Units.

Upon receiving instructions from the purchase contract agent and receipt of the Note having a principal amount of \$1,000, the collateral agent will promptly release the related Treasury security from the pledge and promptly instruct the securities intermediary to transfer such Treasury security to the purchase contract agent for distribution to the holder, free and clear of our security interest. The purchase contract agent then will:

- cancel the 20 Treasury Units;
- transfer the related Treasury security to the holder; and
- deliver 20 Corporate Units to the holder.

If the Treasury Units are in global form, the purchase contract agent will transfer the related Treasury security and deliver the Corporate Units in accordance with applicable depository procedures.

The \$1,000 principal amount Note will be substituted for the Treasury security and will be pledged to us through the collateral agent to secure the holder's obligation to purchase shares of our common stock under the related purchase contracts. The Treasury security thereafter will trade and be transferable separately from the Corporate Units.

Holders who recreate Corporate Units will be responsible for any taxes, governmental charges or other fees or expenses (including, without limitation, fees and expenses payable to the collateral agent) attributable to the collateral substitution. See "Certain Provisions of the Purchase Contract and Pledge Agreement—Miscellaneous."

Payments on the Equity Units

Holders of Corporate Units and Treasury Units will receive quarterly contract adjustment payments payable by us at the rate of 4.00% per year on the stated amount of \$50 per Equity Unit. We will make all contract adjustment payments on the Corporate Units and the Treasury Units quarterly in arrears on February 1, May 1, August 1 and November 1 of each year (except that if any such date is not a business day, contract adjustment

payments will be payable on the following business day, without adjustment), commencing February 1, 2020. Unless the purchase contracts have been terminated (as described under “Description of the Purchase Contracts—Termination” below), we will make such contract adjustment payments until the earliest of the purchase contract settlement date, the fundamental change early settlement date (in the case of a fundamental change early settlement, as described under “Description of the Purchase Contracts—Early Settlement Upon a Fundamental Change” below) and the most recent contract adjustment payment date on or before any other early settlement with respect to the related purchase contracts (in the case of an early settlement as described under “Description of the Purchase Contracts—Early Settlement” below). If the purchase contracts have been terminated, our obligation to pay the contract adjustment payments, including any accrued and unpaid contract adjustment payments and deferred contract adjustment payments (including compounded contract adjustment payments thereon), will cease. In addition, holders of Corporate Units will receive quarterly cash distributions consisting of their pro rata share of interest payments on the Notes (or distributions on the applicable ownership interest in the Treasury portfolio, as applicable), equivalent to the rate of 2.25% per year. There will be no interest payments in respect of the Treasury securities that are a component of the Treasury Units, but to the extent that such holders of Treasury Units continue to hold the Notes that were delivered to them when they created the Treasury Units, such holders will continue to receive the scheduled interest payments on their separate Notes for as long as they hold the Notes.

We have the right to defer payment of quarterly contract adjustment payments as described under “Description of the Purchase Contracts—Contract Adjustment Payments.”

Listing

The Corporate Units are listed on the NYSE under the symbol “DTP.” Except in connection with early settlement, fundamental change early settlement, a termination event or settlement on the purchase contract settlement date with separate cash, unless and until substitution has been made as described in “—Creating Treasury Units by Substituting a Treasury Security for a Note” or “—Recreating Corporate Units,” neither the Note or applicable ownership interest in the Treasury portfolio component of a Corporate Unit nor the Treasury security component of a Treasury Unit will trade separately from Corporate Units or Treasury Units. The Note or applicable ownership interest in the Treasury portfolio component will trade as a unit with the purchase contract component of the Corporate Units, and the Treasury security component will trade as a unit with the purchase contract component of the Treasury Units. In addition, if Treasury Units or Notes are separately traded to a sufficient extent that the applicable exchange listing requirements are met, we may endeavor to cause the Treasury Units or Notes to be listed on the exchange on which the Corporate Units are then listed, including, if applicable, the NYSE. However, there can be no assurance that we will list the Treasury Units or the Notes.

Ranking

The Notes, which are included in the Equity Units, will be our unsecured and unsubordinated obligations and will rank on a parity in right of payment with all of our other unsecured and unsubordinated indebtedness from time to time outstanding. The Notes will be issued under our base indenture and the supplemental indenture (each as defined under “Description of the Remarketable Senior Notes—Ranking”).

Our obligations with respect to contract adjustment payments will be subordinate in right of payment to our existing and future Senior Indebtedness (as defined in the indenture), including the Notes.

The Notes and our obligations with respect to contract adjustments payments will be structurally subordinated to existing or future preferred stock and indebtedness, guarantees and other liabilities, including trade payables, of our subsidiaries.

Our subsidiaries are separate and distinct legal entities from us. Our subsidiaries have no obligation to pay any amounts due on the Notes or the purchase contracts or to provide us with funds to meet our respective payment obligations on the Notes or purchase contracts. Any payment of dividends, loans or advances by our subsidiaries to us could be subject to statutory or contractual restrictions and will be contingent upon the subsidiaries’ earnings and business considerations. Our right to receive any assets of any of our subsidiaries upon their bankruptcy, liquidation

or similar reorganization, and therefore the right of the holders of the Notes or purchase contracts to participate in those assets, will be structurally subordinated to the claims of that subsidiary's creditors, including trade creditors. Even if we are a creditor of any of our subsidiaries, our rights as a creditor would be subordinate to any security interest in the assets of our subsidiaries and any indebtedness of our subsidiaries senior to that held by us. As of December 31, 2020, our subsidiaries have approximately \$9 billion principal amount of indebtedness, which would be senior to our rights as creditors of those companies.

Voting and Certain Other Rights

Prior to the delivery of shares of common stock under each purchase contract, such purchase contract shall not entitle the holder of the Corporate Units or Treasury Units to any rights of a holder of shares of our common stock, including, without limitation, the right to vote or receive any dividends or other payments or distributions or to consent to or to receive notice as a shareholder or other rights in respect of our common stock.

Agreed U.S. Federal Income Tax Treatment

Each beneficial owner of an Equity Unit, by purchasing a Corporate Unit, will be deemed to have agreed (unless otherwise required by any taxing authority) (1) to be treated as the owner of each of the purchase contract, the related Note and the applicable ownership interests in the Treasury portfolio or Treasury security, as the case may be, for U.S. federal, state and local income tax purposes, (2) to treat the Note as indebtedness for all U.S. federal, state and local tax purposes, and (3) to allocate, as of the issue date, 100% of the purchase price paid for the Corporate Units to its ownership interest in the Notes and 0% to each purchase contract, which will establish its initial tax basis in each purchase contract as \$0 and the beneficial owner's initial tax basis in the Note as \$50. This position will be binding on each beneficial owner of each Equity Unit, but not on the IRS.

Repurchase of the Equity Units

We may purchase from time to time any of the Equity Units that are then outstanding by tender, in the open market, by private agreement or otherwise, subject to compliance with applicable law.

DESCRIPTION OF THE PURCHASE CONTRACTS

Purchase of Common Stock

Each purchase contract that is a component of a Corporate Unit or a Treasury Unit will obligate its holder to purchase, and us to issue and deliver, on November 1, 2022 (or if such day is not a business day, the following business day) (the "purchase contract settlement date"), for \$50 in cash a number of shares of our common stock equal to the settlement rate (together with cash, if applicable, in lieu of any fractional shares of common stock in the manner described below), in each case, unless the purchase contract terminates prior to that date or is settled early at the holder's option. The number of shares of our common stock issuable upon settlement of each purchase contract on the purchase contract settlement date (which we refer to as the "settlement rate") will be determined as follows, subject to adjustment as described under "—Anti-dilution Adjustments" below:

- (1) If the applicable market value of our common stock is equal to or greater than the "threshold appreciation price" of \$157.50, the settlement rate will be 0.3175 shares of our common stock (we refer to this settlement rate as the "minimum settlement rate").

Accordingly, if the applicable market value of our common stock is greater than the threshold appreciation price, the aggregate market value of the shares of common stock issued upon settlement of each purchase contract will be higher than the stated amount of \$50 (the "stated amount"), assuming that the market price of the common stock on the purchase contract settlement date is the same as the applicable market value of the common stock. If the applicable market value is the same as the threshold appreciation price, the aggregate market value of the shares issued upon settlement will be

equal to the stated amount, assuming that the market price of the common stock on the purchase contract settlement date is the same as the applicable market value of the common stock.

- (2) If the applicable market value of our common stock is less than the threshold appreciation price but greater than the “reference price” of \$126.00, the settlement rate will be a number of shares of our common stock equal to \$50 *divided by* the applicable market value, rounded to the nearest ten thousandth of a share.

Accordingly, if the applicable market value of our common stock is less than the threshold appreciation price, but greater than the reference price, the aggregate market value of the shares of common stock issued upon settlement of each purchase contract will be equal to the stated amount, assuming that the market price of the common stock on the purchase contract settlement date is the same as the applicable market value of the common stock.

- (3) If the applicable market value of our common stock is less than or equal to the reference price of \$126.00, the settlement rate will be 0.3968 shares of our common stock, which is approximately equal to the stated amount *divided by* the reference price (we refer to this settlement rate as the “maximum settlement rate”).

Accordingly, if the applicable market value of our common stock is less than the reference price, the aggregate market value of the shares of common stock issued upon settlement of each purchase contract will be less than the stated amount, assuming that the market price on the purchase contract settlement date is the same as the applicable market value of the common stock. If the market price of the common stock is the same as the reference price, the aggregate market value of the shares will be equal to the stated amount, assuming that the market price of the common stock on the purchase contract settlement date is the same as the applicable market value of the common stock.

The threshold appreciation price is \$157.50, which is approximately equal to \$50 *divided by* the minimum settlement rate, and represents appreciation of approximately 25% over the reference price.

If a holder elects to settle his/her purchase contract early in the manner described under “—Early Settlement,” the number of shares of our common stock issuable upon settlement of such purchase contract will be 0.3175, the minimum settlement rate, subject to adjustment as described under “—Anti-dilution Adjustments.” If a holder elects to settle his/her purchase contract early upon a fundamental change, the number of shares of our common stock issuable upon settlement will be determined as described under “—Early Settlement Upon a Fundamental Change.” We refer to the minimum settlement rate and the maximum settlement rate as the “fixed settlement rates.”

The “applicable market value” means, as determined by us, the average volume-weighted average price, or VWAP, of our common stock on each trading day during the 20 consecutive scheduled trading day period ending on the third scheduled trading day immediately preceding the purchase contract settlement date (the “market value averaging period”). The “VWAP” of our common stock means, for the relevant trading day, the per share VWAP on the principal exchange or quotation system on which our common stock is listed or admitted for trading as displayed under the heading Bloomberg VWAP on Bloomberg page DTE <EQUITY> AQR (or its equivalent successor if that page is not available) in respect of the period from the scheduled open of trading on the relevant trading day until the scheduled close of trading on the relevant trading day (or if such VWAP is unavailable, the market price of one share of our common stock on such trading day determined, using a volume-weighted average method, by a nationally recognized independent investment banking firm retained for this purpose by us).

A “trading day” means, for purposes of determining a VWAP or closing price, a day (i) on which the principal exchange or quotation system on which our common stock is listed or admitted for trading is scheduled to be open for business and (ii) on which there has not occurred or does not exist a market disruption event.

A “market disruption event” means any of the following events:

- any suspension of, or limitation imposed on, trading by the principal exchange or quotation system on which our common stock is listed or admitted for trading during the one-hour period prior to the close of trading for the regular trading session on such exchange or quotation system (or for purposes of determining VWAP any period or periods prior to 1:00 p.m. New York City time aggregating one half hour or longer) and whether by reason of movements in price exceeding limits permitted by the relevant exchange or quotation system or otherwise relating to our common stock or in futures or options contracts relating to our common stock on the relevant exchange or quotation system; or
- any event (other than a failure to open or, except for purposes of determining VWAP, a closure as described below) that disrupts or impairs the ability of market participants during the one-hour period prior to the close of trading for the regular trading session on the principal exchange or quotation system on which our common stock is listed or admitted for trading (or for purposes of determining VWAP any period or periods prior to 1:00 p.m. New York City time aggregating one half hour or longer) in general to effect transactions in, or obtain market values for, our common stock on the relevant exchange or quotation system or futures or options contracts relating to our common stock on any relevant exchange or quotation system; or
- the failure to open of the principal exchange or quotation system on which futures or options contracts relating to our common stock are traded or, except for purposes of determining VWAP, the closure of such exchange or quotation system prior to its respective scheduled closing time for the regular trading session on such day (without regard to after hours or other trading outside the regular trading session hours) unless such earlier closing time is announced by such exchange or quotation system at least one hour prior to the earlier of the actual closing time for the regular trading session on such day and the submission deadline for orders to be entered into such exchange or quotation system for execution at the actual closing time on such day.

If a market disruption event occurs on any scheduled trading day during the market value averaging period, we will notify investors on the calendar day on which such event occurs.

If 20 trading days for our common stock have not occurred during the market value averaging period, all remaining trading days will be deemed to occur on the third scheduled trading day immediately prior to the purchase contract settlement date and the VWAP of our common stock for each of the remaining trading days will be the VWAP of our common stock on that third scheduled trading day or, if such day is not a trading day, the closing price as of such day.

The “closing price” per share of our common stock means, on any date of determination, the closing sale price or, if no closing sale price is reported, the last reported sale price of our common stock on the principal U.S. securities exchange on which our common stock is listed, or if our common stock is not so listed on a U.S. securities exchange, the average of the last quoted bid and ask prices for our common stock in the over-the-counter market as reported by OTC Markets Group Inc. or similar organization, or, if those bid and ask prices are not available, the market value of our common stock on that date as determined by a nationally recognized independent investment banking firm retained by us for this purpose.

We will not issue any fractional shares of our common stock upon settlement of a purchase contract. Instead of a fractional share, the holder will receive an amount of cash equal to the percentage of a whole share represented by such fractional share, *multiplied by* the closing price of our common stock on the trading day immediately preceding the purchase contract settlement date (or the trading day immediately preceding an early settlement date, in the case of early settlement). If, however, a holder surrenders for settlement at one time more than one purchase contract, then the number of shares of our common stock issuable pursuant to such purchase contracts will be computed based upon the aggregate number of purchase contracts surrendered.

Unless:

- a holder has settled early the related purchase contracts by delivery of cash to the purchase contract agent in the manner described under “—Early Settlement” or “—Early Settlement Upon a Fundamental Change”;

- a holder of Corporate Units has settled the related purchase contracts with separate cash in the manner described under “—Notice to Settle with Cash”; or
- an event described under “—Termination” has occurred;

then, on the purchase contract settlement date,

- in the case of Corporate Units where there has not been a successful optional or final remarketing, the holder will be deemed to have exercised its put right as described under “—Remarketing” (unless it shall have elected not to exercise such put right by delivering cash as described thereunder) and to have elected to apply the proceeds of the put price to satisfy in full the holder’s obligation to purchase our common stock under the related purchase contracts;
- in the case of Corporate Units where the Treasury portfolio or cash has replaced the Notes as a component of the Corporate Units following a successful optional remarketing, the portion of the proceeds of the applicable ownership interests in the Treasury portfolio when paid at maturity or an amount of cash equal to the stated amount of \$50 per Corporate Unit will be applied to satisfy in full the holder’s obligation to purchase common stock under the related purchase contracts and any excess proceeds will be delivered to the purchase contract agent for the benefit of the holders of Corporate Units;
- in the case of Corporate Units where the Notes have been successfully remarketed during the final remarketing period, the portion of the remarketing proceeds sufficient to satisfy the holder’s obligation to purchase our common stock under the related purchase contracts will be applied to satisfy in full the holder’s obligation to purchase common stock under the related purchase contracts and any excess proceeds will be delivered to the purchase contract agent for the benefit of the holders of Corporate Units; and
- in the case of Treasury Units, the proceeds of the related Treasury securities, when paid at maturity, will be applied to satisfy in full the holder’s obligation to purchase our common stock under the related purchase contracts and any excess proceeds will be delivered to the purchase contract agent for the benefit of the holders of Treasury Units.

The common stock will then be issued and delivered to the holder or the holder’s designee on the purchase contract settlement date. We will pay all stock transfer and similar taxes attributable to the initial issuance and delivery of the shares of our common stock pursuant to the purchase contracts, unless any such tax is due because the holder requests such shares to be issued in a name other than such holder’s name.

Prior to the settlement of a purchase contract, the shares of our common stock underlying each purchase contract will not be outstanding, and the holder of the purchase contract will not have any voting rights, rights to dividends or other distributions or other rights of a holder of our common stock by virtue of holding such purchase contract.

By purchasing a Corporate Unit or a Treasury Unit, a holder will be deemed to have, among other things:

- irrevocably appointed the purchase contract agent as its attorney-in-fact to enter into and perform the related purchase contract and the purchase contract and pledge agreement in the name of and on behalf of such holder;
- agreed to be bound by the terms and provisions of the Corporate Units or Treasury Units, as applicable, including, but not limited to, the terms of the related purchase contract and the purchase contract and pledge agreement, for so long as the holder remains a holder of Corporate Units or Treasury Units;

- consented to and agreed to be bound by the pledge of such holder’s right, title and interest in and to its undivided beneficial ownership interest in Notes, the portion of the Treasury portfolio (or cash) described in the first clause of the definition of “applicable ownership interest,” or the Treasury securities, as applicable, and the delivery of such collateral by the purchase contract agent to the collateral agent; and
- agreed to the satisfaction of the holder’s obligations under the purchase contracts with the proceeds of the pledged undivided beneficial ownership in the Notes, Treasury portfolio (or cash), Treasury securities or put price, as applicable, in the manner described above.

Remarketing

We have agreed to enter into a remarketing agreement with one or more remarketing agents, the “remarketing agent,” no later than 20 days prior to the first day of the final remarketing period or, if we elect to conduct an optional remarketing, no later than 20 days prior to the first day of the optional remarketing period.

During a blackout period that relates to each remarketing period:

- holders may not settle a purchase contract early;
- holders may not create Treasury Units; and
- holders may not recreate Corporate Units from Treasury Units.

We refer to each of an “optional remarketing” and a “final remarketing” as a “remarketing.” In a remarketing, the Notes that are a part of Corporate Units whose holder has not elected to settle the purchase contract through payment of separate cash (in the case of a final remarketing), and any separate Notes whose holders have elected to participate in the remarketing, as described under “Description of the Remarketable Senior Notes—Remarketing of the Notes That Are Not Included in Corporate Units,” will be remarketed.

In consultation with the remarketing agent and without the consent of any holders of Notes, we may elect in connection with a remarketing (but shall not be required to elect) to:

- move up the maturity date of the Notes to a date earlier than November 1, 2025, but not earlier than November 1, 2024;
- reset the interest rate on the Notes as described below and under “Description of the Remarketable Senior Notes—Interest Rate Reset” below; and
- remarket the Notes as fixed-rate notes or floating-rate notes and, in the case of floating-rate notes, provide that the interest on the Notes will be equal to an interest rate index determined by us *plus* a spread determined by the remarketing agent, in consultation with us, in which case interest on the Notes may be calculated on the basis of a 365 day year and the actual number of days elapsed (or such other basis as is customarily used for floating-rate notes bearing interest at a rate based on such interest rate index).

All such modifications will take effect only if the remarketing is successful, without the consent of holders, on the settlement date of the remarketing, and will apply to all Notes, whether or not included in the remarketing. See “Description of the Remarketable Senior Notes—Remarketing.” If we conduct an optional remarketing that is not successful, we may make different elections for the final remarketing period.

In order to remarket the Notes, the remarketing agent, in consultation with us, may reset the interest rate on the Notes (either upward or downward) or, if the Notes are remarketed as floating-rate notes, determine the interest rate spread applicable to the Notes, in order to produce the required price in the remarketing, as discussed under “—Optional Remarketing” and “—Final Remarketing” below. The Notes will not be redeemable at our option after a successful remarketing (in which case the provisions described under “Description of the Remarketable Senior Notes—Redemption at Our Option” and “—Redemption Procedures” will no longer apply to the Notes).

We will use commercially reasonable efforts to ensure that, if required by applicable law, a registration statement, including a prospectus, with regard to the full amount of the Notes to be remarketed will be effective under the securities laws in a form that may be used by the remarketing agent in connection with the remarketing (unless a registration statement is not required under the applicable laws and regulations that are in effect at that time or unless we conduct any remarketing in accordance with an exemption under the securities laws).

We will separately pay a fee to the remarketing agent for its services as remarketing agent. Holders whose Notes are remarketed will not be responsible for the payment of any remarketing fee in connection with the remarketing.

Optional Remarketing

Unless a termination event has occurred, we may elect, at our option, to engage the remarketing agent pursuant to the terms of the remarketing agreement, to remarket the Notes over a period selected by us that begins on or after July 28, 2022 (the second business day immediately preceding the last interest payment date prior to the purchase contract settlement date) and ends any time on or before October 13, 2022 (the eighth calendar day immediately preceding the first day of the final remarketing period). We refer to this period as the “optional remarketing period,” a remarketing that occurs during the optional remarketing period as an “optional remarketing” and the date the Notes are priced in an optional remarketing as the “optional remarketing date.” In any optional remarketing, the aggregate principal amount of the Notes that are a part of Corporate Units and any separate Notes whose holders have elected to participate in the optional remarketing, as described under “Description of the Remarketable Senior Notes—Remarketing of the Notes That Are Not Included in Corporate Units,” will be remarketed. If we elect to conduct an optional remarketing, the remarketing agent will use its commercially reasonable efforts to obtain a price for the Notes that results in proceeds of at least 100% of the aggregate of the Treasury portfolio purchase price (as defined below) and the separate Notes purchase price (as defined below). To obtain that price, the remarketing agent may, in consultation with us, reset the interest rate on the Notes remarketed as fixed-rate notes, or determine the interest rate spread for the Notes remarketed as floating-rate notes, as described under “Description of the Remarketable Senior Notes—Interest Rate Reset.” We will request that the depository notify its participants holding Corporate Units, Treasury Units and separate Notes of our election to conduct an optional remarketing no later than five business days prior to the date we begin the optional remarketing. In such notice, we will set forth the dates of such optional remarketing, applicable procedures for holders of separate Notes to participate in the optional remarketing, the applicable procedures for holders of Corporate Units to create Treasury Units and for holders of Treasury Units to recreate Corporate Units, the applicable procedures for holders of Corporate Units to settle their purchase contracts early and any other applicable procedures, and any elections we have made in connection with such remarketing.

An optional remarketing on any remarketing date will be considered successful if the remarketing agent is able to remarket the Notes for a price of at least 100% of the Treasury portfolio purchase price and the separate Notes purchase price.

Following a successful optional remarketing of the Notes, on the optional remarketing settlement date (as defined below), the portion of the remarketing proceeds equal to the Treasury portfolio purchase price will, except as described below, be used to purchase the Treasury portfolio and the remaining proceeds attributable to the Notes underlying the Corporate Units will be remitted to the purchase contract agent for distribution pro rata to the holders of such Corporate Units. The portion of the proceeds attributable to the separate Notes sold in the remarketing will be remitted to the custodial agent for distribution on the optional remarketing settlement date pro rata to the holders of such separate Notes.

If we elect to conduct an optional remarketing and the remarketing is successful:

- settlement with respect to the remarketed Notes will occur on the third business day following the optional remarketing date, unless the remarketed Notes are priced after 4:30 p.m. New York time on the optional remarketing date, in which case settlement will occur on the fourth business day following the optional remarketing date (we refer to such settlement date as the “optional remarketing settlement date”);
- the interest rate on the Notes will be reset or, if we remarketed the Notes as floating-rate notes, the interest rate spread will be determined, by the remarketing agent in consultation with us on the optional remarketing date and will become effective on the optional remarketing settlement date;
- except in the case when the Notes are remarketed as floating-rate notes, interest on the Notes will be payable semi-annually;
- the Notes will cease to be redeemable at our option, and the provisions described under “Description of the Remarketable Senior Notes—Redemption at Our Option” and “—Redemption Procedures” will no longer apply to the Notes;
- the other modifications to the terms of the Notes, as described under “—Remarketing,” will become effective;
- after the optional remarketing settlement date, your Corporate Units will consist of a purchase contract and the applicable ownership interest in the Treasury portfolio (or cash), as described herein; and
- you may no longer create Treasury Units, recreate Corporate Units from Treasury Units or cash settle your obligation under the purchase contract (as described below under “—Notice to Settle with Cash”).

If we do not elect to conduct an optional remarketing during the optional remarketing period or no optional remarketing succeeds for any reason, the Notes will continue to be a component of the Corporate Units or will continue to be held separately and the remarketing agent will use its commercially reasonable efforts to remarket the Notes during the final remarketing period.

For the purposes of a successful optional remarketing, “Treasury portfolio purchase price” means the lowest aggregate ask-side price quoted by a primary U.S. government securities dealer in New York City to the quotation agent selected by us between 9:00 a.m. and 4:00 p.m., New York City time, on the optional remarketing date for the purchase of the Treasury portfolio for settlement on the optional remarketing settlement date; *provided* that if the Treasury portfolio consists of cash, “Treasury portfolio purchase price” means the amount of such cash.

Following a successful optional remarketing and receipt of the proceeds, the collateral agent will purchase, at the Treasury portfolio purchase price, a Treasury portfolio consisting of:

- U.S. Treasury securities (or principal or interest strips thereof) that mature on or prior to the purchase contract settlement date in an aggregate amount at maturity equal to the principal amount of the Notes underlying the undivided beneficial ownership interests in Notes included in the Corporate Units on the optional remarketing date; and
- U.S. Treasury securities (or principal or interest strips thereof) that mature on or prior to the purchase contract settlement date in an aggregate amount equal to the aggregate interest payment (assuming no reset of the interest rate) that would have been paid to the holders of the Corporate Units on the purchase contract settlement date on the principal amount of the Notes underlying the undivided beneficial ownership interests in Notes included in the Corporate Units on the optional remarketing date.

If U.S. Treasury securities (or principal or interest strips thereof) that are to be included in the Treasury portfolio in connection with a successful optional remarketing have a yield that is less than zero, the Treasury portfolio will consist of an amount in cash equal to the aggregate principal amount at maturity of the U.S. Treasury securities described in the bullet points above. If the provisions set forth in this paragraph apply, references in this prospectus supplement to a “Treasury security” and “U.S. Treasury securities (or principal or interest strips thereof)” in connection with the Treasury portfolio will, thereafter, be deemed to be references to such amount in cash.

The applicable ownership interests in the Treasury portfolio will be substituted for the undivided beneficial ownership interests in Notes that are components of the Corporate Units and the portion of the Treasury portfolio described in the first bullet above will be pledged to us through the collateral agent to secure the Corporate Unit holders’ obligation under the purchase contracts. On the purchase contract settlement date, for each Corporate Unit, \$50 of the proceeds from the Treasury portfolio will automatically be applied to satisfy the Corporate Unit holder’s obligation to purchase common stock under the purchase contract. In addition, proceeds from the portion of the Treasury portfolio described in the second bullet, which will equal the interest payment (assuming no reset of the interest rate) that would have been paid on the Notes that were components of the Corporate Units at the time of remarketing, will be paid on the purchase contract settlement date to the holders of the Corporate Units.

If we elect to remarket the Notes during the optional remarketing period and a successful remarketing has not occurred on or prior to October 13, 2022, notice of the failed remarketing will be published no later than 9:00 a.m., New York City time, on the business day immediately following the last date of the optional remarketing period. This notice will be validly published by making a timely release to any appropriate news agency, including Bloomberg Business News and the Dow Jones News Service. We will similarly cause a notice of a successful remarketing of the Notes to be published no later than 9:00 a.m., New York City time, on the business day immediately following the date of such successful remarketing.

On each business day during any optional remarketing period, we have the right in our sole and absolute discretion to determine whether or not an optional remarketing will be attempted. At any time and from time to time during the optional remarketing period prior to the announcement of a successful optional remarketing, we have the right to postpone any optional remarketing in our sole and absolute discretion.

Final Remarketing

Unless a termination event or a successful optional remarketing has previously occurred, we will remarket the Notes during the five business day period ending on, and including, October 27, 2022 (the third business day immediately preceding the purchase contract settlement date). We refer to this period as the “final remarketing period,” the remarketing during this period as the “final remarketing” and the date the Notes are priced in the final marketing as the “final remarketing date.” In the final remarketing, the aggregate principal amount of the Notes that are a part of Corporate Units whose holder has not elected to settle the purchase contract through payment of separate cash and any separate Notes whose holders have elected to participate in the final remarketing will be remarketed. The remarketing agent will use its commercially reasonable efforts to obtain a price for the Notes to be remarketed that results in proceeds of at least 100% of the principal amount of all the Notes offered in the remarketing. To obtain that price, the remarketing agent, in consultation with us, may reset the interest rate on the Notes if the Notes are remarketed as fixed-rate notes, or determine the interest rate spread on the Notes if the Notes are remarketed as floating-rate notes, as described under “Description of the Remarketable Senior Notes—Interest Rate Reset.” We will request that the depository notify its participants holding Corporate Units, Treasury Units and separate Notes of the final remarketing no later than seven days prior to the first day of the final remarketing period. In such notice, we will set forth the dates of the final remarketing period, applicable procedures for holders of separate Notes to participate in the final remarketing, the applicable procedures for holders of Corporate Units to create Treasury Units and for holders of Treasury Units to recreate Corporate Units, the applicable procedures for holders of Corporate Units to settle their purchase contracts early or settle with separate cash and any other applicable procedures, including the procedures that must be followed by a holder of separate Notes in the case of a failed remarketing if a holder of separate Notes wishes to exercise its right to put its Notes to us as described below and under “Description of the Remarketable Senior Notes—Put Option upon Failed Remarketing” and any elections

we have made in connection with such remarketing. We have the right to postpone the final remarketing in our sole and absolute discretion on any day prior to the last three business days of the final remarketing period.

A remarketing during the final remarketing period will be considered successful if the remarketing agent is able to remarket the Notes for a price of at least 100% of the aggregate principal amount of all the Notes offered in the remarketing.

If the final remarketing is successful:

- settlement with respect to the remarketed Notes will occur on the purchase contract settlement date;
- the interest rate of the Notes will be reset or, if the Notes were remarketed as floating-rate notes, the interest rate spread will be determined, by the remarketing agent in consultation with us, and will become effective on the reset effective date, which will be the purchase contract settlement date, as described under “Description of the Remarketable Senior Notes—Interest Rate Reset” below;
- except in the case when the Notes are remarketed as floating-rate notes, interest on the Notes will be payable semi-annually;
- the Notes will cease to be redeemable at our option, and the provisions described under “Description of the Remarketable Senior Notes—Redemption at Our Option” and “—Redemption Procedures” will no longer apply to the Notes;
- the other modifications to the terms of the Notes, as described under “—Remarketing,” will become effective;
- holders may no longer (i) create Treasury Units, (ii) recreate Corporate Units from Treasury Units or (iii) cash settle your obligation under the purchase contract if such election was not made prior to 4:00 p.m., New York City time, on the second business day immediately prior to the first day of the final remarketing period (as described under “—Notice to Settle with Cash” below); and
- the collateral agent will remit the portion of the proceeds it receives equal to the total principal amount of the Notes underlying the Corporate Units to us to satisfy in full the Corporate Unit holders’ obligations to purchase common stock under the related purchase contracts, any excess proceeds attributable to Notes underlying Corporate Units that were remarketed will be remitted to the purchase contract agent for distribution pro rata to the holders of such Notes and proceeds from the final remarketing attributable to the separate Notes remarketed will be remitted to the custodial agent for distribution pro rata to the holders of the remarketed separate Notes.

Unless a termination event has occurred, a holder has effected an early settlement or a fundamental change early settlement, or there has been a successful optional remarketing, each Corporate Unit holder has the option at any time on or after the date we give notice of a final remarketing to notify the purchase contract agent at any time prior to 4:00 p.m., New York City time, on the second business day immediately prior to the first day of the final remarketing period of its intention to settle the related purchase contracts on the purchase contract settlement date with separate cash and to provide that cash on or prior to the business day immediately prior to the first day of the final remarketing period, as described under “—Notice to Settle with Cash.” The Notes of any holder of Corporate Units who has not given this notice or failed to deliver the cash will be remarketed during the final remarketing period. Separately, if the final remarketing is a failed remarketing (as defined below), holders of Corporate Units may also elect to settle their purchase contracts with separate cash prior to 4:00 p.m., New York City time, on the second business day immediately prior to the purchase contract settlement date, as described below. In addition, holders of Notes that do not underlie Corporate Units may elect to participate in the remarketing as described under “Description of the Remarketable Senior Notes—Remarketing of Notes That Are Not Included in Corporate Units.”

If, in spite of using its commercially reasonable efforts, the remarketing agent cannot remarket the Notes during the final remarketing period at a price equal to or greater than 100% of the aggregate principal amount of the Notes offered in the remarketing, a condition precedent set forth in the remarketing agreement has not been fulfilled or a successful remarketing has not occurred for any other reason, in each case resulting in a “failed remarketing,” holders of all Notes will have the right to put their Notes to us for an amount equal to the principal amount of their Notes (the “put price”). The conditions precedent in the remarketing agreement will include, but not be limited to, the timely filing with the Securities and Exchange Commission of all material related to the remarketing required to be filed by us, the truth and correctness of certain representations and warranties made by us in the remarketing agreement, the furnishing of certain officer’s certificates to the remarketing agent, and the receipt by the remarketing agent of customary “comfort letters” from our auditors and opinions of counsel. A holder of Corporate Units will be deemed to have automatically exercised this put right with respect to the Notes underlying such Corporate Units unless the holder has provided a written notice to the purchase contract agent of its intention to settle the purchase contract with separate cash as described below under “—Notice to Settle with Cash” prior to 4:00 p.m., New York City time, on the second business day immediately prior to the purchase contract settlement date, and on or prior to the business day immediately preceding the purchase contract settlement date has delivered the \$50 in cash per purchase contract. Settlement with separate cash may only be effected in integral multiples of 20 Corporate Units. If a holder of Corporate Units elects to settle with separate cash, upon receipt of the required cash payment, the related Notes underlying the Corporate Units will be released from the pledge under the purchase contract and pledge agreement and delivered promptly to the purchase contract agent for delivery to the holder. The holder of the Corporate Units will then receive the applicable number of shares of our common stock on the purchase contract settlement date. The cash received by the collateral agent upon this settlement with separate cash may be invested in permitted investments, as defined in the purchase contract and pledge agreement, and the portion of the proceeds equal to the aggregate purchase price of all purchase contracts of such holders will be paid to us on the purchase contract settlement date. Any excess funds received by the collateral agent in respect of any such permitted investments over the aggregate purchase price remitted to us in satisfaction of the obligations of the holders under the purchase contracts will be distributed to the purchase contract agent for ratable payment to the applicable holders who settled with separate cash. Unless a holder of Corporate Units has elected to settle the related purchase contracts with separate cash and delivered the separate cash on or prior to the business day immediately preceding the purchase contract settlement date, the holder will be deemed to have elected to apply the put price against the holder’s obligations to pay the aggregate purchase price for the shares of our common stock to be issued under the related purchase contracts, thereby satisfying the obligations in full, and we will deliver to the holder our common stock pursuant to the related purchase contracts.

If a successful final remarketing has not occurred on or prior to October 27, 2022 (the last day of the final remarketing period), we will cause a notice of the failed remarketing of the Notes to be published no later than 9:00 a.m., New York City time, on the business day immediately following the last date of the final remarketing period. This notice will be validly published by making a timely release to any appropriate news agency, including Bloomberg Business News and the Dow Jones News Service.

Early Settlement

Subject to the conditions described below, a holder of Corporate Units or Treasury Units may settle the related purchase contracts at any time prior to 4:00 p.m., New York City time, on the second business day immediately preceding the purchase contract settlement date, other than during a blackout period. An early settlement may be made only in integral multiples of 20 Corporate Units or 20 Treasury Units; however, if the Treasury portfolio has replaced the Notes as a component of the Corporate Units following a successful optional remarketing, holders of Corporate Units may settle early only in integral multiples of 32,000 Corporate Units. In order to settle purchase contracts early, a holder of Equity Units must deliver to the purchase contract agent at the corporate trust office of the purchase contract agent or its agent, in each case, in the Borough of Manhattan, The City of New York, (1) a completed “Election to Settle Early” form, along with the Corporate Unit or Treasury Unit certificate, if they are in certificated form and (2) a cash payment in immediately available funds in an amount equal to:

- \$50 times the number of purchase contracts being settled; *plus*

- if the early settlement date occurs during the period from the close of business on any record date next preceding any contract adjustment payment date to the opening of business on such contract adjustment payment date, an amount equal to the contract adjustment payments payable on such contract adjustment payment date, unless we have elected to defer the contract adjustment payments payable on such contract adjustment payment date.

So long as you hold Equity Units as a beneficial interest in a global security certificate deposited with the depository, procedures for early settlement will also be governed by applicable depository procedures and standing arrangements between the depository and the purchase contract agent.

The early settlement right is also subject to the condition that, if required under U.S. federal securities laws, we have a registration statement under the Securities Act in effect with respect to the shares of common stock and other securities, if any, deliverable upon settlement of a purchase contract. We have agreed that, if such a registration statement is required, we will use our commercially reasonable efforts to (1) have a registration statement in effect covering those shares of common stock and other securities, if any, to be delivered in respect of the purchase contracts being settled and (2) provide a prospectus in connection therewith, in each case in a form that may be used in connection with the early settlement right (it being understood that if there is a material business transaction or development that has not yet been publicly disclosed, we will not be required to file such registration statement or provide such a prospectus, and the early settlement right will not be available, until we have publicly disclosed such transaction or development; *provided* that we will use commercially reasonable efforts to make such disclosure as soon as it is commercially reasonable to do so). In the event that a holder seeks to exercise its early settlement right and a registration statement is required to be effective in connection with the exercise of such right but no such registration statement is then effective, the holder's exercise of such right will be void unless and until such a registration statement is effective.

Upon early settlement, except as described below in “—Early Settlement Upon a Fundamental Change,” we will sell, and the holder will be entitled to buy, the minimum settlement rate of 0.3175 shares of our common stock (or in the case of an early settlement following a reorganization event, such number of exchange property units, as described under “—Reorganization Events” below) for each purchase contract being settled (regardless of the market price of our common stock on the date of early settlement), subject to adjustment under the circumstances described under “—Anti-dilution Adjustments” below. We will cause, on the third business day after the applicable early settlement date, (1) the shares of our common stock to be issued and (2) the related Notes or applicable ownership interests in the Treasury portfolio or Treasury securities, as the case may be, underlying the Equity Units and securing such purchase contracts to be released from the pledge under the purchase contract and pledge agreement, and delivered to the purchase contract agent for delivery to the holder. Upon early settlement, the holder will be entitled to receive any accrued and unpaid contract adjustment payments (including any accrued and unpaid deferred contract adjustment payments and compounded contract adjustment payments thereon) to, but excluding, the contract adjustment payment date immediately preceding the early settlement date. The holder's right to receive future contract adjustment payments will also terminate.

If the purchase contract agent receives a completed “Election to Settle Early” form (along with the Corporate Unit or Treasury Unit certificate, if they are in certificated form) and payment of \$50 for each purchase contract being settled (and, if required, an amount equal to the contract adjustment payments payable on the next contract adjustment payment date) prior to 4:00 p.m., New York City time, on any business day and all conditions to early settlement have been satisfied, then that day will be considered the early settlement date. If the purchase contract agent receives the foregoing at or after 4:00 p.m., New York City time, on any business day or at any time on a day that is not a business day, then the next business day will be considered the early settlement date.

Early Settlement Upon a Fundamental Change

If a “fundamental change” (as defined below) occurs prior to the 20th business day preceding the purchase contract settlement date, then, following the fundamental change, each holder of a purchase contract, other than during a blackout period and subject to certain conditions described in this prospectus supplement, will have the right to accelerate and settle the purchase contract early on the fundamental change early settlement date (defined

below) at the settlement rate determined as if the applicable market value equaled the stock price (as defined below), *plus* an additional make-whole amount of shares (such additional make-whole amount of shares being hereafter referred to as the “make-whole shares”). We refer to this right as the “fundamental change early settlement right.”

We will provide each of the holders and the purchase contract agent with a notice of the completion of a fundamental change within 10 business days after the effective date of a fundamental change. The notice will specify (1) a date (subject to postponement as described below, the “fundamental change early settlement date”), which will be at least 10 days after the date of the notice but no later than the earlier of 20 days after the date of such notice and one business day prior to the purchase contract settlement date, on which date we will deliver shares of our common stock to holders who exercise the fundamental change early settlement right, (2) the date by which holders must exercise the fundamental change early settlement right, (3) the applicable settlement rate and number of make-whole shares, (4) the amount and kind (per share of common stock) of the cash, securities and other consideration receivable by the holder upon settlement and (5) the amount of accrued and unpaid contract adjustment payments (including any deferred contract adjustment payments and compounded contract adjustment payments thereon), if any, that will be paid upon settlement to holders exercising the fundamental change early settlement right. To exercise the fundamental change early settlement right, a holder must deliver to the purchase contract agent at the corporate trust office of the purchase contract agent or its agent, in each case, in the Borough of Manhattan, The City of New York, during the period beginning on the date we deliver notice that a fundamental change has occurred and ending at 4:00 p.m., New York City time, on the third business day immediately preceding the fundamental change early settlement date (such period, subject to extension as described below, the “fundamental change exercise period”), the certificate evidencing your Corporate Units or Treasury Units if they are held in certificated form, and payment of \$50 for each purchase contract being settled in immediately available funds.

A “fundamental change” will be deemed to have occurred if any of the following occurs:

- (1) a “person” or “group” within the meaning of Section 13(d) of the Exchange Act has become the direct or indirect “beneficial owner,” as defined in Rule 13d-3 under the Exchange Act, of shares of our common stock representing more than 50% of the voting power of our common stock;
- (2) (A) we are involved in a consolidation with or merger into any other person, or any merger of another person into us, or any other similar transaction or series of related transactions, in each case, in which 90% or more of the outstanding shares of our common stock are exchanged for or converted into cash, securities or other property, greater than 10% of the value of which consists of cash, securities or other property that is not (or will not be upon or immediately following the effectiveness of such consolidation, merger or other transaction) common stock listed on the NYSE, the NASDAQ Global Select Market or the NASDAQ Global Market (or any of their respective successors) (the “listed stock condition”) or (B) the consummation of any sale, lease or other transfer in one transaction or a series of related transactions of all or substantially all of our consolidated assets to any person other than one of our subsidiaries;
- (3) our common stock ceases to be listed on at least one of the NYSE, the NASDAQ Global Select Market and the NASDAQ Global Market (or any of their respective successors); or
- (4) our shareholders approve our liquidation, dissolution or termination.

If any transaction in which our common stock is replaced by the securities of another entity occurs, following completion of any related fundamental change exercise period (or, in the case of a transaction that would have been a fundamental change but for the inapplicability of the listed stock condition in clause (2)(A) of the definition of “fundamental change,” following the effective date of such transaction), references to us in the definition of “fundamental change” above shall instead be references to such other entity.

If a holder exercises the fundamental change early settlement right, we will deliver on the fundamental change early settlement date for each purchase contract with respect to which such holder has elected fundamental change early settlement, a number of shares (or exchange property units, if applicable) equal to the settlement rate described above *plus* the additional make-whole shares. In addition, on the fundamental change early settlement date, we will pay the holder the amount of any accrued and unpaid contract adjustment payments (including any deferred contract adjustment payments and compounded contract adjustment payments thereon) to, but excluding, the fundamental change early settlement date, unless the date on which the fundamental change early settlement right is exercised occurs following any record date and prior to the related scheduled contract adjustment payment date, and we are not deferring the related contract adjustment payment, in which case we will instead pay all accrued and unpaid contract adjustment payments to the holder as of such record date. Such holder will also receive on the fundamental change early settlement date the Notes or the applicable ownership interest in the Treasury portfolio or Treasury securities underlying the Corporate Units or Treasury Units, as the case may be, with respect to which such holder is effecting a fundamental change early settlement, which, in each case, shall have been released from the pledge under the purchase contract and pledge agreement. If a holder do not elect to exercise your fundamental change early settlement right, his/her Corporate Units or Treasury Units will remain outstanding and will be subject to normal settlement on the purchase contract settlement date.

We have agreed that, if required under the U.S. federal securities laws, we will use our commercially reasonable efforts to (1) have in effect throughout the fundamental change exercise period a registration statement covering the common stock and other securities, if any, to be delivered in respect of the purchase contracts being settled and (2) provide a prospectus in connection therewith, in each case in a form that may be used in connection with the fundamental change early settlement (it being understood that for so long as there is a material business transaction or development that has not yet been publicly disclosed (but in no event for a period longer than 90 days), we will not be required to file such registration statement or provide such a prospectus, and the fundamental change early settlement right will not be available, until we have publicly disclosed such transaction or development; *provided* that we will use commercially reasonable efforts to make such disclosure as soon as it is commercially reasonable to do so). In the event that a holder seeks to exercise its fundamental change early settlement right and a registration statement is required to be effective in connection with the exercise of such right but no such registration statement is then effective or a blackout period is continuing, the holder's exercise of such right will be void unless and until such a registration statement is effective and no blackout period is continuing. The fundamental change exercise period will be extended by the number of days during such period on which no such registration statement is effective or a blackout period is continuing (*provided* that the fundamental change exercise period will not be extended beyond the fourth business day preceding the purchase contract settlement date) and the fundamental change early settlement date will be postponed to the third business day following the end of the fundamental change exercise period. If, but for the proviso contained in the immediately preceding sentence, the fundamental change early settlement date would occur on or after the purchase contract settlement date, we will deliver to any holder of purchase contracts on the purchase contract settlement date the applicable number of make-whole shares in addition to a number of shares equal to the settlement rate, determined as if the applicable market value were equal to the relevant stock price.

Unless the Treasury portfolio has replaced the Notes as a component of the Corporate Units as result of a successful remarketing, holders of Corporate Units may exercise the fundamental change early settlement right only in integral multiples of 20 Corporate Units. If the Treasury portfolio has replaced the Notes as a component of Corporate Units, holders of the Corporate Units may exercise the fundamental change early settlement right only in integral multiples of 32,000 Corporate Units.

A holder of Treasury Units may exercise the fundamental change early settlement right only in integral multiples of 20 Treasury Units.

Calculation of Make-Whole Shares. The number of make-whole shares per purchase contract applicable to a fundamental change early settlement will be calculated by us and will be determined by reference to the table below, based on the date on which the fundamental change occurs or becomes effective (the "effective date") and the "stock price" in the fundamental change, which will be:

- in the case of a fundamental change described in clause (2) above where the holders of our common stock receive only cash in the fundamental change, the cash amount paid per share of our common stock; or
- otherwise, the average of the closing prices of our common stock over the 20 trading-day period ending on the trading day immediately preceding the effective date of the fundamental change.

Effective Date	\$	45.00 \$	65.00 \$	85.00 \$	105.00 \$	126.00 \$	140.00 \$	157.50 \$	190.00 \$	225.00 \$	260.00 \$	295.00 \$	330.00 \$	365.00 \$	400.00
November 1, 2019		0.0933	0.0634	0.0450	0.0259	0.0000	0.0278	0.0518	0.0329	0.0231	0.0184	0.0156	0.0136	0.0120	0.0108
November 1, 2020		0.0632	0.0431	0.0312	0.0171	0.0000	0.0188	0.0414	0.0228	0.0153	0.0122	0.0105	0.0092	0.0081	0.0073
November 1, 2021		0.0321	0.0219	0.0164	0.0092	0.0000	0.0095	0.0283	0.0110	0.0073	0.0061	0.0053	0.0046	0.0041	0.0037
November 1, 2022		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

The stock prices set forth in the second row of the table (i.e., the column headers) will be adjusted upon the occurrence of certain events requiring anti-dilution adjustments to the fixed settlement rates in a manner inversely proportional to the adjustments to the fixed settlement rates.

Each of the make-whole share amounts in the table will be subject to adjustment in the same manner and at the same time as the fixed settlement rates as set forth under “—Anti-dilution Adjustments.”

The exact stock price and effective date applicable to a fundamental change may not be set forth on the table, in which case:

- if the stock price is between two stock prices on the table or the effective date is between two effective dates on the table, the amount of make-whole shares will be determined by straight line interpolation between the make-whole share amounts set forth for the higher and lower stock prices and the two effective dates based on a 365-day year, as applicable;
- if the stock price is in excess of \$400.00 per share (subject to adjustment in the same manner as the stock prices set forth in the second row of the table as described above), then the make-whole share amount will be zero; and
- if the stock price is less than \$45.00 per share (subject to adjustment in the same manner as the stock prices set forth in the second row of the table as described above) (the “minimum stock price”), then the make-whole share amount will be determined as if the stock price equaled the minimum stock price, using straight line interpolation, as described above, if the effective date is between two effective dates on the table.

Notice to Settle with Cash

Unless a termination event has occurred, a holder effects an early settlement or a fundamental change early settlement with respect to the underlying purchase contract, or a successful remarketing has occurred, a holder of Corporate Units may settle the related purchase contract with separate cash by delivering the Corporate Unit certificate, if in certificated form, to the purchase contract agent at the corporate trust office of the purchase contract agent or its agent, in each case, in the Borough of Manhattan, The City of New York, with the completed “Notice to Settle with Cash” form at any time on or after the date we give notice of a final remarketing and prior to 4:00 p.m.,

New York City time on the second business day immediately preceding the first day of the final remarketing period. Separately, unless a termination event has occurred or a holder effects an early settlement or a fundamental change early settlement with respect to the underlying purchase contract, if there is a failed final remarketing, a holder of Corporate Units may settle the related purchase contract with separate cash (in lieu of exercising its put right with respect to the Notes as described in “Description of the Remarketable Senior Notes—Put Option upon Failed Remarketing” below) by delivering the Corporate Unit certificate, if in certificated form, to the purchase contract agent at the corporate trust office of the purchase contract agent or its agent, in each case, in the Borough of Manhattan, The City of New York, with the completed “Notice to Settle with Cash” form at any time on or after the date we give notice of the failed final remarketing and prior to 4:00 p.m., New York City time, on the second business day immediately preceding the purchase contract settlement date.

Holders of Corporate Units may only cash-settle Corporate Units in integral multiples of 20 Corporate Units.

The holder must also deliver to the securities intermediary the required cash payment in immediately available funds. Such payment must be delivered prior to 4:00 p.m., New York City time, on the first business day immediately preceding the final remarketing period or, if such cash settlement is in connection with a failed final remarketing, on the first business day immediately preceding the purchase contract settlement date.

Upon receipt of the cash payment, the related Note will be released from the pledge arrangement and transferred to the purchase contract agent for distribution to the holder of the related Corporate Units. The holder of the Corporate Units will then receive the applicable number of shares of our common stock on the purchase contract settlement date.

If a holder of Corporate Units that has given notice of its election to settle with cash fails to deliver the cash by the applicable time and date specified above, such holder shall be deemed to have consented to the disposition of its Notes in the final remarketing, or to have exercised its put right (as described under “—Remarketing” above), in each case, as applicable.

Any cash received by the collateral agent upon cash settlement may, upon our written direction, be invested in permitted investments, as defined in the purchase contract and pledge agreement, and the portion of the proceeds equal to the aggregate purchase price of all purchase contracts of such holders will be paid to us on the purchase contract settlement date. Any excess funds received by the collateral agent in respect of permitted investments over the aggregate purchase price remitted to us in satisfaction of the obligations of the holders under the purchase contracts will be distributed to the purchase contract agent for payment to the holders who settled with cash.

Contract Adjustment Payments

Contract adjustment payments in respect of Corporate Units and Treasury Units will be fixed at a rate per year of 4.00% of the stated amount of \$50 per purchase contract. Contract adjustment payments payable for any period will be computed on the basis of a 360-day year of twelve 30-day months. Contract adjustment payments will accrue from the date of issuance of the purchase contracts and will be payable quarterly in arrears on February 1, May 1, August 1 and November 1 of each year, commencing February 1, 2020.

Contract adjustment payments will be payable to the holders of purchase contracts as they appear on the books and records of the purchase contract agent at the close of business on the relevant record dates, which will be the 15th day of the month immediately preceding the month in which the relevant payment date falls (whether or not a business day). These distributions will be paid through the purchase contract agent, which will hold amounts received in respect of the contract adjustment payments for the benefit of the holders of the purchase contracts relating to the Equity Units. Subject to any applicable laws and regulations, each such payment will be made as described under “Certain Provisions of the Purchase Contract and Pledge Agreement—Book-Entry System.”

If any date on which contract adjustment payments are to be made on the purchase contracts related to the Corporate Units or Treasury Units is not a business day, then payment of the contract adjustment payments payable

on that date will be made on the next succeeding day that is a business day, and no interest or payment will be paid in respect of the delay.

For the avoidance of doubt, subject to our right to defer contract adjustment payments, all record holders of purchase contracts on any record date will be entitled to receive the full contract adjustment payment due on the related contract adjustment payment date regardless of whether the holder of such purchase contract elects to settle such purchase contract early (whether at its option or in connection with a fundamental change) following such record date. However, the holder will be required to pay us an amount equal to the contract adjustment payments payable on such contract adjustment payment date upon early settlement of its purchase contract where the early settlement date occurs during the period from the close of business on the record date preceding such contract adjustment payment date to the opening of business on such contract adjustment payment date, as described above under “—Early Settlement.”

Our obligations with respect to contract adjustment payments will be subordinated and junior in right of payment to our obligations under any of our Senior Indebtedness (as defined in the indenture) and will rank junior to the Notes.

We may, at our option and upon prior written notice of at least one business day before the record date to the purchase contract agent and the holders, defer all or part of the contract adjustment payments, but not beyond the purchase contract settlement date (or, with respect to an early settlement upon a fundamental change, not beyond the fundamental change early settlement date or, with respect to an early settlement other than upon a fundamental change, not beyond the contract adjustment payment date immediately preceding the early settlement date).

Deferred contract adjustment payments will accrue additional contract adjustment payments at the rate equal to 6.25% per annum (which is equal to the rate of total distributions on the Corporate Units), compounded on each contract adjustment payment date, to, but excluding, the contract adjustment payment date on which such deferred contract adjustment payments are paid. We refer to additional contract adjustment payments that accrue on deferred contract adjustment payments as “compounded contract adjustment payments.” We may pay any such deferred contract adjustment payments (including compounded contract adjustment payments thereon) on any scheduled contract adjustment payment date; *provided* that in order to pay deferred contract adjustment payments on any scheduled contract adjustment payment date other than the purchase contract settlement date, we must deliver written notice thereof to holders of the Equity Units and the purchase contract agent on or before the relevant record date. If the purchase contracts are terminated (upon the occurrence of certain events of bankruptcy, insolvency or similar reorganization with respect to us), the right to receive contract adjustment payments and deferred contract adjustment payments (including compounded contract adjustment payments thereon) will also terminate.

If we exercise our option to defer the payment of contract adjustment payments, then, until the deferred contract adjustment payments (including compounded contract adjustment payments thereon) have been paid, we will not (1) declare or pay any dividends on, or make any distributions on, or redeem, purchase or acquire, or make a liquidation payment with respect to, any shares of our capital stock, (2) make any payment of principal of, or interest or premium, if any, on, or repay, repurchase or redeem any of our debt securities that rank on parity with, or junior to, the contract adjustment payments, or (3) make any guarantee payments under any guarantee by us of securities of any of our subsidiaries if our guarantee ranks on parity with, or junior to, the contract adjustment payments.

The restrictions listed above do not apply to:

- (a) purchases, redemptions or other acquisitions of our capital stock in connection with any employment contract, benefit plan or other similar arrangement with or for the benefit of employees, officers, directors, agents or consultants or a stock purchase or dividend reinvestment plan, or the satisfaction of our obligations pursuant to any contract or security outstanding on the date that the contract adjustment payment is deferred requiring us to purchase, redeem or acquire our capital stock;

- (b) any payment, repayment, redemption, purchase, acquisition or declaration of dividends described in clause (1) above as a result of a reclassification of our capital stock, or the exchange or conversion of all or a portion of one class or series of our capital stock, for another class or series of our capital stock;
- (c) the purchase of fractional interests in shares of our capital stock pursuant to the conversion or exchange provisions of our capital stock or the security being converted or exchanged, or in connection with the settlement of stock purchase contracts outstanding on the date that the contract adjustment payment is deferred;
- (d) dividends or distributions paid or made in our capital stock (or rights to acquire our capital stock), or repurchases, redemptions or acquisitions of capital stock in exchange for capital stock and distributions in connection with the settlement of stock purchase contracts outstanding on the date that the contract adjustment payment is deferred;
- (e) redemptions, exchanges or repurchases of, or with respect to, any rights outstanding under a shareholder rights plan outstanding on the date that the contract adjustment payment is deferred or the declaration or payment thereunder of a dividend or distribution of or with respect to rights in the future;
- (f) payments on any trust preferred securities, subordinated debentures, junior subordinated debentures or junior subordinated notes, or any guarantees of any of the foregoing, in each case, that rank equal in right of payment to the contract adjustment payments, so long as the amount of payments made on account of such securities or guarantees and the purchase contracts is paid on all such securities and guarantees and the purchase contracts then outstanding on a pro rata basis in proportion to the full payment to which each series of such securities, guarantees or purchase contracts is then entitled if paid in full; *provided* that, for the avoidance of doubt, we will not be permitted under the purchase contract and pledge agreement to make contract adjustment payments in part; or
- (g) any payment of deferred interest or principal on, or repayment, redemption or repurchase of, parity or junior securities that, if not made, would cause us to breach the terms of the instrument governing such parity or junior securities.

Anti-dilution Adjustments

Each fixed settlement rate will be subject to the following adjustments:

- (1) *Stock Dividends*. If we pay or make a dividend or other distribution on our common stock in common stock, each fixed settlement rate in effect at the opening of business on the day following the date fixed for the determination of stockholders entitled to receive such dividend or other distribution will be increased by dividing:
 - each fixed settlement rate by
 - a fraction, the numerator of which will be the number of shares of our common stock outstanding at the close of business on the date fixed for such determination and the denominator will be the sum of such number of shares and the total number of shares constituting the dividend or other distribution.

If any dividend or distribution in this paragraph (1) is declared but not so paid or made, the new fixed settlement rates shall be readjusted, on the date that our board of directors determines not to pay or make such dividend or distribution, to the fixed settlement rates that would then be in effect if such dividend or distribution had not been declared.

(2) *Stock Purchase Rights.* If we issue to all or substantially all holders of our common stock rights, options, warrants or other securities (other than pursuant to a dividend reinvestment, share purchase or similar plan), entitling them to subscribe for or purchase shares of our common stock for a period expiring within 45 days from the date of issuance of such rights, options, warrants or other securities at a price per share of our common stock less than the current market price (as defined below) calculated as of the date fixed for the determination of stockholders entitled to receive such rights, options, warrants or other securities, each fixed settlement rate in effect at the opening of business on the day following the date fixed for such determination will be increased by dividing:

- each fixed settlement rate by
- a fraction, the numerator of which will be the number of shares of our common stock outstanding at the close of business on the date fixed for such determination *plus* the number of shares of our common stock which the aggregate consideration expected to be received by us upon the exercise of such rights, options, warrants or other securities would purchase at such current market price and the denominator of which will be the number of shares of our common stock outstanding at the close of business on the date fixed for such determination *plus* the number of shares of our common stock so offered for subscription or purchase.

If any right, option, warrant or other security described in this paragraph (2) is not exercised or converted prior to the expiration of the exercisability or convertibility thereof (and as a result no additional shares of common stock are delivered or issued pursuant to such rights, options, warrants or other securities), the new fixed settlement rates shall be readjusted, as of the date of such expiration, to the fixed settlement rates that would then be in effect had the increase with respect to the issuance of such rights, options, warrants or other securities been made on the basis of delivery or issuance of only the number of shares of common stock actually delivered.

For purposes of this clause (2), in determining whether any rights, options, warrants or other securities entitle the holders to subscribe for or purchase shares of the common stock at a price per share of our common stock less than the current market price on the date fixed for the determination of stockholders entitled to receive such rights, options, warrants or other securities, and in determining the aggregate price payable to exercise such rights, options, warrants or other securities, there shall be taken into account any consideration received by us for such rights, options, warrants or other securities and any amount payable on exercise or conversion thereof, the value of such consideration, if other than cash, to be determined in good faith by our board of directors.

(3) *Stock Splits; Reverse Splits; and Combinations.* If outstanding shares of our common stock shall be subdivided, split or reclassified into a greater number of shares of common stock, each fixed settlement rate in effect at the opening of business on the day following the day upon which such subdivision, split or reclassification becomes effective shall be proportionately increased, and, conversely, in case outstanding shares of our common stock shall each be combined or reclassified into a smaller number of shares of common stock, each fixed settlement rate in effect at the opening of business on the day following the day upon which such combination or reclassification becomes effective shall be proportionately reduced.

(4) *Debt, Asset or Security Distributions.* If we, by dividend or otherwise, distribute to all or substantially all holders of our common stock evidences of our indebtedness, assets or securities or any rights, options or warrants (or similar securities) to subscribe for, purchase or otherwise acquire evidences of our indebtedness, other assets or property or other securities (but excluding any rights, options, warrants or other securities referred to in paragraph (2) above, any dividend or distribution paid exclusively in cash referred to in paragraph (5) below (in each case, whether or not an adjustment to the fixed settlement rates is required by such paragraph) and any dividend paid in shares of capital stock of any class or series, or similar equity interests, of or relating to a subsidiary or other business unit of ours in the case of a spin-off referred to below, or dividends or distributions referred to in paragraph (1) above), each fixed settlement rate in effect immediately prior to the close of business on the date fixed for the determination of stockholders entitled to receive such distribution shall be increased by dividing:

- each fixed settlement rate by
- a fraction, the numerator of which shall be the current market price of our common stock calculated as of the date fixed for such determination less the then fair market value (as determined in good faith by our board of directors) of the portion of the assets, securities or evidences of indebtedness so distributed applicable to one share of our common stock and the denominator of which shall be such current market price.

Notwithstanding the foregoing, if the then fair market value (as determined in good faith by our board of directors) of the portion of the assets, securities or evidences of indebtedness so distributed applicable to one share of our common stock exceeds the current market price of our common stock on the date fixed for the determination of stockholders entitled to receive such distribution, in lieu of the foregoing increase, each holder of a purchase contract shall receive, for each purchase contract, at the same time and upon the same terms as holders of shares of our common stock, the amount of such distributed assets, securities or evidences of indebtedness that such holder would have received if such holder owned a number of shares of our common stock equal to the maximum settlement rate on the record date for such dividend or distribution.

In the case of the payment of a dividend or other distribution on our common stock of shares of capital stock of any class or series, or similar equity interests, of or relating to a subsidiary or other business unit of ours, which are or will, upon issuance, be listed on a U.S. securities exchange or quotation system, which we refer to as a “spin-off,” each fixed settlement rate in effect immediately before the close of business on the date fixed for determination of stockholders entitled to receive that distribution will be increased by dividing:

- each fixed settlement rate by
- a fraction, the numerator of which is the current market price of our common stock and the denominator of which is such current market price *plus* the fair market value, determined as described below, of those shares of capital stock or similar equity interests so distributed applicable to one share of common stock.

The adjustment to the fixed settlement rates under the preceding paragraph will occur on:

- the 10th trading day from and including the effective date of the spin-off; or
- if the spin-off is effected simultaneously with an initial public offering of the securities being distributed in the spin-off and the ex date for the spin-off occurs on or before the date that the initial public offering price of the securities being distributed in the spin-off is determined, the issue date of the securities being offered in such initial public offering.

For purposes of this section, “initial public offering” means the first time securities of the same class or type as the securities being distributed in the spin-off are offered to the public for cash.

Subject to the immediately following paragraph, the fair market value of the securities to be distributed to holders of our common stock means the average of the closing sale prices of those securities on the principal U.S. securities exchange or quotation system on which such securities are listed or quoted at that time over the first 10 trading days following the effective date of the spin-off. Also, for purposes of such a spin-off, the current market price of our common stock means the average of the closing sale prices of our common stock on the principal U.S. securities exchange or quotation system on which our common stock is listed or quoted at that time over the first 10 trading days following the effective date of the spin-off.

If, however, an initial public offering of the securities being distributed in the spin-off is to be effected simultaneously with the spin-off and the ex date for the spin-off occurs on or before the date that the initial public offering price of the securities being distributed in the spin-off is determined, the fair market value of the securities being distributed in the spin-off means the initial public offering price, while the current market price of our common stock means the closing sale price of our common stock on the principal U.S. securities exchange or quotation system on which our common stock is listed or quoted at that time on the trading day on which the initial public offering price of the securities being distributed in the spin-off is determined.

If any dividend or distribution described in this paragraph (4) is declared but not so paid or made, the new fixed settlement rates shall be readjusted, as of the date our board of directors determines not to pay or make such dividend or distribution, to the fixed settlement rates that would then be in effect if such dividend or distribution had not been declared.

(5) *Cash Distributions.* If we, by dividend or otherwise, make distributions to all or substantially all holders of our common stock exclusively in cash during any quarterly period in an amount that exceeds \$1.0125 per share per quarter in the case of a regular quarterly dividend (such per share amount being referred to as the “reference dividend,” which shall be adjusted proportionally for any change in frequency of our regular dividends), then immediately after the close of business on the date fixed for determination of the stockholders entitled to receive such distribution, each fixed settlement rate in effect immediately prior to the close of business on such date will be increased by dividing:

- each fixed settlement rate by
- a fraction, the numerator of which will be equal to the current market price on the date fixed for such determination less the amount, if any, by which the per share amount of the distribution

exceeds the reference dividend and the denominator of which will be equal to such current market price.

Notwithstanding the foregoing, if (x) the amount by which the per share amount of the cash distribution exceeds the reference dividend exceeds (y) the current market price of our common stock on the date fixed for the determination of stockholders entitled to receive such distribution, in lieu of the foregoing increase, each holder of a purchase contract shall receive, for each purchase contract, at the same time and upon the same terms as holders of shares of our common stock, the amount of distributed cash that such holder would have received if such holder owned a number of shares of our common stock equal to the maximum settlement rate on the record date for such cash dividend or distribution.

The reference dividend will be subject to an inversely proportional adjustment whenever each fixed settlement rate is adjusted, other than pursuant to this paragraph (5). For the avoidance of doubt, the reference dividend will be zero in the case of a cash dividend that is not a regular quarterly dividend.

If any dividend or distribution described in this paragraph (5) is declared but not so paid or made, the new fixed settlement rate shall be readjusted, as of the date our board of directors determines not to pay or make such dividend or distribution, to the fixed settlement rate that would then be in effect if such dividend or distribution had not been declared.

(6) *Tender and Exchange Offers.* In the case that a tender offer or exchange offer made by us or any subsidiary for all or any portion of our common stock shall expire and such tender or exchange offer (as amended through the expiration thereof) requires the payment to stockholders (based on the acceptance (up to any maximum specified in the terms of the tender offer or exchange offer) of purchased shares) of an aggregate consideration having a fair market value per share of our common stock that exceeds the closing price of our common stock on the trading day next succeeding the last date on which tenders or exchanges may be made pursuant to such tender offer or exchange offer, then, immediately prior to the opening of business on the day after the date of the last time (which we refer to as the “expiration time”) tenders or exchanges could have been made pursuant to such tender offer or exchange offer (as amended through the expiration thereof), each fixed settlement rate in effect immediately prior to the close of business on the date of the expiration time will be increased by dividing:

- each fixed settlement rate by

- a fraction (1) the numerator of which will be equal to (a) the product of (i) the current market price on the date of the expiration time and (ii) the number of shares of common stock outstanding (including any tendered or exchanged shares) on the date of the expiration time less (b) the amount of cash *plus* the fair market value of the aggregate consideration payable to stockholders pursuant to the tender offer or exchange offer (assuming the acceptance by us of purchased shares (as defined below)), and (2) the denominator of which will be equal to the product of (x) the current market price on the date of the expiration time and (y) the result of (i) the number of shares of our common stock outstanding (including any tendered or exchanged shares) on the date of the expiration time less (ii) the number of all shares validly tendered, not withdrawn and accepted for payment on the date of the expiration time (such actually validly tendered or exchanged shares, up to any maximum acceptance amount specified by us in the terms of the tender offer or exchange offer, being referred to as the “purchased shares”).

For purposes of paragraphs (2) and (4) (except as otherwise expressly provided therein with respect to spin-offs) above, the “current market price” per share of our common stock or any other security on any day means the average VWAP of our common stock or such other security on the principal U.S. securities exchange or quotation system on which our common stock or such other security, as applicable, is listed or quoted at that time for the 10 consecutive trading days preceding the earlier of the trading day preceding the day in question and the trading day before the “ex date” with respect to the issuance or distribution requiring such computation. For purposes of paragraph (5) above, the “current market price” per share of our common stock means the closing price of our common stock on the trading day immediately preceding the ex date for the relevant cash dividend or distribution. For purposes of paragraph (6) above, the “current market price” per share of our common stock means the closing price of our common stock on the trading day next succeeding the last date on which tenders or exchanges may be made pursuant to the relevant tender offer or exchange offer. The term “ex date,” when used with respect to any issuance or distribution on our common stock or any other security, means the first date on which our common stock or such other security, as applicable, trades, regular way, on the principal U.S. securities exchange or quotation system on which our common stock or such other security, as applicable, is listed or quoted at that time, without the right to receive the issuance or distribution in question, from us or, if applicable, from the seller of our common stock on such exchange or system (in the form of due bills or otherwise) as determined by such exchange or system.

We currently do not have a shareholders rights plan with respect to our common stock. To the extent that we have a shareholders rights plan involving the issuance of share purchase rights or other similar rights to all or substantially all holders of our common stock in effect upon settlement of a purchase contract, you will receive, in

addition to the common stock issuable upon settlement of any purchase contract, the related rights for the common stock under the shareholders rights plan, unless, prior to any settlement of a purchase contract, the rights have separated from the common stock, in which case each fixed settlement rate will be adjusted at the time of separation as if we made a distribution to all holders of our common stock as described in clause (4) above, subject to readjustment in the event of the expiration, termination or redemption of the rights under the shareholder rights plan.

Unless made pursuant to a bona fide, reasonable anti-dilution formula, a holder may be treated as receiving a constructive distribution from us for U.S. federal income tax purposes with respect to the purchase contract if the fixed settlement rates are adjusted (or fail to be adjusted) and, as a result of the adjustment (or failure to adjust), such holder's proportionate interest in our assets or earnings and profits is increased. For example, if the fixed settlement rate is adjusted as a result of a distribution that is taxable to the holders of our common stock, such as a cash dividend, a holder may be deemed to have received a "constructive distribution" of our stock. Thus, under certain circumstances, an adjustment to the fixed settlement rates might give rise to a taxable dividend to such holder even though he/she will not receive any cash in connection with such adjustment. In addition, non-U.S. holders may, in certain circumstances, be deemed to have received a distribution subject to U.S. federal withholding tax.

In addition, we may increase the fixed settlement rates if our board of directors deems it advisable to avoid or diminish any income tax to holders of our common stock resulting from any dividend or distribution of shares (or rights to acquire shares) or from any event treated as a dividend or distribution for income tax purposes or for any other reasons. We may only make such a discretionary adjustment if we make the same proportionate adjustment to each fixed settlement rate.

Adjustments to the fixed settlement rates will be calculated by us to the nearest ten thousandth of a share. No adjustment to the fixed settlement rates will be required unless the adjustment would require an increase or decrease of at least one percent in one or both fixed settlement rates. If any adjustment is not required to be made because it would not change one or both fixed settlement rates by at least one percent, then the adjustment will be carried forward and taken into account in any subsequent adjustment. All anti-dilution adjustments will be made not later than the time at which we are required to determine the relevant settlement rate or amount of make-whole shares (if applicable) in connection with any settlement with respect to the purchase contracts.

No adjustment to the fixed settlement rates will be made if holders of Equity Units participate, as a result of holding the Equity Units and without having to settle the purchase contracts that form part of the Equity Units, in the transaction that would otherwise give rise to an adjustment as if they held a number of shares of our common stock equal to the maximum settlement rate, at the same time and upon the same terms as the holders of common stock participate in the transaction.

The fixed settlement rates will not be adjusted (subject to our right to increase them if our board of directors deems it advisable as described in the third preceding paragraph):

- upon the issuance of any shares of our common stock pursuant to any present or future plan providing for the reinvestment of dividends or interest payable on our securities and the investment of additional optional amounts in shares of our common stock under any plan;
- upon the issuance of options, restricted stock or other awards in connection with any employment contract, executive compensation plan, benefit plan or other similar arrangement with or for the benefit of any one or more employees, officers, directors, consultants or independent contractors or the exercise of such options or other awards;
- upon the issuance of any shares of our common stock pursuant to any option, warrant, right or exercisable, exchangeable or convertible security outstanding as of the date the Equity Units were first issued;
- for a change in the par value or no par value of the common stock; or

- for accumulated and unpaid contract adjustment payments.

We will, as promptly as practicable after a fixed settlement rate is adjusted, provide written notice of the adjustment to the holders of Equity Units and the purchase contract agent.

If an adjustment is made to the fixed settlement rates, an adjustment also will be made to the reference price and the threshold appreciation price on an inversely proportional basis solely to determine which of the clauses of the definition of settlement rate will be applicable to determine the settlement rate with respect to the purchase contract settlement date or any fundamental change early settlement date.

If any adjustment to the fixed settlement rates becomes effective, or any effective date, expiration time, ex date or record date for any stock split or reverse stock split, tender or exchange offer, issuance, dividend or distribution (relating to a required fixed settlement rate adjustment) occurs, during the period beginning on, and including, (i) the open of business on a first trading day of the 20 scheduled trading-day period during which the applicable market value is calculated or (ii) in the case of the optional early settlement or fundamental change early settlement, the relevant early settlement date or the date on which the fundamental change early settlement right is exercised and, in each case, ending on, and including, the date on which we deliver shares of our common stock under the related purchase contract, we will make appropriate adjustments to the fixed settlement rates and/or the number of shares of our common stock deliverable upon settlement with respect to the purchase contract, in each case, consistent with the methodology used to determine the anti-dilution adjustments set forth above. If any adjustment to the fixed settlement rates becomes effective, or any effective date, expiration time, ex date or record date for any stock split or reverse stock split, tender or exchange offer, issuance, dividend or distribution (relating to a required fixed settlement rate adjustment) occurs, during the period used to determine the “stock price” or any other averaging period hereunder, we will make appropriate adjustments to the applicable prices, consistent with the methodology used to determine the anti-dilution adjustments set forth above.

Reorganization Events

The following events are defined as “reorganization events”:

- any consolidation or merger of the Company with or into another person or of another person with or into the Company or a similar transaction (other than a consolidation, merger or similar transaction in which the Company is the continuing corporation and in which the shares of our common stock outstanding immediately prior to the merger or consolidation are not exchanged for cash, securities or other property of the Company or another person);
- any sale, transfer, lease or conveyance to another person of the property of the Company as an entirety or substantially as an entirety, as a result of which the shares of our common stock are exchanged for cash, securities or other property;
- any statutory exchange of the common stock of the Company with another corporation (other than in connection with a merger described in the first bullet above); and
- any liquidation, dissolution or termination of the Company (other than as a result of or after the occurrence of a termination event described below under “—Termination”).

Following the effective date of a reorganization event, the settlement rate shall be determined by reference to the value of an exchange property unit, and we shall deliver, upon settlement of any purchase contract, a number of exchange property units equal to the number of shares of our common stock that we would otherwise be required to deliver. An “exchange property unit” is the kind and amount of common stock, other securities, other property or assets (including cash or any combination thereof) receivable in such reorganization event (without any interest

thereon, and without any right to dividends or distribution thereon which have a record date that is prior to the applicable settlement date) per share of our common stock by a holder of common stock that is not a person with which we are consolidated or into which we are merged or which merged into us or to which such sale or transfer was made, as the case may be (we refer to any such person as a “constituent person”), or an affiliate of a constituent person, to the extent such reorganization event provides for different treatment of common stock held by the constituent person and/or the affiliates of the constituent person, on the one hand, and non-affiliates of a constituent person, on the other hand. In the event holders of our common stock (other than any constituent person or affiliate thereof) have the opportunity to elect the form of consideration to be received in such transaction, the exchange property unit that holders of the Corporate Units or Treasury Units are entitled to receive will be deemed to be (x) the weighted average of the types and amounts of consideration received by the holders of our common stock that affirmatively make an election or (y) if no holders of our common stock affirmatively make such an election, the types and amounts of consideration actually received by the holders of our common stock.

In the event of such a reorganization event, the person formed by such consolidation or merger or the person that acquires our assets shall execute and deliver to the purchase contract agent an agreement providing that the holder of each Equity Unit that remains outstanding after the reorganization event (if any) shall have the rights described in the preceding paragraph. Such supplemental agreement shall provide for adjustments to the amount of any securities constituting all or a portion of an exchange property unit and/or adjustments to the fixed settlement rates, which, for events subsequent to the effective date of such reorganization event, shall be as nearly equivalent as may be practicable to the adjustments provided for under “—Anti-dilution Adjustments” above. The provisions described in the preceding two paragraphs shall similarly apply to successive reorganization events.

In connection with any reorganization event, we will also adjust the reference dividend based on the number of shares of common stock comprising an exchange property unit and (if applicable) the value of any non-stock consideration comprising an exchange property unit. If an exchange property unit is composed solely of non-stock consideration, the reference dividend will be zero.

Termination

The purchase contract and pledge agreement provides that the purchase contracts and the obligations and rights of us and of the holders of Corporate Units and Treasury Units thereunder (including the holders’ obligation and right to purchase and receive shares of our common stock and to receive accrued and unpaid contract adjustment payments, including deferred contract adjustment payments and compounded contract adjustment payments thereon) will immediately and automatically terminate upon the occurrence of a termination event (as defined below).

Upon any termination event, the Equity Units will represent the right to receive the Notes underlying the undivided beneficial interest in the Notes, applicable ownership interests in the Treasury portfolio, or the Treasury securities, as the case may be, forming part of such Equity Units. Upon the occurrence of a termination event, we will promptly give the purchase contract agent, the collateral agent and the holders written notice of such termination event and the collateral agent will release the related interests in the Notes, applicable ownership interests in the Treasury portfolio or Treasury securities, as the case may be, from the pledge arrangement and transfer such interests in the Notes, applicable ownership interests in the Treasury portfolio or Treasury securities to the purchase contract agent for distribution to the holders of Corporate Units and Treasury Units. If a holder is entitled to receive Notes in an aggregate principal amount that is not an integral multiple of \$1,000, we will issue upon request of the purchase contract agent Notes in denominations of \$50 and integral multiples thereof in exchange for Notes in denominations of \$1,000 or integral multiples thereof. In addition, if any holder is entitled to receive, with respect to its applicable ownership interests in the Treasury portfolio or its pledged Treasury securities, any securities having a principal amount at maturity of less than \$1,000, the purchase contract agent will dispose of such securities for cash and pay the cash received to the holder in lieu of such applicable ownership in the Treasury portfolio or such Treasury securities. Upon any termination event, however, such release and distribution may be subject to a delay. In the event that the Company becomes the subject of a case under the U.S. Bankruptcy Code, such delay may occur as a result of the automatic stay under the U.S. Bankruptcy Code and continue until such automatic stay has been lifted. Moreover, claims arising out of the Notes will be subject to the equitable jurisdiction and powers of the bankruptcy court.

A “termination event” means any of the following events with respect to the Company:

- (1) at any time on or prior to the purchase contract settlement date, a decree or order by a court having jurisdiction in the premises shall have been entered adjudicating the Company bankrupt or insolvent, or approving as properly filed a petition seeking reorganization arrangement, adjustment or composition of or in respect of the Company under the U.S. Bankruptcy Code or any other similar applicable federal or state law and such decree or order shall have been entered more than 90 days prior to the purchase contract settlement date and shall have continued undischarged and unstayed for a period of 90 consecutive days;
- (2) at any time on or prior to the purchase contract settlement date, a decree or order of a court having jurisdiction in the premises shall have been entered for the appointment of a receiver, liquidator, trustee, assignee, sequestrator or other similar official in bankruptcy or insolvency of the Company or of all or any substantial part of the Company’s property, or for the winding up or liquidation of the Company’s affairs, and such decree or order shall have been entered more than 90 days prior to the purchase contract settlement date and shall have continued undischarged and unstayed for a period of 90 consecutive days; or
- (3) at any time on or prior to the purchase contract settlement date, the Company shall institute proceedings to be adjudicated bankrupt or insolvent, or shall consent to the institution of bankruptcy or insolvency proceedings against it, or shall file a petition or answer or consent seeking reorganization under the U.S. Bankruptcy Code or any other similar applicable federal or state law, or shall consent to the filing of any such petition, or shall consent to the appointment of a receiver, liquidator, trustee, assignee, sequestrator or other similar official of the Company or of all or any substantial part of the Company’s property, or shall make an assignment for the benefit of creditors, or shall admit in writing its inability to pay its debts generally as they become due.

Pledged Securities and Pledge

The undivided beneficial ownership interests in the Notes, or, following a successful optional remarketing, the applicable ownership interests in the Treasury portfolio (as described under the first bullet of the definition of “Treasury portfolio”), that are a component of the Corporate Units or, if substituted, the beneficial ownership interest in the Treasury securities that are a component of the Treasury Units, collectively, the “pledged securities,” will be pledged to the collateral agent for our benefit pursuant to the purchase contract and pledge agreement to secure your obligation to purchase shares of our common stock under the related purchase contracts. The rights of the holders of the Corporate Units and Treasury Units with respect to the pledged securities will be subject to our security interest therein. No holder of Corporate Units or Treasury Units will be permitted to withdraw the pledged securities related to such Corporate Units or Treasury Units from the pledge arrangement except:

- in the case of Corporate Units, to substitute a Treasury security for the related Note, as provided under “Description of the Equity Units—Creating Treasury Units by Substituting a Treasury Security for a Note;”
- in the case of Treasury Units, to substitute a Note for the related Treasury security, as provided under “Description of the Equity Units—Recreating Corporate Units;” and
- upon early settlement, settlement through the payment of separate cash or termination of the related purchase contracts.

Subject to our security interest and the terms of the purchase contract and pledge agreement, each holder of a Corporate Unit (unless the Treasury portfolio has replaced the Notes as a component of the Corporate Unit), will be entitled through the purchase contract agent and the collateral agent to all of the proportional rights and preferences of the related Notes (including distribution, voting, redemption, repayment and liquidation rights). Each holder of Treasury Units and each holder of Corporate Units (if the Treasury portfolio has replaced the Notes as a component

of the Corporate Units), will retain beneficial ownership of the related Treasury securities or the applicable ownership interests in the Treasury portfolio, as applicable, pledged in respect of the related purchase contracts. We will have no interest in the pledged securities other than our security interest.

Except as described in “Certain Provisions of the Purchase Contract and Pledge Agreement—General,” upon receipt of distributions on the pledged securities, the collateral agent will distribute such payments to the purchase contract agent, which in turn will distribute those payments to the holders in whose names the Corporate Units or Treasury Units are registered at the close of business on the record date for the distribution.

CERTAIN PROVISIONS OF THE PURCHASE CONTRACT AND PLEDGE AGREEMENT

General

Except as described under “—Book-Entry System” below, payments on the Corporate Units and Treasury Units will be payable, the purchase contracts will be settled, and transfers of the Corporate Units and Treasury Units will be registrable at, the office of the purchase contract agent or its agent, in each case, in the Borough of Manhattan, The City of New York. In addition, if the Corporate Units or Treasury Units do not remain in book-entry form, we will make payments on the Corporate Units and Treasury Units by check mailed to the address of the person entitled thereto as shown on the security register or, if the holder timely so requests, by a wire transfer to the account designated by the holder by a prior written notice.

Shares of common stock will be delivered on the purchase contract settlement date (or earlier upon early settlement), or, if the purchase contracts have terminated, the related pledged securities will be delivered (subject to delays, including potentially as a result of the imposition of the automatic stay under the U.S. Bankruptcy Code, as described under “Description of the Purchase Contracts—Termination”) at the corporate trust office of the purchase contract agent or its agent, in each case, in the Borough of Manhattan, The City of New York, upon presentation and surrender of the applicable Corporate Unit or Treasury Unit certificate, if in certificated form.

If Corporate Units or Treasury Units are in certificated form and the holder fails to present and surrender the certificate evidencing the Corporate Units or Treasury Units to the purchase contract agent on or prior to the purchase contract settlement date, the shares of common stock issuable upon settlement with respect to the related purchase contract will be registered in the name of the purchase contract agent or its nominee. The shares, together with any distributions, will be held by the purchase contract agent as agent for the benefit of the holder until the certificate is presented and surrendered or the holder provides satisfactory evidence that the certificate has been destroyed, lost or stolen, together with any indemnity that may be required by the purchase contract agent and us.

If the purchase contracts terminate prior to the purchase contract settlement date, the related pledged securities are transferred to the purchase contract agent for distribution to the holders, and a holder fails to present and surrender the certificate evidencing the holder’s Corporate Units or Treasury Units, if in certificated form, to the purchase contract agent, the related pledged securities delivered to the purchase contract agent and payments on the pledged securities will be held by the purchase contract agent as agent for the benefit of the holder until the applicable certificate is presented, if in certificated form, or the holder provides the evidence and indemnity described above.

No service charge will be made for any registration of transfer or exchange of the Corporate Units or Treasury Units, except for any tax or other governmental charge that may be imposed in connection therewith.

The purchase contract agent will have no obligation to invest or to pay interest on any amounts it holds pending payment to any holder.

Modification

The purchase contract and pledge agreement will contain provisions permitting us, the purchase contract agent and the collateral agent, to modify the purchase contract and pledge agreement without the consent of the holders for any of the following purposes:

- to evidence the succession of another person to our obligations;
- to add to the covenants for the benefit of holders or to surrender any of our rights or powers under the purchase contract and pledge agreement;
- to evidence and provide for the acceptance of appointment of a successor purchase contract agent or a successor collateral agent or securities intermediary;
- to make provision with respect to the rights of holders pursuant to the requirements applicable to reorganization events; and
- to cure any ambiguity or to correct or supplement any provisions that may be inconsistent with any other provision in the purchase contract and pledge agreement or to make such other provisions in regard to matters or questions arising under the purchase contract and pledge agreement that do not adversely affect the interests of any holders of Equity Units; it being understood that any amendment made to conform the provisions of the purchase contract and pledge agreement to the description of such agreement, the Equity Units and the purchase contracts contained in the preliminary prospectus supplement for the Equity Units as supplemented and/or amended by the related pricing term sheet will be deemed not to adversely affect the interests of the holders.

The purchase contract and pledge agreement will contain provisions allowing us, the purchase contract agent and the collateral agent, subject to certain limited exceptions, to modify the terms of the purchase contracts or the purchase contract and pledge agreement with the consent of the holders of not less than a majority of the outstanding Equity Units, with holders of Corporate Units and Treasury Units voting as a single class. However, no such modification may, without the consent of the holder of each outstanding purchase contract affected thereby:

- subject to our right to defer contract adjustment payments, change any payment date;
- impair the holders' right to institute suit for the enforcement of a purchase contract or payment of any contract adjustment payments (including compounded contract adjustment payments);
- except as required pursuant to any anti-dilution adjustment, reduce the number of shares of our common stock purchasable under a purchase contract, increase the purchase price of the shares of our common stock on settlement of any purchase contract, change the purchase contract settlement date or change the right to early settlement or fundamental change early settlement in a manner adverse to the holders or otherwise adversely affect the holder's rights under any purchase contract, the purchase contract and pledge agreement or remarketing agreement in any respect;
- increase the amount or change the type of collateral required to be pledged to secure a holder's obligations under the purchase contract and pledge agreement;
- impair the right of the holder of any purchase contract to receive distributions on the collateral, or otherwise adversely affect the holder's rights in or to such collateral;
- reduce any contract adjustment payments or any deferred contract adjustment payments (including compounded contract adjustment payments) or change any place where, or the coin or currency in which, any contract adjustment payment is payable; or

- reduce the percentage of the outstanding purchase contracts whose holders' consent is required for the modification, amendment or waiver of the provisions of the purchase contracts and the purchase contract and pledge agreement.

However, if any amendment or proposal would adversely affect only the Corporate Units or only the Treasury Units, then only the affected class of holders will be entitled to vote on such amendment or proposal, and such amendment or proposal will not be effective except with the consent of the holders of not less than a majority of such class or, if referred to in the seven bullets above, each holder affected thereby.

No Consent to Assumption

Each holder of a Corporate Unit or a Treasury Unit will be deemed under the terms of the purchase contract and pledge agreement, by the purchase of such Corporate Unit or Treasury Unit, to have expressly withheld any consent to the assumption under Section 365 of the U.S. Bankruptcy Code or otherwise, of the related purchase contracts by us, our receiver, liquidator or trustee or person or entity performing similar functions in the event that we become a debtor under the U.S. Bankruptcy Code or other similar state or federal law providing for reorganization or liquidation.

Consolidation, Merger and Conveyance of Assets as an Entirety

We will agree not to merge or consolidate with any other person or sell or convey all or substantially all of our assets to any person unless (i) either we are the continuing entity, or the successor entity (if other than us) is a corporation organized and existing under the laws of the United States of America or a State thereof or the District of Columbia and such corporation expressly assumes all of our responsibilities and liabilities under the purchase contracts, the Corporate Units, the Treasury Units, the purchase contract and pledge agreement, the remarketing agreement (if any) and the indenture by one or more supplemental agreements in form satisfactory to the purchase contract agent, the collateral agent and the indenture trustee, executed and delivered to the purchase contract agent, the collateral agent and the indenture trustee by such corporation, and (ii) we or such successor corporation, as the case may be, will not, immediately after such merger or consolidation, or such sale or conveyance, be in default in the performance of any of its obligations or covenants under such agreements.

In case of any such consolidation, merger, sale or conveyance, and upon any such assumption by the successor corporation, such successor corporation shall succeed to and be substituted for us, with the same effect as if it had been named in the purchase contracts, the Corporate Units, the Treasury Units, the purchase contract and pledge agreement and the remarketing agreement (if any) as us and (other than in the case of a lease) we shall be relieved of any further obligation under the purchase contracts, the Corporate Units, the Treasury Units, the purchase contract and pledge agreement and the remarketing agreement (if any).

Title

We, the purchase contract agent and the collateral agent may treat the registered owner of any Corporate Units or Treasury Units as the absolute owner of the Corporate Units or Treasury Units for the purpose of making payment (subject to the record date provisions described above), settling the related purchase contracts and for all other purposes.

Replacement of Equity Unit Certificates

In the event that physical certificates have been issued, any mutilated Corporate Unit or Treasury Unit certificate will be replaced by us at the expense of the holder upon surrender of the certificate to the purchase contract agent at the corporate trust office of the purchase contract agent or its agent, in each case, in the Borough of Manhattan, The City of New York. Corporate Unit or Treasury Unit certificates that become destroyed, lost or stolen will be replaced by us at the expense of the holder upon delivery to us and the purchase contract agent of evidence of their destruction, loss or theft satisfactory to us and the purchase contract agent. In the case of a destroyed, lost or

stolen Corporate Unit or Treasury Unit certificate, an indemnity satisfactory to the purchase contract agent and us may be required at the expense of the holder before a replacement certificate will be issued.

Notwithstanding the foregoing, we will not be obligated to issue any Corporate Unit or Treasury Unit certificates on or after the business day immediately preceding the purchase contract settlement date or the date on which the purchase contracts have terminated. The purchase contract and pledge agreement will provide that, in lieu of the delivery of a replacement Corporate Unit or Treasury Unit certificate, the purchase contract agent, upon delivery of the evidence and indemnity described above, will, in the case of the purchase contract settlement date, deliver the shares of common stock issuable pursuant to the purchase contracts included in the Corporate Units or Treasury Units evidenced by the certificate, or, if the purchase contracts have terminated prior to the purchase contract settlement date, transfer the pledged securities included in the Corporate Units or Treasury Units evidenced by the certificate.

Governing Law

The purchase contracts and the purchase contract and pledge agreement and the remarketing agreement will be governed by, and construed in accordance with, the laws of the State of New York (without regard to conflicts of laws principles thereof).

Information Concerning the Purchase Contract Agent

The Bank of New York Mellon Trust Company, N.A. (or its successor) is the purchase contract agent. The purchase contract agent will act as the agent for the holders of Corporate Units and Treasury Units. The purchase contract agent will not be obligated to take any discretionary action in connection with a default under the terms of the Corporate Units, the Treasury Units or the purchase contract and pledge agreement.

The purchase contract and pledge agreement will contain provisions limiting the liability of the purchase contract agent. The purchase contract and pledge agreement also will contain provisions under which the purchase contract agent may resign or be replaced. Such resignation or replacement will be effective upon the appointment of a successor.

In addition to serving as the purchase contract agent and collateral agent, as described below, The Bank of New York Mellon Trust Company, N.A. will serve as the custodial agent and securities intermediary under the purchase contract and pledge agreement and as the “indenture trustee” for the Notes. We and certain of our affiliates maintain banking and credit relationships with The Bank of New York Mellon Trust Company, N.A. The Bank of New York Mellon Trust Company, N.A. and its affiliates have purchased, and are likely to purchase in the future, our securities and securities of our affiliates.

Information Concerning the Collateral Agent

The Bank of New York Mellon Trust Company, N.A. (or its successor) will be the collateral agent. The collateral agent will act solely as our agent and will not assume any obligation or relationship of agency or trust for or with any of the holders of the Corporate Units and the Treasury Units except for the obligations owed by a pledgee of property to the owner thereof under the purchase contract and pledge agreement and applicable law.

The purchase contract and pledge agreement will contain provisions limiting the liability of the collateral agent. The purchase contract and pledge agreement also will contain provisions under which the collateral agent may resign or be replaced. Such resignation or replacement will be effective upon the appointment of a successor.

Miscellaneous

The purchase contract and pledge agreement will provide that we will, at all times prior to the purchase contract settlement date, reserve and keep available, free from preemptive rights, out of our authorized but unissued common stock the maximum number of shares of our common stock issuable against payment (including the

maximum number of make-whole shares issuable upon a fundamental change early settlement) in respect of all purchase contracts included in the Corporate Units or Treasury Units evidenced by the outstanding certificates.

The purchase contract and pledge agreement provides that we will indemnify the purchase contract agent and pay all fees and expenses related to (1) the retention of the purchase contract agent, the collateral agent, the custodial agent and the securities intermediary and (2) any enforcement by the purchase contract agent of the rights of the holders of the Corporate Units and Treasury Units. Holders who elect to substitute the related pledged securities, thereby creating Treasury Units or recreating Corporate Units, however, will be responsible for any fees or expenses payable in connection with such substitution, as well as for any commissions, fees or other expenses incurred in acquiring the pledged securities to be substituted. We will not be responsible for any such fees or expenses. The purchase contract agent shall be under no obligation to exercise any of the rights or powers vested in it by the purchase contract and pledge agreement at the request or direction of any of the holders pursuant to the purchase contract and pledge agreement, unless such holders shall have offered to the purchase contract agent security or indemnity reasonably satisfactory to the purchase contract agent against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

The purchase contract and pledge agreement also provides that any court of competent jurisdiction may in its discretion require, in any suit for the enforcement of any right or remedy under the purchase contract and pledge agreement, or in any suit against the purchase contract agent for any action taken, suffered or omitted by it as purchase contract agent, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees and costs against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant. The foregoing shall not apply to any suit instituted by the purchase contract agent, to any suit instituted by any holder, or group of holders, holding in the aggregate more than 10% of the outstanding Equity Units, or to any suit instituted by any holder for the enforcement of any interest on any Notes owed pursuant to such holder's applicable ownership interests in Notes or contract adjustment payments on or after the respective payment date therefor in respect of any Equity Unit held by such holder, or for enforcement of the right to purchase shares of our common stock under the purchase contracts constituting part of any Equity Unit held by such holder.

Book-Entry System

The Depository Trust Company, or DTC, which we refer to along with its successors in this capacity as the "depository," acts as securities depository for the Corporate Units and Treasury Units. The Corporate Units and Treasury Units were issued only as fully registered securities registered in the name of Cede & Co., the depository's nominee, or such other name as may be requested by an authorized representative of DTC. One or more fully registered global security certificates, representing the total aggregate number of Corporate Units and Treasury Units, were issued and deposited with the depository or its custodian and will bear a legend regarding the restrictions on exchanges and registration of transfer referred to below.

The laws of some jurisdictions may require that some purchasers of securities take physical delivery of securities in definitive form. These laws may impair the ability to transfer beneficial interests in the Corporate Units and Treasury Units so long as the Corporate Units and Treasury Units are represented by global security certificates.

If (1) the depository notifies us that it is unwilling or unable to continue its services as depository and no successor depository has been appointed within 90 days after our receipt of such notice; (2) the depository ceases to be a clearing agency registered under the Exchange Act when the depository is required to be so registered and we receive notice of such cessation, and no successor depository has been appointed within 90 days after our receipt of such notice or our becoming aware of such cessation; or (3) any Event of Default (as defined in "Description of the Remarketable Senior Notes—Events of Default") has occurred and is continuing or any other event has occurred and is continuing, which after notice or lapse of time, would become an Event of Default with respect to the Notes, or we have failed to perform any of our obligations under the purchase contract and pledge agreement, the Corporate Units, the Treasury Units or the purchase contracts, and any beneficial owner requests that its beneficial interest be exchanged for a physical certificate, then (x) we will prepare definitive certificates with respect to such Corporate Units or Treasury Units, as applicable, and will deliver such certificates to the purchase contract agent and (y) upon

surrender of the global security certificates representing Corporate Units or Treasury Units by the depository, accompanied by registration instructions, we will cause definitive certificates to be delivered to the beneficial owners in accordance with instructions provided by the depository. We and the purchase contract agent will not be liable for any delay in delivery of such instructions and may conclusively rely on, and will be authorized and protected in relying on, such instructions. Each definitive certificate so delivered will evidence Corporate Units or Treasury Units, as applicable, of the same kind and tenor as the global security certificate so surrendered in respect thereof. With respect to the Corporate Units and the Treasury Units, this paragraph replaces the antepenultimate and penultimate paragraphs of the “Book-Entry Securities” section of the accompanying prospectus in their entirety.

As long as the depository or its nominee is the registered owner of the global security certificates, the depository or its nominee, as the case may be, will be considered the sole owner and holder of the global security certificates and all Corporate Units and Treasury Units represented by these certificates for all purposes under the Corporate Units, Treasury Units and the purchase contract and pledge agreement. Except in the limited circumstances referred to above, owners of beneficial interests in global security certificates:

- will not be entitled to have the Corporate Units or the Treasury Units represented by these global security certificates registered in their names; and
- will not be considered to be owners or holders of the global security certificates or any Corporate Units or Treasury Units represented by these certificates for any purpose under the Corporate Units, Treasury Units or the purchase contract and pledge agreement.

All payments on the Corporate Units and Treasury Units represented by the global security certificates and all transfers and deliveries of related Notes, Treasury securities and common stock will be made to the depository or its nominee, as the case may be, as the holder of the securities.

Ownership of beneficial interests in the global security certificates will be limited to participants or persons that may hold beneficial interests through institutions that have accounts with the depository or its nominee. Ownership of beneficial interests in global security certificates will be shown only on, and the transfer of those ownership interests will be effected only through, records maintained by the depository or its nominee, with respect to participants’ interests, or any participant, with respect to interests of persons held by the participant on their behalf. Procedures for settlement of purchase contracts on the purchase contract settlement date or upon early settlement will be governed by arrangements among the depository, participants and persons that may hold beneficial interests through participants designed to permit settlement without the physical movement of certificates. Payments, transfers, deliveries, exchanges and other matters relating to beneficial interests in global security certificates may be subject to various policies and procedures adopted by the depository from time to time. None of us, the purchase contract agent or any agent of us or the purchase contract agent will have any responsibility or liability for any aspect of the depository’s or any participant’s records relating to, or for payments made on account of, beneficial interests in global security certificates, or for maintaining, supervising or reviewing any of the depository’s records or any participant’s records relating to these beneficial ownership interests.

Although the depository has agreed to the foregoing procedures in order to facilitate transfers of interest in the global security certificates among participants, the depository is under no obligation to perform or continue to perform these procedures, and these procedures may be discontinued at any time. We will not have any responsibility for the performance by the depository or its direct participants or indirect participants under the rules and procedures governing the depository.

The information in this section concerning the depository and its book-entry system has been obtained from sources that we believe to be reliable, but we have not attempted to verify the accuracy of this information.

DESCRIPTION OF THE REMARKETABLE SENIOR NOTES

General

The Notes are our unsecured and unsubordinated obligations and will rank on a parity in right of payment with all of our other unsecured and unsubordinated indebtedness from time to time outstanding. Additional information about our current outstanding indebtedness and the relative priorities of our indebtedness is described below under “—Ranking.”

The Notes are in fully registered form only, without coupons. Any Notes that are issued as separate securities as a result of the creation of Treasury Units or in connection with an early settlement, early settlement upon a fundamental change, a remarketing, a termination or a settlement with separate cash will be initially represented by one or more fully registered global securities (the “global securities”) deposited with the indenture trustee, as custodian for DTC, as depository, and registered in the name of DTC or DTC’s nominee. A beneficial interest in a global security will be shown on, and transfers or exchanges thereof will be effected only through, records maintained by DTC and its participants, as described below under “—Book-Entry Issuance—The Depository Trust Company.” The authorized denominations of the Notes will be \$1,000 and any larger amount that is an integral multiple of \$1,000. However, if a holder is entitled to receive Notes in an aggregate principal amount that is not an integral multiple of \$1,000 upon termination of the purchase contracts as described under “Description of the Purchase Contracts—Termination” above, we will issue upon request the purchase contract agent Notes in denominations of \$50 and integral multiples thereof. Except in certain circumstances described below, the Notes that are issued as global securities will not be exchangeable for Notes in definitive certificated form.

Each Corporate Unit includes a 1/20, or 5%, undivided beneficial ownership interest in a Note having a principal amount of \$1,000 that corresponds to the stated amount of \$50 per Corporate Unit.

The Notes will not be subject to a sinking fund provision and, prior to the purchase contract settlement date, will not be subject to discharge or defeasance. After the purchase contract settlement date, the Notes will be subject to discharge and defeasance as described in the indenture. The entire principal amount of the Notes will mature and become due and payable, together with any accrued and unpaid interest thereon, on November 1, 2025 (subject to our ability to move up the maturity date in connection with a remarketing as described below under “—Remarketing”). As described below under “—Put Option upon Failed Remarketing,” holders will have the right to require us to purchase their Notes under certain circumstances. Except for the limitation on issuance of secured debt as described below under “—Limitation on Secured Debt” and as set forth under “—Put Option upon Failed Remarketing,” the indenture does not contain any financial covenants or restrict us from paying dividends, making investments, incurring indebtedness or repurchasing our securities. Except for the covenants described under “—Consolidation, Merger or Sale,” the indenture does not contain provisions that afford holders of the Notes protection in the event we are involved in a highly leveraged transaction or other similar transaction that may adversely affect such holders. The indenture limits our incurrence of Secured Debt as described above, but does not limit our ability to issue or incur other debt or issue preferred stock.

The Notes were initially offered in the principal amount of \$1,300,000,000. The existing Notes and any new Notes having the same terms as the Notes offered hereby subsequently issued under the indenture will be treated as a single class for all purposes under the indenture, including, without limitation, voting waivers and amendments.

We will not pay any additional amounts to holders of the Notes that are not U.S. persons in respect of any tax, assessment or governmental charge.

Ranking

The Notes were issued by us under an indenture (the “base indenture”) dated as of April 9, 2001 between us and The Bank of New York Mellon Trust Company, N.A. (referred to herein as the “indenture trustee”), as supplemented by a supplemental indenture, the terms of which are described in this prospectus supplement (the “supplemental indenture” and, together with the base indenture, the “indenture”). We may issue under the base indenture additional debt securities that rank on parity with the Notes.

The Notes will be our unsecured and unsubordinated obligations and will rank on a parity in right of payment with all of our other unsecured and unsubordinated indebtedness from time to time outstanding. The Notes will be effectively subordinated to all liabilities of our subsidiaries.

Because we are a holding company and conduct all of our operations through our subsidiaries, our ability to meet our obligations under the Notes is dependent on the earnings and cash flows of those subsidiaries and the ability of those subsidiaries to pay dividends or to advance or repay funds to us. Holders of the Notes will generally have a junior position to claims of creditors of our subsidiaries, including trade creditors, debtholders, secured creditors, taxing authorities, guarantee holders and any preferred stockholders. The provisions of the indenture do not limit the amount of indebtedness or preferred stock issuable by our subsidiaries. We and our subsidiaries expect to incur additional indebtedness from time to time.

Principal and Interest

The Notes will initially mature on November 1, 2025 (the “stated maturity date”) and will initially bear interest from the date of original issuance at the rate of 2.25% per annum. In connection with a successful remarketing, we may shorten the stated maturity date of the Notes to any date not earlier than November 1, 2024. Subject to the changes to the interest payment dates made pursuant to a successful remarketing, interest will be payable quarterly on February 1, May 1, August 1 and November 1 of each year (each, an “interest payment date”), commencing on February 1, 2020, and at maturity. Subject to certain exceptions, the indenture provides for the payment of interest on an interest payment date only to persons in whose names the Notes are registered at the close of business on the record date; which will be the close of business on the 15th day of the calendar month immediately preceding the calendar month in which the applicable interest payment date falls (whether or not a business day). Notwithstanding the foregoing, any interest payable at maturity will be paid to the person to whom principal is payable. Interest will be calculated on the basis of a 360-day year of twelve 30-day months, and with respect to any period less than a full calendar month, on the basis of the actual number of days elapsed in a 30-day month. However, if we remarket the Notes as floating-rate notes, without the consent of any holder of Notes we may modify the basis on which interest will be calculated after the optional remarketing settlement date or the purchase contract settlement date, as applicable, to conform to the market convention applicable to floating-rate notes using the same interest rate index.

Except as described under “—Book-Entry Issuance—The Depository Trust Company” below, and notwithstanding anything to the contrary in the accompanying prospectus, payment of interest on the Notes will be made by check mailed to the address of the person entitled thereto as shown on the security register or, if the holder timely so requests, by a wire transfer to the account designated by the holder by a prior written notice.

If any interest payment date, redemption date, maturity date or the date (if any) on which we are required to purchase the Notes is not a business day, then the applicable payment will be made on the next succeeding day that is a business day, and no interest will accrue or be paid in respect of such delay. If we remarket the Notes as floating-rate notes, without the consent of any holder of Notes we may modify the interest payment dates to provide that if any February 1, May 1, August 1 and November 1 is not a business day, the relevant interest payment date shall be the immediately succeeding business day. “Business day,” for purposes of the indenture, means any day, other than a Saturday or Sunday, which is not a day on which banking institutions or trust companies in the City of New York, New York are generally authorized or required by law, regulation or executive order to remain closed.

The interest rate on the Notes may be reset in connection with a successful remarketing, as described below under “—Interest Rate Reset.” However, if there is not a successful remarketing, the interest rate will not be reset and the Notes will continue to bear interest at the initial interest rate, all as described below under “—Interest Rate Reset.” Except in the case of a failed final remarketing or when the Notes are remarketed as floating-rate notes, interest on the Notes following the optional remarketing settlement date or the purchase contract settlement date, as applicable, will be payable on a semi-annual basis.

Remarketing

The Notes will be remarketed as described under “Description of the Purchase Contracts—Remarketing.”

In consultation with the remarketing agent and without the consent of any holders of Notes, we may elect in connection with a remarketing (but shall not be required to elect) to:

- move up the maturity date of the Notes to a date earlier than November 1, 2025 but not earlier than November 1, 2024;
- reset the interest rate on the Notes as described below and under “—Interest Rate Reset” below; and
- remarket the Notes as fixed-rate notes or floating-rate notes and, in the case of floating-rate notes, provide that the interest on the Notes will be equal to an interest rate index determined by us *plus* a spread determined by the remarketing agent, in consultation with us, in which case interest on the Notes may be calculated on the basis of a 365 day year and the actual number of days elapsed (or such other basis as is customarily used for floating-rate notes bearing interest at a rate based on such interest rate index).

All such modifications will take effect only if the remarketing is successful, without the consent of holders, on the settlement date for the remarketing, and will apply to all Notes, whether or not included in the remarketing. If we conduct an optional remarketing that is not successful, we may make different elections for the final remarketing period.

We will use commercially reasonable efforts to ensure that, if required by applicable law, a registration statement, including a prospectus, with regard to the full amount of the Notes to be remarketed will be effective under the securities laws in a form that may be used by the remarketing agent in connection with the remarketing (unless a registration statement is not required under the applicable laws and regulations that are in effect at that time or unless we conduct any remarketing in accordance with an exemption under the securities laws).

In order to remarket the Notes, the remarketing agent, in consultation with us, may reset the interest rate on the Notes (either upward or downward) or, if the Notes are remarketed as floating-rate notes, determine the interest rate spread applicable to the Notes, in order to produce the required price in the remarketing, as discussed under “Description of the Purchase Contracts—Remarketing.” The Notes will not be redeemable at our option after a successful remarketing (in which case the provisions described under “—Redemption at Our Option” and “—Redemption Procedures” below will no longer apply to the Notes).

Except in the case of Notes remarketed as floating-rate notes or in the case of a failed final remarketing, interest on the Notes following the optional remarketing settlement date or the purchase contract settlement date, as applicable, will be payable on a semi-annual basis.

Remarketing of Notes That Are Not Included in Corporate Units

At any time after we give notice of a remarketing (other than during a blackout period), holders of Notes that do not underlie Corporate Units may elect to have their Notes remarketed in such remarketing in the same manner as Notes that underlie Corporate Units by delivering their Notes along with a notice of this election to the custodial agent. The custodial agent will hold the Notes separate from the collateral account in which the pledged securities will be held. Holders of Notes electing to have their Notes remarketed will also have the right to make or withdraw such election at any time on or prior to 4:00 p.m., New York City time, on the second business day immediately preceding the first day of an optional remarketing period or final remarketing period, as the case may be, in each case, other than during a blackout period. In the event of a successful remarketing during the optional remarketing period, each holder of separate Notes that elects to have its Notes remarketed will receive, for each \$1,000 principal amount of Notes sold, the remarketing price per Note. The “remarketing price per Note” means, for each \$1,000 principal amount of Notes, an amount in cash equal to the quotient of the Treasury portfolio purchase price *divided*

by the number of Notes having a principal amount of \$1,000 included in such remarketing that are held as components of Corporate Units. For the purposes of determining the proceeds that the remarketing agent will seek to obtain for the Notes in an optional remarketing, the “separate Notes purchase price” means the amount in cash equal to the product of (1) the remarketing price per Note, *multiplied by* (2) the number of Notes having a principal amount of \$1,000 included in such remarketing that are not part of Corporate Units. In the event of a successful remarketing during the final remarketing period, each holder of separate Notes that elects to have its Notes remarketed will receive an amount, for each \$1,000 principal amount of Notes, equal to \$1,000 in cash. Any accrued and unpaid interest on such Notes will be paid in cash by us on the purchase contract settlement date.

Interest Rate Reset

In the case of a successful remarketing, the interest rate on the Notes may be reset or, if the Notes are remarketed as floating-rate notes, may be changed to a floating rate equal to an interest rate index selected by us *plus* a reset spread, on the date of a successful remarketing and the relevant reset rate will become effective on the settlement date of the remarketing, which will be, in the case of an optional remarketing, the third business day following the optional remarketing date (or, if the remarketed Notes are priced after 4:30 p.m. New York time on the optional remarketing date, the fourth business day following the optional remarketing date) and, in the case of the final remarketing period, the purchase contract settlement date. If a reset occurs pursuant to a successful optional remarketing, the reset rate or, if the Notes are remarketed as floating-rate notes, the reset spread, will be the interest rate or spread, as the case may be, determined by the remarketing agent, in consultation with us, as the rate or spread, as the case may be, the Notes should bear in order for the remarketing proceeds to equal at least 100% of the Treasury portfolio purchase price *plus* the separate Notes purchase price, if any. If a reset occurs pursuant to a successful final remarketing, the reset rate or reset spread, as the case may be, will be the interest rate or spread determined by the remarketing agent, in consultation with us, as the rate the Notes should bear in order for the remarketing proceeds to equal at least 100% of the principal amount of the Notes being remarketed. In any case, a reset rate or the applicable interest rate index *plus* the reset spread may be higher or lower than the initial interest rate of the Notes depending on the results of the remarketing and market conditions at that time. However, in no event will the reset rate or the applicable interest rate index *plus* the reset spread exceed the maximum rate permitted by applicable law. In addition, following a successful remarketing, interest on the Notes remarketed as fixed-rate notes will be payable on a semi-annual basis.

If the Notes are not successfully remarketed, the interest rate will not be reset and the Notes will continue to bear interest at the initial annual interest rate of 2.25%.

The remarketing agent is not obligated to purchase any Notes that would otherwise remain unsold in the remarketing. None of the Company, the remarketing agent or any agent of the Company or the remarketing agent will be obligated in any case to provide funds to make payment upon tender of Notes for remarketing.

Put Option upon Failed Remarketing

If the Notes have not been successfully remarketed on or prior to the last day of the final remarketing period, holders of Notes will have the right to require us to purchase their Notes on the purchase contract settlement date, upon at least two business days’ prior notice in the case of Notes that are not included in Corporate Units, at a price equal to the principal amount of such Notes. In such circumstances, holders of Notes that underlie Corporate Units will be deemed to have exercised such put right as described under “Description of the Purchase Contracts—Remarketing,” unless they settle the related purchase contracts with separate cash.

Redemption at Our Option

We may redeem the Notes at our option only if there has been a failed final remarketing. In that event, any Notes that remain outstanding after the purchase contract settlement date will be redeemable on or after November 1, 2024 at our option, in whole or in part, at any time and from time to time, at a redemption price equal to the principal amount thereof *plus* accrued and unpaid interest, if any, to but excluding the redemption date. We may at any time irrevocably waive the right to redeem the Notes for any specified period (including the remaining

term of the Notes). We may not redeem the Notes if the Notes have been accelerated and such acceleration has not been rescinded or unless all accrued and unpaid interest has been paid in full on all outstanding Notes for all interest periods terminating on or prior to the redemption date. Following a successful remarketing of the Notes, the Notes will cease to be redeemable at our option.

Redemption Procedures

We will send notice of any optional redemption to the registered holder of the Notes being redeemed not less than 30 days and not more than 60 days before the redemption date. The notice of redemption will identify, among other things, the redemption date, the redemption price and that on the redemption date, the redemption price will become due and payable and that Notes called for redemption will cease to accrue interest on and after the redemption date (unless there is a default on payment of the redemption price). Prior to the redemption date, we will deposit with the paying agent or the indenture trustee money sufficient to pay the redemption price of the Notes to be redeemed on that date. If we redeem less than all of the Notes, and the Notes are issued as global securities, the Notes to be redeemed will be selected by DTC in accordance with applicable DTC procedures. If the Notes to be redeemed are not issued as global securities, the indenture trustee will choose the Notes to be redeemed by lot or in any manner that it may deem fair and appropriate.

In the event the final remarketing fails and you do not settle the related purchase contracts with separate cash, if you hold Notes as part of Corporate Units you will be deemed to exercise your option to put the Notes to us unless you elect to settle the purchase contracts with separate cash as described under “Description of the Purchase Contracts—Notice to Settle with Cash,” and we will apply the put price against your obligations under the purchase contracts. This remedy has the effect similar to an automatic redemption of the Notes, but we do not have to give you prior notice or follow any of the other redemption procedures.

We may block the transfer or exchange of (i) all Notes during a period beginning 15 days prior to the date on which notice of selection of the Notes for optional redemption is given and ending on the day the relevant notice of redemption is sent or (ii) any Note being redeemed, except with respect to the unredeemed portion of any Note being redeemed solely in part.

Events of Default

An event of default with respect to the Notes will be any of the following events:

- (1) failure to pay interest on the Notes, or any additional amounts payable with respect thereto, for 30 days after payment is due;
- (2) failure to pay principal or any premium on the Notes, or any additional amounts payable with respect thereto, when due;
- (3) failure to pay any sinking fund installment or analogous payment when due;
- (4) failure to perform, or breach of, any other covenant or warranty or obligation of DTE Energy in the indenture for 60 days after we are given written notice by the trustee or we and the trustee are given written notice by the registered owners of at least 25% in principal amount of the Notes;
- (5) default occurs under any bond, note, debenture or other instrument evidencing any indebtedness for money borrowed by DTE Energy (including a default with respect to any other series of debt securities issued under the indenture), or under any mortgage, indenture or other instrument under which there may be issued or by which there may be secured or evidenced any indebtedness for money borrowed by DTE Energy (or the payment of which is guaranteed by DTE Energy), whether such indebtedness or guarantee exists on the date of the indenture or is issued or entered into following the date of the indenture, if:
 - either:
 - such default results from failure to pay any such indebtedness when due and such defaulted payment has not been made, waived or extended within 30 days of such payment default; or

- as a result of such default the maturity of such indebtedness has been accelerated prior to its expressed maturity and such indebtedness shall not have been discharged in full or such acceleration has not been rescinded or annulled within 30 days of such acceleration; and
 - the principal amount of such indebtedness, together with the principal amount of any other such indebtedness in default for failure to pay any such indebtedness when due or the maturity of which has been so accelerated, aggregates to at least \$40 million;
- (6) certain events of bankruptcy, insolvency, reorganization, receivership or liquidation relating to DTE Energy; or
- (7) we fail to pay the purchase price of any Note on the purchase contract settlement date, if required under “—Put Option upon Failed Remarketing” above.

If an event of default with respect to the Notes occurs and is continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the Notes may declare the principal amount of the Notes to be due and payable immediately. At any time after a declaration of acceleration has been made, but before a judgment or decree for payment of money has been obtained by the trustee, and subject to applicable law and certain other provisions of the indenture, the holders of a majority in aggregate principal amount of the Notes may, under certain circumstances, rescind and annul the acceleration. If an event of default occurs pertaining to certain events of bankruptcy, insolvency or reorganization specified in the indenture as described in paragraph (6) above, the principal amount and accrued and unpaid interest and any additional amounts payable in respect of the Notes, or a lesser amount as provided for in the Notes, will be immediately due and payable without any declaration or other act by the trustee or any holder.

The indenture provides that within 90 days after the occurrence of any default under the indenture with respect to the Notes, the trustee must transmit to the holders of the Notes, in the manner set forth in the indenture, notice of the default known to the trustee, unless the default has been cured or waived. However, except in the case of a default in the payment of the principal of (or premium, if any) or interest or any additional amounts or in the payment of any sinking fund installment with respect to, any Note, the trustee may withhold such notice if and so long as the board of directors, the executive committee or a trust committee of directors or responsible officers of the trustee has in good faith determined that the withholding of such notice is in the interest of the holders of Notes. In addition, in the case of any event of default described in paragraph (4) above, no such notice to holders will be given until at least 30 days after the occurrence of the event of default.

If an event of default occurs and is continuing with respect to the Notes, the trustee may in its discretion proceed to protect and enforce its rights and the rights of the holders of Notes by all appropriate judicial proceedings.

The indenture further provides that, subject to the duty of the trustee during any default to act with the required standard of care, the trustee will be under no obligation to exercise any of its rights or powers under the indenture at the request or direction of any of the holders of debt securities, unless that requesting holder has offered to the trustee reasonable indemnity. Subject to such provisions for the indemnification of the trustee, and subject to applicable law and certain other provisions of the indenture, the holders of a majority in aggregate principal amount of the outstanding Notes will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the Notes.

The indenture provides that no holder of any Note will have any right to institute any proceeding with respect to the indenture for the appointment of a receiver or for any other remedy thereunder unless:

- that holder has previously given the trustee written notice of a continuing event of default;
- the holders of 25% in aggregate principal amount of the outstanding Notes have made written request to the trustee to institute proceedings in respect of that event of default and have offered the trustee reasonable indemnity against costs and liabilities incurred in complying with such request; and
- for 60 days after receipt of such notice, the trustee has failed to institute any such proceeding and no direction inconsistent with such request has been given to the trustee during such 60-day period by the holders of a majority in aggregate principal amount of outstanding Notes.

Furthermore, no holder will be entitled to institute any such action if and to the extent that such action would disturb or prejudice the rights of other holders.

However, each holder has an absolute and unconditional right to receive payment when due and to bring a suit to enforce that right.

Under the indenture, we are required to furnish to the trustee annually a statement as to our performance of certain of our obligations under the indenture and as to any default in such performance. We are also required to deliver to the trustee, within five days after occurrence thereof, written notice of any event that after notice or lapse of time or both would constitute an event of default.

The holders of a majority in principal amount of outstanding Notes may waive a default or Event of Default, other than a default in the payment of principal of, or interest on, the Notes (including the redemption price or purchase price of the Notes, if applicable), or a default or Event of Default with respect to a covenant or provision that cannot be modified or amended without the consent of the holder of each outstanding Note.

If any portion of the amount payable on the Notes upon acceleration is considered by a court to be unearned interest, the court could disallow recovery of such portion.

Limitation on Secured Debt

We have agreed that we will not create, issue, incur or assume any Secured Debt (as defined below) without the consent of the holders of a majority in principal amount of the outstanding debt securities of all series with respect to which this covenant is made, considered as one class; provided, however, that the foregoing covenant will not prohibit the creation, issuance, incurrence or assumption of any Secured Debt if we either:

- secure all debt securities then outstanding with respect to which this covenant is made equally and ratably with the Secured Debt; or
- deliver to the trustee bonds, notes or other evidences of indebtedness secured by the Lien (as defined below) which secures the Secured Debt in an aggregate principal amount equal to the aggregate principal amount of the debt securities then outstanding with respect to which this covenant is made and meeting certain other requirements in the indenture.

“*Debt*” means:

- indebtedness for borrowed money evidenced by a bond, debenture, note or other written instrument or agreement by which we are obligated to repay such borrowed money; and
- any guaranty by DTE Energy of any such indebtedness of another person.

“Lien” means any mortgage, pledge, security interest, encumbrance, lien or charge of any kind (including, without limitation, any conditional sale or other title retention agreement or lease in the nature thereof or any agreement to give any security interest).

“Secured Debt” means Debt created, issued, incurred or assumed by DTE Energy that is secured by a Lien upon any shares of stock of any Significant Subsidiary, as defined in Regulation S-X of the rules and regulations under the Securities Act, whether owned at the date of the initial authentication and delivery of the debt securities of any series or thereafter acquired.

Consolidation, Merger or Sale

We will agree not to merge or consolidate with any other person or sell or convey all or substantially all of our assets to any person unless (i) either we are the continuing entity, or the successor entity (if other than us) is a corporation organized and existing under the laws of the United States of America or a State thereof or the District of Columbia and such corporation expressly assumes the due and punctual payment of the principal of and interest on the Notes, and the due and punctual performance and observance of all of the covenants and conditions of the indenture to be performed by us by supplemental indenture in form satisfactory to the indenture trustee, executed and delivered to the indenture trustee by such corporation, and (ii) we or such successor corporation, as the case may be, will not, immediately after such merger or consolidation, or such sale or conveyance, be in default in the performance of any such covenant or condition.

In case of any such consolidation, merger, sale or conveyance, and upon any such assumption by the successor corporation, such successor corporation will succeed to and be substituted for us, with the same effect as if it had been named as us in the indenture and (other than in the case of a lease), we will be discharged of all of our obligations and covenants under the indenture and the Notes.

The indenture does not prevent or restrict any conveyance or other transfer, or lease, of any part of our assets that does not constitute all, or substantially all, of our assets.

Modification of Indenture

DTE Energy and the trustee may generally modify certain provisions of the indenture with the consent of the holders of not less than a majority in aggregate principal amount of the debt securities of each series affected by the modification, except that no such modification or amendment may, without the consent of the holder of each debt security affected thereby:

- change the stated maturity of the principal of, or any installment of principal of, or any premium or interest on, or any additional amounts with respect to, any debt security issued under the indenture;
- reduce the principal amount of, or premium or interest on, or any additional amounts with respect to, any debt security issued under the indenture;
- change the place of payment or the coin or currency in which any debt security issued under that indenture or any premium or any interest on that debt security or any additional amounts with respect to that debt security is payable;
- reduce the percentage in principal amount of the outstanding debt securities, the consent of whose holders is required under the indenture in order to take certain actions;
- change any of our obligations to maintain an office or agency in the places and for the purposes required by the indenture;
- if the debt securities are convertible or exchangeable, modify the conversion or exchange provision in a manner adverse to holders of that debt security;
- in the case of a subordinated debt security, modify any of the subordination provisions in a manner adverse to holders of that debt security;
- impair the right to institute suit for the enforcement of any payment on or after the stated maturity of any debt securities issued under that indenture or, in the case of redemption, exchange or conversion, if applicable, on or after the redemption, exchange or conversion date or, in the case of repayment at the option of any holder, if applicable, on or after the date for repayment; or
- modify any of the above provisions or certain provisions regarding the waiver of past defaults or the waiver of certain covenants, with limited exceptions.

In addition, we and the trustee may, without the consent of any holders, modify provisions of the indenture for certain purposes, including, among other things:

- evidencing the succession of another person to DTE Energy and the assumption by any such successor of the covenants of DTE Energy in the indenture and in the debt securities;
- adding to the covenants of DTE Energy for the benefit of the holders of debt securities (and if such covenants are to be for the benefit of less than all series of debt securities, stating that such covenants are expressly being included solely for the benefit of such series) or surrendering any right or power herein conferred upon DTE Energy with respect to the debt securities;
- adding any additional events of default with respect to the debt securities (and, if such event of default is applicable to less than all series of debt securities, specifying the series to which such event of default is applicable);
- adding to or changing any provisions of the indenture to provide that bearer debt securities may be registrable, changing or eliminating any restrictions on the payment of principal of (or premium, if any) or interest on or any additional amounts with respect to bearer debt securities, permitting bearer debt securities to be issued in exchange for registered debt securities, permitting bearer debt securities to be issued in exchange for bearer debt securities of other authorized denominations or facilitating the issuance of debt securities in uncertificated form provided that any such action shall not adversely affect the interests of the holders of the debt securities in any material respect;
- establishing the form or terms of debt securities of any series;
- evidencing and providing for the acceptance of appointment of a successor trustee and adding to or changing any of the provisions of the indenture to facilitate the administration of the trusts;
- curing any ambiguity, correcting or supplementing any provision in the indenture that may be defective or inconsistent with any other provision therein, or making or amending any other provisions with respect to matters or questions arising under the indenture which shall not adversely affect the interests of the holders of debt securities of any series in any material respect;
- modifying, eliminating or adding to the provisions of the indenture to maintain the qualification of the indenture under the Trust Indenture Act as the same may be amended from time to time;
- adding to, deleting from or revising the conditions, limitations and restrictions on the authorized amount, terms or purposes of issue, authentication and delivery of debt securities, as therein set forth;
- modifying, eliminating or adding to the provisions of any security to allow for such security to be held in certificated form;
- securing the debt securities;
- making provisions with respect to conversion or exchange rights of holders of securities of any series;
- amending or supplementing any provision contained therein or in any supplemental indenture, provided that no such amendment or supplement will adversely affect the interests of the holders of any debt securities then outstanding in any material respect; or
- modifying, deleting or adding to any of the provisions of the indenture other than as contemplated above.

The holders of at least 66²/₃% in aggregate principal amount of debt securities of any series issued under the indenture may, on behalf of the holders of all debt securities of that series, waive our compliance with certain restrictive provisions of the indenture. The holders of not less than a majority in aggregate principal amount of debt securities of any series issued under the indenture may, on behalf of all holders of debt securities of that series, waive any past default and its consequences under the indenture with respect to the debt securities of that series, except:

- payment default with respect to debt securities of that series; or

- a default of a covenant or provision of the indenture that cannot be modified or amended without the consent of the holder of each debt security of that series.

In addition to the provisions set forth above, without the consent of any holders of Notes, we and the indenture trustee may from time to time amend and/or supplement the indenture and the Notes for the following purposes:

- to set forth the terms of the Notes following a successful remarketing, including to incorporate the reset interest rate or floating rate and reset spread and, if applicable, semi-annual interest payment dates and the modified maturity date, and to eliminate the Notes' optional redemption provisions; and
- to conform the terms of the indenture and the Notes to the descriptions thereof contained in the "Description of the Remarketable Senior Notes," "Description of the Equity Units," "Description of the Purchase Contracts" and "Certain Provisions of the Purchase Contract and Pledge Agreement" sections in the preliminary prospectus supplement for the Equity Units, as supplemented and/or amended by the related pricing term sheet.

In addition to the limitations set forth above, no modification or amendment may, without the consent of the holder of each Note affected thereby:

- modify the put right of holders of the Notes upon a failed remarketing in a manner materially adverse to the holders; or
- modify the remarketing provisions of the Notes in a manner materially adverse to the holders.

For the avoidance of doubt, the immediately preceding sentence will not limit our ability to modify the terms of the Notes in connection with a remarketing that is made in accordance with the terms of the indenture.

A supplemental indenture that changes or eliminates any covenant or other provision of the indenture expressly included solely for the benefit of holders of securities other than the Notes, or which modifies the rights of the holders of securities other than the Notes with respect to such covenant or other provision, will be deemed not to affect the rights under the indenture of the holders of the Notes.

Title

Prior to due presentment for registration of transfer of any Note, we, the indenture trustee and any agent of ours or the indenture trustee may deem and treat the person in whose name such Note is registered as the absolute owner of such Note (whether or not payments in respect of such Note are overdue and notwithstanding any notation of ownership or other writing thereon) for the purpose of receiving payment of or an account of the principal of and interest on such Note and for all other purposes; and neither we nor the indenture trustee nor any agent of ours or the indenture trustee will be affected by any notice to the contrary.

Governing Law

The indenture and the Notes provide that they will be governed by and for all purposes construed in accordance with the laws of the State of New York.

The Indenture Trustee

The trustee under the indenture will be The Bank of New York Mellon Trust Company, N.A. We and certain of our affiliates maintain banking and credit relationships with The Bank of New York Mellon Trust Company, N.A.

The Bank of New York Mellon Trust Company, N.A. and its affiliates have purchased, and are likely to purchase in the future, our securities and securities of our affiliates.

Book-Entry Issuance—The Depository Trust Company

The Notes that form a part of the Corporate Units will be issued in fully registered form and will be registered in the name of the purchase contract agent. The Notes that do not form a part of the Corporate Units will be evidenced by one or more global notes registered in the name of DTC's nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. Such global notes will be deposited with the indenture trustee as custodian for DTC.

Purchases of the Notes under the DTC system must be made by or through direct participants, which will receive a credit for the Notes on DTC's records. The ownership interest of each actual purchaser of each Note ("beneficial owner") is in turn to be recorded on the direct and indirect participants' records. Beneficial owners will not receive written confirmation from DTC of their purchases, but beneficial owners are expected to receive written confirmations providing details of the transactions, as well as periodic statements of their holdings, from the direct or indirect participant through which they purchased the Notes. Transfers of ownership interests in the Notes are to be accomplished by entries made on the books of direct and indirect participants acting on behalf of beneficial owners. Beneficial owners will not receive certificates representing their ownership interests in Notes, except in the event that use of the book-entry system for the Notes is discontinued.

To facilitate subsequent transfers, all Notes deposited by direct participants with DTC are registered in the name of DTC's nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of the Notes with DTC and their registration in the name of Cede & Co. or such other nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual beneficial owners of the Notes; DTC's records reflect only the identity of the direct participants to whose accounts the Notes are credited, which may or may not be the beneficial owners. The direct and indirect participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to direct participants, by direct participants to indirect participants, and by direct participants and indirect participants to beneficial owners, will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Notices will be sent to DTC.

Neither DTC nor Cede & Co. (nor such other DTC nominee) will consent or vote with respect to the Notes unless authorized by a direct participant in accordance with DTC's procedures. Under its usual procedures, DTC mails an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns the voting or consenting rights of Cede & Co. to those direct participants to whose accounts the Notes are credited on the record date. We believe that these arrangements will enable the beneficial owners to exercise rights equivalent in substance to the rights that can be directly exercised by a registered holder of the Notes.

Payments of principal and interest on the Notes will be made to Cede & Co. (or such other nominee of DTC). DTC's practice is to credit direct participants' accounts upon DTC's receipt of funds and corresponding detail information from us or the indenture trustee, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by participants to beneficial owners will be governed by standing instructions and customary practices and will be the responsibility of each participant and not of DTC, the indenture trustee or us, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or other such nominee of DTC) is our responsibility. Disbursement of such payments to direct participants will be the responsibility of DTC, and disbursement of such payments to the beneficial owners is the responsibility of direct and indirect participants.

In a few special situations described below, a book-entry security representing the Notes will terminate and interests in it will be exchanged for physical certificates representing the Notes. After that exchange, the choice of whether to hold securities directly or in street name will be up to you. You must consult your bank, broker or other

financial institution to find out how to have your interests in the Notes transferred to your name, so that you will be a direct holder.

The special situations for termination of a global security representing the Notes are:

- DTC notifies us that it is unwilling or unable to continue as depository for that global security or DTC ceases to be a “clearing agency” registered under the Exchange Act and we are unable to find a qualified replacement for DTC within 90 days; or
- any Event of Default with respect to the Notes has occurred and is continuing, or any other event has occurred and is continuing, which after notice or lapse of time, would become an Event of Default with respect to the Notes, and any beneficial owner requests that its beneficial interest be exchanged for a physical certificate.

With respect to the Notes, this paragraph replaces the antepenultimate and penultimate paragraphs of the “Book-Entry Securities” section of the accompanying prospectus in their entirety.

DTC may discontinue providing its services as securities depository with respect to the Notes at any time by giving us or the indenture trustee reasonable notice. In the event no successor securities depository is obtained, certificates for the Notes will be printed and delivered.

The information in this section concerning DTC’s book-entry system has been obtained from sources that we believe to be reliable, but neither we nor the underwriters take any responsibility for the accuracy of this information.

The indenture trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under the indenture or under applicable law with respect to any transfer of any interest in any Note (including any transfers between or among direct participant of DTC or beneficial owners of interests in any Note) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, the indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

None of the Purchase Contract Agent, the indenture trustee nor any agent shall have any responsibility or liability for any actions taken or not taken by DTC.

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (this “*Agreement*”) by and between **DTE ENERGY COMPANY**, a Michigan corporation (the “*Company*”), and **GERARDO NORCIA** (“*Executive*”) is made effective by the Company and Executive as of July 1, 2019 (the “*Effective Date*”).

RECITALS

WHEREAS, the Board of Directors of the Company (the “*Board*”) has determined that it is in the best interests of the Company and its shareholders to employ Executive as Chief Executive Officer of the Company; and

WHEREAS, the Board and the Executive have mutually agreed upon Executive’s compensation and benefits for the Executive’s role as Chief Executive Officer; and

WHEREAS, the Company and the Executive desire to enter into this Agreement with respect to certain terms of Executive’s employment with the Company as its Chief Executive Officer.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and the terms and conditions set forth herein, the parties agree as follows:

(a) **DUTIES.** Executive shall continue to be employed by the Company and shall begin to serve as the Chief Executive Officer of the Company on the Effective Date, continuing in that position thereafter at the pleasure of the Board. Executive shall serve in such other position or positions with the Company and its subsidiaries as are consistent with Executive’s position as Chief Executive Officer of the Company, and shall have such duties and responsibilities as are assigned to Executive by the Board consistent with Executive’s position as Chief Executive Officer. If elected, Executive agrees to serve as a member of the Board during the term of Executive’s employment with the Company. Executive’s compensation shall be as determined from time to time by the Organization and Compensation Committee of the Board.

1. CONFIDENTIALITY; NON-COMPETITION; NON-SOLICITATION.

(a) **Confidentiality.** At all times, both during the term of Executive’s employment by the Company and after the termination of Executive’s employment, Executive shall keep in confidence and trust and shall not use or disclose any confidential information of the Company or of any third party that is entrusted to the Company, except as may be necessary in the ordinary course of performing Executive’s duties for the Company; provided, however, that Executive shall have no such obligation with respect to confidential information that (i) was already known to Executive at the time of its disclosure to Executive by or on behalf of the Company, (ii) at the time of disclosure to Executive was generally available to the public or otherwise in the public domain, or (iii) subsequent to such disclosure becomes generally available to the public or otherwise in the public domain without fault on Executive’s part.

(b) Compelled Disclosure. In the event that Executive is requested in any proceeding to disclose any confidential information, Executive shall give the Company prompt notice of such request so that the Company may seek an appropriate protective order. If, in the absence of a protective order, Executive is nonetheless compelled by any court or tribunal of competent jurisdiction to disclose confidential information, Executive may disclose such information without liability hereunder; provided, however, that Executive gives the Company notice of the confidential information to be disclosed as far in advance of its disclosure as is practicable and uses Executive's best efforts to obtain assurances that confidential treatment will be accorded to such Confidential Information.

(c) Non-Competition. During the term of Executive's employment and for twenty-four (24) months thereafter, Executive shall not, with or without consideration, render services in any capacity to any person (including as a member of the board of directors of a company), or the division or subsidiary of any business, firm or company engaged in any business anywhere in the United States which has a product or service competitive with a product or service of the Company.

(d) Non-Solicitation. During the term of Executive's employment and for twenty-four (24) months thereafter, Executive shall not (i) encourage or solicit any employee of the Company to leave the Company for any reason or to accept employment with any other person or entity, (ii) disrupt or interfere with the relationship between the Company and any of its current or former customers, business relations, consultants, agents, representatives or vendors or (iii) induce or solicit or attempt to solicit, any person that is a current or former customer, supplier or other business relation of the Company to enter into a business relationship that may disrupt, damage, impair or interfere with the Company's business.

(e) Non-Disparagement. During the term of Executive's employment with the Company and thereafter, neither the Company nor Executive shall make, publish or communicate to any person or entity or in any public forum any defamatory or disparaging remarks, comments or statements concerning the other party including their affiliates, employees or officers, as applicable.

(f) Reasonableness of Terms. The Company and Executive agree that the terms contained in this Section 2 of this Agreement are reasonable in all respects and that the restrictions contained therein are designed to ensure that Executive does not engage in unfair competition with the Company. In the event a court determines that any of the terms or provisions of this Agreement are unreasonable, the court may limit the application of any provision or term, or modify any provision or term, and proceed to enforce this Agreement as so limited or modified.

(g) Remedies. Executive acknowledges that a violation of the terms of this Agreement may give rise to irreparable injury to the Company inadequately compensable in damages, and accordingly, agrees that the Company may seek injunctive relief against such breach or threatened breach, in addition to any other legal remedies which may be available, including recovery of monetary damages. Both parties waive any right to seek against the other party any claim for punitive, exemplary, or consequential damages for any breach of this Agreement.

(h) Permissible Disclosures. Nothing in this Agreement shall prohibit Executive from participating, testifying or assisting in any investigation, hearing, whistleblower proceeding or other proceeding before any federal, state or local government agency or pursuant to a lawfully issued subpoena, nor does anything herein preclude, prohibit or otherwise limit, in any way, Executive's rights and abilities to contact, communicate with, report matters to, or otherwise participate in any whistleblower program administered by any such agencies.

(f) AT-WILL EMPLOYMENT; OTHER POLICIES AND AGREEMENTS. Executive's employment with the Company is an "at-will" arrangement and this Agreement does not constitute a guarantee of employment for any specific period of time. Either Executive or the Company may terminate Executive's employment with the Company at any time, with or without Cause (as defined below), and with or without advance notice. This "at-will" employment relationship cannot be changed except in a written agreement approved by the Board and Executive. This Agreement shall not supersede or affect any other agreement (including but not limited to any change in control agreement or policy, any provisions of any incentive compensation plans or award agreements, any clawback policy or any indemnification agreement) currently in force. This Agreement shall not supersede or affect any of Executive's vested employment benefits including but not limited to post-employment benefits.

(g) SEVERANCE BENEFITS.

(h) Entitlement to Severance Benefits. If the Company (or any successor entity) terminates Executive's employment without Cause, or Executive terminates his employment for Good Reason, then unless such termination is due to Executive's death, permanent disability (within the meaning of the Company sponsored long-term disability plan in effect for, or applicable to, Executive), voluntary resignation or retirement, Executive shall be eligible to receive (i) severance pay in the form of continuation of Executive's base salary in effect as of the employment termination date for twenty-four (24) months following the date of termination of employment, plus (ii) an amount equal to two (2) times the annual incentive award that Executive would have been paid under the Company's annual incentive plan then in effect if Executive had been employed for the full calendar year with respect to the year in which the termination of Executive's employment occurred, calculated in the same manner as the annual incentive plan payments for other executives of the Company are calculated, and in addition (iii) Executive shall be paid a pro rata annual incentive payment under the Company's annual incentive plan then in effect, based on the number of days during the calendar year prior to the date of termination as compared to the entire calendar year, with such pro rata annual incentive payment to be earned only if and only to the extent that the annual incentive plan targets are achieved at the end of the calendar year, and (iv) the unvested equity awards held by Executive at the time of the termination of his employment shall vest on a pro rata basis, based on the number of days during the vesting period that Executive was employed prior to the date of termination as compared to the total vesting period, and any performance awards shall be earned if and only to the extent that the performance targets are achieved at the end of the performance period (the "**Severance Benefits**"). Executive will also be entitled to be certain post-termination health care benefits in accordance with a retiree medical plan in which Executive is entitled to participate. The vesting of unvested equity awards provided for in this Agreement is intended to be the same pro rata vesting that is provided for in the Company's current retirement

arrangement in which Executive is entitled to participate; in all other respects the Severance Benefits provided under this Agreement are in addition to any benefits under any other plans or agreements in effect between Executive and the Company, which plans or agreements are not altered in any manner by the terms of this Agreement.

(i) Payment of Severance Benefits. The Severance Benefits shall be subject to all required payroll deductions and withholdings as determined by the Company. In order to be eligible for the Severance Benefits, Executive must meet the Release Requirements as set forth in Section 5 within sixty (60) days after the date of Executive's employment termination, and Executive shall receive no Severance Benefits if Executive fails to meet the Release Requirements. If Executive meets the Release Requirements set forth in Section 5, the salary continuation portion of the Severance Benefits will be paid in equal monthly installments in accordance with the Company's regular payroll practices, provided however, that the first payment of such amounts will not be made to Executive until the first regular monthly payroll date that is more than sixty (60) days after the employment termination date, with the first payment due on such first payroll date that is more than sixty (60) days after the employment termination date to include all payments that would have been due during the period beginning on the first regular monthly payroll date following the termination date and such first regular monthly payroll date after the sixtieth (60th) day following the termination date; the annual incentive plan portion of the Severance Benefits shall be paid as follows: the first payment shall be made on March 15 of the year following the year in which the termination of Executive's employment occurs, such payment to consist of the sum of each of the monthly installments which would have been paid by such date if the annual incentive plan payments had been made following the termination date in twenty-four (24) monthly installments in accordance with the Company's regular payroll practices, and the balance shall be paid in equal monthly installments in accordance with the Company's regular payroll practices over the remainder of the two-year period following the termination date; and the pro rata annual incentive plan payment for the year in which the termination occurs shall be paid if and when annual incentive payments are made to the other executives who participate in the annual incentive plan.

(j) Definition of Cause. "Cause" for the Company (or any acquirer or successor in interest thereto) to terminate Executive's employment shall exist if any of the following occurs: (i) Executive's conviction (including a guilty plea or plea of *nolo contendere*) of any felony or any other crime involving fraud, dishonesty or moral turpitude; (ii) Executive's commission or attempted commission of or participation in a fraud or act of dishonesty or misrepresentation against the Company that results (or could reasonably be expected to result) in material harm or injury to the business or reputation of the Company; (iii) Executive's material violation of any Company policy or of any statutory duty Executive owes to the Company; or (iv) Executive's conduct that constitutes gross insubordination, incompetence or habitual neglect of duties and that results in (or could reasonably be expected to have resulted in) material harm to the business or reputation of the Company; provided, however, that the action or conduct described in clauses (iii) and (iv) above will constitute "Cause" only if such action or conduct continues after the Board or an authorized officer of the Company has provided Executive with written notice thereof and 30 days' opportunity to cure the same, except that the Board is not obligated to provide such written notice and opportunity to cure if the action or conduct is not reasonably susceptible to cure. The determination that a termination is for Cause shall be made in good faith by the Board in its sole discretion.

(k) Definition of Good Reason. “Good Reason” means the occurrence, without Executive’s consent, of any of the following events, other than in connection with a termination of Executive’s employment for Cause or due to a Qualifying Termination under a Change of Control as set forth in the March 3, 2014 Change in Control Severance Agreement between the parties.

(i) Executive’s Annual base salary or Executive’s opportunity to earn incentives and bonus pay from the Company at the target goals in place at the time of the Effective Date of this Agreement is reduced, except in the case of an across-the-board salary reduction similarly affecting all company executives,

(ii) Failure of Executive to be nominated by the Board to serve as a member of the Board at any meeting of shareholders at which Executive’s current term as a director expires;

(iii) Executive being required to report to any person(s) other than the Board, the Executive not being permitted to have a material involvement in the strategy and operations of the Company or the dilution or curtailing of the Executive’s roles and responsibilities (including but not limited to hiring of a Chief Operating Officer (COO), Chief Financial Officer (CFO) or similar equivalent roles of heads of functions and/or departments, without the Executive’s prior written consent or termination of a Chief Operating Officer (COO), Chief Financial Officer (CFO) or similar equivalent roles of heads of functions and/or departments, without first consulting with Executive in good faith);

(iv) Involuntary relocation of Executive outside of the greater Detroit Metropolitan Area; or

(v) A material breach by the Company of this Agreement or of any other Agreement between Company and the Executive concerning compensation and/or benefits.

Provided however, that the above will constitute “Good Reason” only if such actions or conditions continue after Executive has provided the Company with written notice thereof and thirty (30) days opportunity to cure the same, except that Executive is not obligated to provide such written notice and opportunity to cure if the action or conduct is not reasonably susceptible to cure.

(l) RELEASE REQUIREMENTS. To be eligible to receive the Severance Benefits, Executive must meet the following requirements (the “*Release Requirements*”): (a) Executive must first timely execute, make effective, not revoke and deliver to the Company within sixty (60) days after the date of Executive’s employment termination a general release of all known and unknown claims, in substantially the form attached hereto as Exhibit A; and (b) Executive must not be in material breach of any other agreement or contract between Executive and the Company at the time of the receipt of such benefits. In the event that, during such time as Executive continues to receive the Severance Benefits, Executive materially breaches this Agreement, the Company’s obligation to continue to provide the Severance Benefits will immediately cease in full, and Executive will not be entitled to receive any additional Severance Benefits as of the date of Executive’s breach.

(m) MISCELLANEOUS.

(n) Binding Effect; Severability. This Agreement will bind the heirs, personal representatives, successors and assigns of both Executive and the Company, and inure to the benefit of both Executive and the Company, their heirs, successors and assigns. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination shall not affect any other provision of this Agreement and the provision in question shall be modified so as to be rendered enforceable in a manner consistent with the intent of the parties insofar as possible under applicable law.

(o) Counterparts. This Agreement may be signed in counterparts, all of which together shall constitute one agreement.

(p) Governing Law; Consent to Jurisdiction; Jury Trial Waiver. This Agreement shall be governed by and construed in accordance with the internal laws of the State of Michigan, without regard to its principles of conflicts of laws. Each of the parties hereto irrevocably submits to the exclusive jurisdiction of the state and federal courts of or for the State of Michigan for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Agreement and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Agreement. Each of the parties hereto irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. Each party hereto irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. BY SIGNING THIS AGREEMENT EXECUTIVE ALSO WAIVES ANY RIGHT TO REQUEST A TRIAL BY JURY IN ANY LITIGATION WITH RESPECT TO THIS AGREEMENT AND REPRESENTS THAT COUNSEL HAS BEEN CONSULTED SPECIFICALLY AS TO THIS WAIVER.

(q) Mutual Drafting. Any ambiguity in this Agreement shall not be construed against either party as the drafter. Any waiver of a breach of this Agreement, or rights hereunder, shall be in writing and shall not be deemed to be a waiver of any successive breach or rights hereunder. This Agreement may be executed in counterparts which shall be deemed to be part of one original, and facsimile and .pdf signatures shall be equivalent to original signatures.

(r) SECTION 409A COMPLIANCE.

(s) The intent of the parties is that payments and benefits under this Agreement either are exempt from or comply with Section 409A and the regulations and guidance promulgated thereunder and, accordingly, to the maximum extent permitted, this Agreement (and payments and benefits hereunder) shall be interpreted to be exempt from or in compliance therewith. However, in no event whatsoever shall the Company be liable for any additional tax, interest or penalty that may be imposed on Executive by Section 409A or for damages for failing to be exempt from or in compliance with Section 409A.

(t) A termination of employment shall not be deemed to have occurred for purposes of any provision of this Agreement providing for the payment of any amounts or benefits upon or following a termination of employment unless such termination is also a “separation from service” within the meaning of Section 409A and, for purposes of any such provision of this Agreement, references to a “termination,” “termination of employment” or like terms shall mean “separation from service.”

(u) Notwithstanding any other payment schedule provided herein to the contrary, if Executive is deemed on the date of termination to be a “specified employee” within the meaning of that term under Section 409A(a)(2)(B), then each of the following shall apply:

(i) With regard to any payment that is considered deferred compensation under Section 409A payable on account of a “separation from service,” such payment shall be made on the date which is the earlier of (A) the expiration of the six-month period measured from the date of such “separation from service” of Executive, and (B) the date of Executive’s death (the “**Delay Period**”) to the extent required under Section 409A. Upon the expiration of the Delay Period, all payments delayed pursuant to this Section 7 (whether they would have otherwise been payable in a single sum or in installments in the absence of such delay) shall be paid to Executive in a lump sum, and all remaining payments due under this Agreement shall be paid or provided in accordance with the normal payment dates specified for them herein; and

(ii) To the extent that any benefits to be provided during the Delay Period is considered deferred compensation under Section 409A provided on account of a “separation from service,” Executive shall pay the cost of such benefits during the Delay Period, and the Company shall promptly reimburse Executive, to the extent that such costs would otherwise have been paid by the Company or to the extent that such benefits would otherwise have been provided by the Company at no cost to Executive, the Company’s share of the cost of such benefits upon expiration of the Delay Period, and any remaining benefits shall be reimbursed or provided by the Company in accordance with the procedures specified herein.

(v) All reimbursements of expenses under this Agreement shall be made on or prior to the last day of the taxable year following the taxable year in which such expenses were incurred by Executive. Any right to reimbursement or in kind benefits is not subject to liquidation or exchange for another benefit. No such reimbursement, expenses eligible for reimbursement, or in-kind benefits provided in any taxable year shall in any way affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other taxable year.

(w) For purposes of Section 409A, Executive’s right to receive any installment payment pursuant to this Agreement shall be treated as a right to receive a series of separate and distinct payments.

(x) Whenever a payment under this Agreement specifies a payment period with reference to a number of days (e.g., “payment shall be made within 30 days following the date of termination”), the actual date of payment within the specified period shall be within the sole discretion of the Company.

(y) Notwithstanding any other provision of this Agreement to the contrary, in no event shall any payment under this Agreement that constitutes “deferred compensation” for purposes of Section 409A be subject to offset, counterclaim or recoupment by any other amount payable to Executive unless and to the extent otherwise permitted by Section 409A.

(z) Unless this Agreement provides a specified and objectively determinable payment schedule to the contrary, to the extent that any payment of base salary or other compensation is to be paid for a specified continuing period of time beyond the date of Executive’s termination of employment in accordance with the Company’s payroll practices (or other similar term), the payments of such base salary or other compensation shall be made upon such schedule as in effect upon the date of termination, but no less frequently than monthly.

(aa) During the term of employment, Company shall provide Executive with regular and qualified consulting support to ensure Executive’s continued compliance with Section 409A; and upon Executive’s termination, retirement or other permanent separation from the Company, Company shall provide Executive the same consulting services for a period of six (6) months subsequent to such termination or retirement at Company’s sole cost.

SIGNATURES ON THE FOLLOWING PAGE

IN WITNESS WHEREOF, the Company and Executive have executed this Agreement as of the Effective Date.

EXECUTIVE:

THE COMPANY:

DTE ENERGY COMPANY

/s/Gerardo Norcia
GERARDO NORCIA

By: /s/Diane M. Antishin
Name: **DIANE M. ANTISHIN**
Title: Vice President - Human Resources

SEPARTION AGREEMENT AND RELEASE OF CLAIMS

This Separation Agreement and Release of Claims (“**Agreement**”) is made between (Insert Employee Name) (“**Employee**”) and (**Insert DTE Energy Corporate Services, LLC/ DTE Electric Company/DTE Gas Company**), for the benefit of DTE Energy Company, and all its assigns, employees, agents, officers, directors, trustees, shareholders, successors, parents, subsidiaries, affiliates, attorneys, associated companies and representatives, both past and present (collectively, the “**Company**”).

WHEREAS, Employee is separated from the Company, effective _____, and the parties desire to mutually and fully settle any and all potential claims, charges, or issues and resolve any and all disputes, whether known or unknown, that have or could have been raised by either Employee or the Company, including without limitation disputes arising out of, occurring during, or related to Employee’s employment with or separation from the Company, and

NOW, THEREFORE, in consideration of the mutual promises and representations contained throughout this entire Agreement, the parties agree as follows:

1. The Company will:

- a. [Describe applicable economic arrangements];
- b. Respond, as required by law, but not protest if Employee seeks unemployment benefits (however, benefit eligibility, timing and amount are determined by the Michigan Unemployment Insurance Agency (“UIA”));
- c. Record and advise third parties (other than UIA) that Employee voluntarily resigned and, if inquiry is made, the Company will provide only confirmation of dates of service and positions held.

2. Sufficient Consideration. The Employee agrees that the benefits set forth in this Agreement, including but not limited to the benefits outlined in Section 1 above, are benefits to which Employee would not otherwise be entitled to in the absence of this Agreement. Employee agrees that such benefits constitute adequate consideration for Employee’s obligations under this Agreement.

3. Release. Employee waives and releases for all time any and all claims Employee may have against the Company arising from Employee’s employment and/or termination of Employee’s employment up through the date on which this Agreement is executed. Employee agrees that the release of claims is all encompassing, final and binding for all time on Employee and Employee’s heirs or assigns. By signing this Agreement, Employee releases all claims for injury, damages wages or other compensation, whether known or unknown, arising under all federal, state and local regulations or statutes; including, but not limited to, claims under Title VII of the Civil Rights Act of 1964, as amended, the American’s With Disabilities Act, or the Age Discrimination in Employment Act, the Equal Pay Act, the Fair Labor Standards Act, the Employment Retirement Income Security Act of 1974, the Family Medical Leave Act, the Michigan Whistleblowers’ Protection Act, the Michigan Persons with Disabilities Civil Rights Act, the Michigan Elliott-Larsen Civil Rights Act, claims for discrimination, harassment or retaliation on the basis of any protected class or protected activity, or any claim arising under the common law (such as defamation or slander) that can or could be raised in any forum or court, unless the claims are those that cannot legally be released or those that arise after the date this Agreement is executed. Further, this does not limit Employee’s right to participate in an EEOC, NLRB, OSHA, SEC or other governmental agency investigation; however, Employee waives the right to recover any monetary or other benefits, such as reinstatement, arising from the investigation. This Agreement does not limit Employee’s rights to receive an award from the government for information provided.

4. **Proprietary Information and Return of Property.** Employee acknowledges that, while employed, Employee received proprietary and confidential information belonging to the Company, including trade secrets, customer lists, accounting information, and information related to process and technology, which are not generally known outside the Company, of which the Company takes reasonable efforts to maintain secrecy and from which the Company derives economic benefit and value (“Proprietary Information”). Employee agrees that for all time Employee will not disclose such Proprietary Information to any person outside of the Company, nor make any unauthorized use of such Proprietary Information. Employee shall immediately turn over to the Company and not keep or deliver to any other person, all Proprietary Information related to the business of the Company, as well as all other property belonging to the Company including, but not limited to, Employee Handbooks, door keys, file keys, computer access codes or other physical property. Employee shall have no right to retain any copies of Proprietary Information or Property for any reason whatsoever without the express written consent of the Company.
5. **Vested Benefits:** Nothing in this Agreement modifies or limits the terms or conditions of any Company benefit plan. Employee’s eligibility for benefits, if any, shall be governed by the terms of the applicable Company plan, including any reservation of rights therein.
6. **No Admission of Liability:** This Agreement constitutes a full accord and satisfaction of any and all claims described above and shall not be used as an admission of liability by the Company at any time for any purpose.
7. **Voluntary Agreement:** In signing this Agreement, Employee acknowledges that Employee does not and has not relied on any representation or statement by the Company or any representative of the Company regarding the subject matter or effect of this Agreement, except as stated herein. Employee acknowledges having had sufficient time to review the terms of this Agreement and is fully aware of its contents and legal effects. Employee has executed this Agreement after independent consideration and without being subjected to fraud, duress or undue influence. Employee has been advised to consult with an attorney prior to signing the Agreement.
8. **Choice of Law:** This Agreement is made and entered into in the State of Michigan and shall in all respects be interpreted, enforced and governed under the laws of that State.
9. **Severability:** If any provision, section, subsection or portion of this Agreement is determined to be illegal, invalid or unenforceable, in whole or in part, by a court of competent jurisdiction, such determination shall not affect any other provision and the remaining provisions of this Agreement shall remain in full force and effect, and shall be interpreted to best reflect the intent of the parties. Also, the headings or paragraph numbers are intended to be instructive, and not dispositive of the subject addressed.
10. **Waiting and Revocation Periods:** Employee confirms receipt of this Agreement on _____. Employee has twenty-one (21) days from the actual receipt of this Agreement to consider its terms, at which time the offer is withdrawn if it has not been accepted. Employee has the right to execute and return this Agreement at any time prior to the expiration of the waiting period. By signing earlier, Employee expressly and voluntarily waives any remainder of the 21-day review period.

Employee understands and agrees that this Agreement is revocable for seven (7) days following Employee’s signing of this Agreement, and may be revoked by a writing sent via certified mail to *Antoinette S. Porter, Employment Counsel, DTE Energy, One Energy Plaza 1640 WCB, Detroit, MI 48226*, post-marked no later than the seventh (7th) day after this Agreement is signed by Employee (unless that day is a Sunday or a holiday, in which event the period is extended to the next day there is mail service). This Agreement shall not become effective or enforceable until that revocation period has expired and shall automatically become enforceable and effective on the eighth (8th) day after the date this Agreement is signed by Employee and a designee of the Company.

11. **Medicare Acknowledgement:** Employee affirms that he is not, and has never been, a recipient of Medicare benefits. Employee affirms that he is under age 65 and is not otherwise eligible for Medicare, and that Medicare has not notified him of, and he is not aware of, any Medicare liens applicable to him.
12. **May Be Signed in Counterparts:** This Agreement may be signed in counterparts, and a facsimile or scanned signature sent via electronic mail shall be considered as authentic as the original.

The undersigned have read the foregoing Agreement and accepted and agree to the provisions contained therein and hereby execute it voluntarily and with full understanding of its consequences.

PLEASE READ CAREFULLY. THIS AGREEMENT INCLUDES A RELEASE OF CLAIMS.

(Insert Employee Name), Employee

Date: _____

Diane M. Antishin, for the Company

Date: _____

SUBSIDIARIES OF DTE ENERGY COMPANY

DTE Energy Company's principal subsidiaries as of December 31, 2019 are listed below. All other subsidiaries, if considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary.

Subsidiary	State of Incorporation
1. DTE Electric Company	Michigan
2. DTE Enterprises, Inc.	Michigan
3. DTE Pipeline Company	Michigan
4. DTE Gas Enterprises, LLC	Michigan
5. DTE Gas Company	Michigan
6. DTE Energy Resources, LLC	Delaware
7. DTE Gas Holdings, Inc.	Michigan
8. DTE Energy Services, Inc.	Michigan
9. DTE Electric Holdings, LLC	Michigan

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-157769 and 333-230656) and Form S-8 (No. 333-202343, 333-133645, 333-199746 and 333-225917) of DTE Energy Company of our report dated February 5, 2020 relating to the financial statements and financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 5, 2020

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (No. 333-230656-01) of DTE Electric Company of our report dated February 5, 2020 relating to the financial statements and financial statement schedule, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 5, 2020

FORM 10-K CERTIFICATION

I, Gerardo Norcia, certify that:

1. I have reviewed this Annual Report on Form 10-K of DTE Energy Company;
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(s) 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(s) 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.

/S/ GERARDO NORCIA

Date: February 5, 2020

Gerardo Norcia
President and
Chief Executive Officer of DTE Energy Company

FORM 10-K CERTIFICATION

I, Peter B. Oleksiak, certify that:

1. I have reviewed this Annual Report on Form 10-K of DTE Energy Company;
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(s) 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(s) 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.

/S/ PETER B. OLEKSIK

Peter B. Oleksiak
Senior Vice President and
Chief Financial Officer of DTE Energy Company

Date: February 5, 2020

FORM 10-K CERTIFICATION

I, Gerardo Norcia, certify that:

1. I have reviewed this Annual Report on Form 10-K of DTE Electric Company;
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(s) 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(s) 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.

/S/ GERARDO NORCIA

Date: February 5, 2020

Gerardo Norcia
President and
Chief Executive Officer of DTE Electric Company

FORM 10-K CERTIFICATION

I, Peter B. Oleksiak, certify that:

1. I have reviewed this Annual Report on Form 10-K of DTE Electric Company;
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(s) 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(s) 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.

/S/ PETER B. OLEKSIK

Peter B. Oleksiak
Senior Vice President and
Chief Financial Officer of DTE Electric Company

Date: February 5, 2020

**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 on Form 10-K of DTE Energy Company for the year ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Gerardo Norcia, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge and belief:

- (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 DTE Energy Company.

Date: February 5, 2020

/S/ GERARDO NORCIA

Gerardo Norcia
President and
Chief Executive Officer of DTE Energy Company

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

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

In connection with the Annual Report on Form 10-K of DTE Energy Company for the year ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Peter B. Oleksiak, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge and belief:

- (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 DTE Energy Company.

Date: February 5, 2020

/S/ PETER B. OLEKSIK

Peter B. Oleksiak
Senior Vice President and
Chief Financial Officer of DTE Energy Company

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

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

In connection with the Annual Report on Form 10-K of DTE Electric Company for the year ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Gerardo Norcia, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge and belief:

- (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 DTE Electric Company.

Date: February 5, 2020

/S/ GERARDO NORCIA

Gerardo Norcia
Chairman of the Board and
Chief Executive Officer of DTE Electric Company

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

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

In connection with the Annual Report on Form 10-K of DTE Electric Company for the year ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Peter B. Oleksiak, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge and belief:

- (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 DTE Electric Company.

Date: February 5, 2020

/S/ PETER B. OLEKSIAK

Peter B. Oleksiak
Senior Vice President and
Chief Financial Officer of DTE Electric Company

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