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, 2021

Or

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

Commission File Number: 1-11607

DTE Energy Company

Michigan	**38-3217752**
(State or other jurisdiction of incorporation or organization)	(I.R.S Employer Identification No.)

Commission File Number: 1-2198

DTE Electric Company

Michigan	**38-0478650**
(State or other jurisdiction of incorporation or organization)	(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	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 Energy	2020 Series G 4.375% Junior Subordinated Debentures due 2080	DTB	New York Stock Exchange
DTE Energy	2021 Series E 4.375% Junior Subordinated Debentures due 2081	DTG	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** ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

DTE Energy	**Yes**	☒	**No**	☐	**DTE Electric**	**Yes**	☒	**No**	☐

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

DTE Energy	**Large accelerated filer**	**Accelerated filer**	**Non-accelerated filer**	**Smaller reporting company**	**Emerging growth company**
	☒	☐	☐	☐	☐
DTE Electric	**Large accelerated filer**	**Accelerated filer**	**Non-accelerated filer**	**Smaller reporting company**	**Emerging growth company**
	☐	☐	☒	☐	☐

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

DTE Energy	**Yes**	☒	**No**	☐	**DTE Electric**	**Yes**	☐	**No**	☒

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

DTE Energy	**Yes**	☐	**No**	☒	**DTE Electric**	**Yes**	☐	**No**	☒

On June 30, 2021, the aggregate market value of DTE Energy's voting and non voting common equity held by non-affiliates was approximately $21.2 billion (based on the New York Stock Exchange closing price on such date).

Number of shares of Common Stock outstanding at January 31, 2022:

Registrant	Description	Shares
DTE Energy	Common Stock, without par value	193,745,891
DTE Electric	Common Stock, $10 par value, indirectly-owned by DTE Energy	138,632,324

DOCUMENTS INCORPORATED BY REFERENCE

Certain information in DTE Energy's definitive Proxy Statement for its 2022 Annual Meeting of Common Shareholders to be held May 5, 2022, which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A, not later than 120 days after the end of the Registrants' fiscal year covered by this report on Form 10-K, is incorporated herein by reference to Part III (Items 10, 11, 12, 13, and 14) of this Form 10-K.

This combined Form 10-K is filed separately by two registrants: DTE Energy and DTE Electric. Information contained herein relating to any individual registrant is filed by such registrant solely on its own behalf. DTE Electric makes no representation as to information relating exclusively to DTE Energy.

DTE Electric, an indirect wholly-owned subsidiary of DTE Energy, meets the conditions set forth in General Instructions I(1)(a) and (b) of Form 10-K and is therefore filing this form with the reduced disclosure format specified in General Instruction I(2) of Form 10-K.

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DEFINITIONS

ACE	Affordable Clean Energy
AFUDC	Allowance for Funds Used During Construction
AMT	Alternative Minimum Tax
AMV	Applicable Market Value
ASU	Accounting Standards Update issued by the FASB
CAD	Canadian Dollar (C$)
CARB	California Air Resources Board that administers California's Low Carbon Fuel Standard
Carbon emissions	Emissions of carbon containing compounds, including carbon dioxide and methane, that are identified as greenhouse gases
CARES Act	Coronavirus Aid, Relief, and Economic Security Act enacted in March 2020 to assist individuals and employers with the impacts of the COVID-19 pandemic, including certain tax relief provisions
CCR	Coal Combustion Residuals
CFTC	U.S. Commodity Futures Trading Commission
COVID-19	Coronavirus disease of 2019
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
DT Midstream	DT Midstream, Inc., formerly DTE Energy's natural gas pipeline, storage, and gathering non-utility business comprising the Gas Storage and Pipelines segment and certain DTE Energy holding company activity in the Corporate and Other segment, which separated from DTE Energy and became an independent public company on July 1, 2021
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 2019 equity units issued in November 2019, which were used to finance the Gas Storage and Pipelines acquisition on December 4, 2019
ERCOT	Electric Reliability Council of Texas, the independent power market operator responsible for substantially all of the Texas power market.
EWR	Energy Waste Reduction program, which includes a mechanism authorized by the MPSC allowing DTE Electric and DTE Gas to recover through rates certain costs relating to energy waste reduction
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
FGD	Flue Gas Desulfurization
FOV	Finding of Violation

DEFINITIONS

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
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
Net zero	Collective efforts to reduce the carbon emissions of DTE Energy's utility operations and gas suppliers, as well as efforts to offset an amount equivalent to any remaining emissions. Progress towards this goal is estimated and may vary from the calculations of other utility businesses with similar targets
NEXUS	NEXUS Gas Transmission, LLC, a joint venture in which DTE Energy previously owned a 50% partnership interest that separated with DT Midstream effective July 1, 2021
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
NO_X	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRC	U.S. Nuclear Regulatory Commission
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
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
RPS	Renewable Portfolio Standard program, which includes a mechanism authorized by the MPSC allowing DTE Electric to recover through rates its renewable energy costs
RSN	Remarketable Senior Notes
RTO	Regional Transmission Organization

DEFINITIONS

SEC	Securities and Exchange Commission
SGG	Stonewall Gas Gathering is a midstream natural gas asset that was previously owned 85% by DTE Energy and separated with DT Midstream effective July 1, 2021
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TCJA	Tax Cuts and Jobs Act of 2017, which reduced the corporate Federal income tax rate from 35% to 21%
TCJA rate reduction	Reduction in DTE Gas revenue related to Calculation C of the TCJA. DTE Gas' Calculation C case was approved by the MPSC in August 2019 to address all remaining issues relative to the TCJA, which is primarily the remeasurement of deferred taxes and how the amounts deferred as Regulatory liabilities flow to ratepayers
Topic 606	FASB issued ASU No. 2014-09, Revenue from Contracts with Customers, as amended
Topic 842	FASB issued ASU No, 2016-02, Leases, as amended
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

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:

- Risks related to the separation of DT Midstream, including that providing DT Midstream with transition services could adversely affect our business and that the transaction may not achieve some or all of the anticipated benefits;
- the duration and impact of the COVID-19 pandemic on the Registrants and customers;
- impact of regulation by the EPA, EGLE, the FERC, the MPSC, the NRC, and for DTE Energy, the CFTC and CARB, 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 in prices in the international steel markets and in prices of environmental attributes generated from renewable natural gas investments on the operations of DTE Vantage (formerly Power and Industrial Projects);
- 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 and customer data 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 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;
- impacts of inflation and 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, including climate change, 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;
- successful execution of new business development and future growth plans;
- contract disputes, binding arbitration, litigation, and related appeals;
- the ability of the electric and gas utilities to achieve net zero emissions goals; 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 two other segments that are engaged in a variety of energy-related businesses.

DTE Electric is a Michigan corporation organized in 1903 and is an indirect wholly-owned subsidiary of DTE Energy. DTE Electric is a public utility engaged in the generation, purchase, distribution, and sale of electricity to approximately 2.3 million customers in southeastern Michigan.

DTE Gas is a Michigan corporation organized in 1898 and is an indirect 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 include 1) DTE Vantage, formerly DTE Energy's Power and Industrial Projects segment, which is primarily involved in renewable natural gas projects, providing industrial energy services, and reduced emissions fuel projects, and 2) energy marketing and trading operations.

On July 1, 2021, DTE Energy completed the separation of its natural gas pipeline, storage, and gathering non-utility business. Effective with the separation, DTE Energy retains no ownership in the new company, DT Midstream.

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 and CARB.

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 SEC 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 22 to the Consolidated Financial Statements, "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 2.3 million residential, commercial, and industrial customers in southeastern Michigan.

Gas

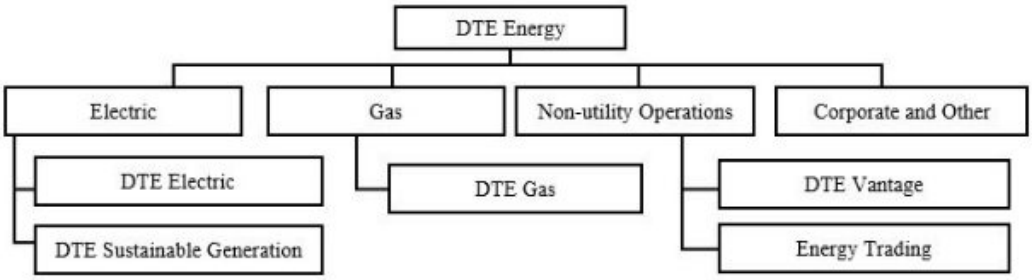
- The Gas segment consists principally of DTE Gas, which is engaged in the purchase, storage, transportation, distribution, and sale of natural gas to approximately 1.3 million residential, commercial, and industrial customers throughout Michigan and the sale of storage and transportation capacity.

Non-utility Operations

- DTE Vantage 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 certain investments, including funds supporting regional development and economic growth.



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 2.3 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.

For a summary of Electric segment operating revenues by service, see Note 5 to the Consolidated Financial Statements, "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 dependent upon the availability of coal and natural gas.

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 19 million tons of low-sulfur western coal and approximately 1.5 million tons of Appalachian coal to be delivered from 2022 to 2023. All of these contracts have pricing schedules. DTE Electric has 100% of its expected coal requirements under contract for 2022. DTE Electric leases a fleet of rail cars and has the expected western and eastern coal rail requirements under multi-year contracts. DTE Electric's 2022 rail transportation is covered under long-term agreements. DTE Electric expects to cover all of its 2022 vessel transportation requirements for delivery of purchased coal to electric generating facilities through existing agreements. DTE Electric's natural gas supply requirements are expected to be met through a combination of short and long-term agreements, agreements with local distribution companies, and spot market purchases. Natural gas purchase requirements for 2022 are expected to be approximately 52 Bcf. DTE Electric has contracts for firm gas transportation and storage capacity to ensure reliable and flexible gas supply to its power plants. Given the geographic diversity of supply, DTE Electric believes it can meet its expected generation requirements.

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, 2021 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
St. Clair	St. Clair	1953, 1954, 1961, and 1969	1,065
Trenton Channel	Wayne	1968	495
Dearborn	Wayne	2019	35
			6,480
Natural gas and Oil-fueled Peaking Units	Various	1966-1971, 1981, 1999, 2002, and 2003	1,998
Nuclear-fueled Steam-Electric Fermi 2	Monroe	1988	1,141
Hydroelectric Pumped Storage Ludington[d]	Mason	1973	1,088
Renewables[e]			
Wind Utility	Various	2011-2021	1,164
Wind Non-Utility	Various	2019-2020	106
Solar	Various	2010-2021	66
			1,336
			12,043

(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 7 to the Consolidated Financial Statements, "Jointly-Owned Utility Plant."
(c) The Monroe generating plant provided 39% of DTE Electric's total 2021 power plant generation.
(d) Represents DTE Electric's 49% interest in Ludington with a total capability of 2,220 MW. See Note 7 to the Consolidated Financial Statements, "Jointly-Owned Utility Plant."
(e) 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 52 MW relate to power purchase agreements with DTE Sustainable Generation.

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 698 distribution substations with a capacity of approximately 36,987,000 kilovolt-amperes (kVA) and approximately 449,800 line transformers with a capacity of approximately 32,817,000 kVA.

Circuit miles of electric distribution lines owned and in service as of December 31, 2021 are shown in the following table:

	Circuit Miles	
Operating Voltage-Kilovolts (kV)	**Overhead**	**Underground**
4.8 kV to 13.2 kV	28,536	15,652
24 kV	179	741
40 kV	2,352	430
120 kV	62	8
	31,129	**16,831**

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, wholesale electric market activities, certain affiliate transactions, the acquisition and disposition of certain generation and other facilities, and, in conjunction with the NERC, compliance with mandatory reliability standards. 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 8, 9, 12, 18, and 19 to the Consolidated Financial Statements, "Asset Retirement Obligations," "Regulatory Matters," "Fair Value," "Commitments and Contingencies," and " Nuclear Operations."

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 and support DTE Energy's goal to reduce carbon emissions by 32% by 2023, 50% by 2028, and 80% by 2040 from 2005 carbon emissions levels, as well as net zero emissions by 2050. An increasing amount of high wind and other extreme weather events driven by climate change, coupled with increasing electric vehicle adoption, will drive a continued need for substantial grid investment over the long-term. In addition, 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. To maintain reliability and meet the carbon reduction goals in the near-term, DTE Electric plans to put in service a natural gas fueled combined cycle generation facility in 2022 and will continue its energy waste reduction initiatives and transition away from coal-fired plants to renewable energy and other sources. To achieve long-term carbon reduction goals, DTE Electric is monitoring the viability of emerging technologies involving energy storage, carbon capture and sequestration, alternative fuels such as hydrogen, and advanced nuclear power.

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. Energy legislation enacted by the State of Michigan has placed a 10% cap on total retail access. This cap mitigates some of the unfavorable effects of electric retail access on DTE Electric's financial performance and full-service customer rates. Customers with retail access to alternative electric suppliers consist primarily of industrial and commercial customers and represented approximately 10%, 8.5%, and 10% of retail sales in 2021, 2020, and 2019, respectively. DTE Electric expects that customers with retail access to alternative electric suppliers will represent approximately 10% of retail sales in 2022.

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 Revenue Decoupling Mechanism authorized by the MPSC.

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.

For a summary of Gas segment operating revenues by service, see Note 5 to the Consolidated Financial Statements, "Revenue."

Natural Gas Supply

DTE Gas' gas distribution system has a planned maximum daily send-out capacity of 2.4 Bcf, with approximately 66% of the volume coming from underground storage for 2021. 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 2024.

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, 2021 are listed below.

	Availability (MDth/d)	Contract Expiration
Vector Pipeline L.P.	20	2022
Great Lakes Gas Transmission L.P.	30	2024
Viking Gas Transmission Company	21	2027
ANR Pipeline Company	129	2028
Panhandle Eastern Pipeline Company	125	2029
NEXUS Pipeline	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 1,304,000 service pipelines, and approximately 1,305,000 active meters. DTE Gas also 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 through a finance lease arrangement. See Note 17 to the Consolidated Financial Statements, "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 9 and 18 to the Consolidated Financial Statements, "Regulatory Matters" and "Commitments and Contingencies."

Energy Assistance Programs

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 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.

DTE Energy is also committed to a goal of net zero carbon emissions by 2050 for its gas utility, for both internal operations and from suppliers. To achieve net zero, DTE Gas is working to source gas with lower methane intensity, reduce emissions through its main renewal and pipeline integrity programs, and if necessary, use carbon offsets to address any remaining emissions. DTE Energy is also committed to helping DTE Gas customers reduce their emissions by 35% by 2050 by increasing energy efficiency, pursuing advanced technologies such as hydrogen, and through the CleanVision Natural Gas Balance program which provides customers the option to use carbon offsets and renewable natural gas.

DTE VANTAGE

Description

DTE Vantage 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:

Renewable Energy

- *Renewable Gas Recovery* — DTE Vantage has ownership interests in, and operates, twenty-two gas recovery sites in eight states. The sites recover methane from landfills and agricultural businesses and convert the gas to generate electricity and replace fossil fuels in industrial and manufacturing operations. Certain sites also refine the methane to produce pipeline-quality gas, which can then be used as vehicle fuel and generate environmental attributes.
- *Wholesale Power and Renewables* — DTE Vantage holds ownership interests in, and operates, four renewable generating plants with a capacity of 139 MWs. The electric output is sold under long-term power purchase agreements.

Industrial Energy Services

- *On-Site Energy* — DTE Vantage provides power generation, steam production, chilled water production, wastewater treatment, and compressed air supply to industrial customers. DTE Vantage also provides utility-type services using project assets usually located on or near the customers' premises in the automotive, airport, chemical, and other industries.
- *Steel and Petroleum Coke* — DTE Vantage 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. DTE Vantage also provided pulverized coal through the end of 2021 and continues to supply metallurgical and petroleum coke to the steel, pulp and paper, and other industries.

Environmental Controls

- *Reduced Emissions Fuel* — DTE Vantage constructed and placed in service REF facilities at ten sites, including facilities located at seven third-party owned coal-fired power plants. DTE Energy sold membership interests in seven of the facilities and entered into lease arrangements in two of the facilities. The facilities blended a proprietary additive with coal used in coal-fired power plants, resulting in reduced emissions of nitrogen oxide and mercury. Qualifying facilities were eligible to generate tax credits for ten years upon achieving certain criteria and ceased operations at the end of 2021 given no further eligibility. 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.

Properties and Other

The following are significant properties owned by DTE Vantage as of December 31, 2021:

Business Areas	Location	Service Type
Renewable Energy		
Renewable Gas Recovery	AZ, CA, MI, NC, OH, TX, UT, and WI	Electric Generation and Renewable Natural Gas
Wholesale Power and Renewables	CA and MN	Electric Generation
Industrial Energy Services		
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
Hospital and University	CA and IL	Electricity, Steam, and Chilled Water
Casino and Gaming	NJ	Electricity, Steam, and Chilled Water
Steel and Petroleum Coke		
Pulverized Coal Operations[(a)]	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
Environmental Controls[(a)]	MI, OH, IL, TX, and WI	REF Supply

(a) Ceased operations as of December 31, 2021.

	2021	2020	2019
		(In millions)	
Production Tax Credits Generated (Allocated to DTE Energy)			
REF	**$ 58**	$ 55	$ 72
Wholesale Power and Renewables	**8**	9	8
Renewable Gas Recovery	**2**	2	3
	$ 68	$ 66	$ 83

Regulation

Certain electric generating facilities within DTE Vantage 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 DTE Vantage are also subject to the applicable laws, rules, and regulations related to the EPA, U.S. Department of Homeland Security, DOE, CARB, and various state utility commissions.

Strategy and Competition

DTE Vantage will continue leveraging its energy-related operating experience and project management capability to develop and grow its renewable energy and on-site energy businesses. DTE Vantage will also continue to pursue opportunities to provide asset management and operations services to third parties. There are limited competitors for DTE Vantage's existing disparate businesses who provide similar products and services. DTE Vantage's 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 DTE Vantage.

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

DTE Vantage intends to focus on the following areas for growth:

- Acquiring and developing renewable energy projects and other energy projects
- Providing energy and utility-type services to commercial and industrial customers
- Exploring decarbonization opportunities related to carbon capture and storage 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

Corporate and Other includes various holding company activities, holds certain non-utility debt, and holds certain investments, including funds supporting regional development and economic growth.

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 reconsideration 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	Total
		(In millions)	
Water	$ 10	$ —	$ 10
Contaminated and other sites	12	14	26
Coal combustion residuals and effluent limitations guidelines	417	—	417
Estimated total future expenditures through 2026	$ 439	$ 14	$ 453
Estimated 2022 expenditures	$ 81	$ 8	$ 89
Estimated 2023 expenditures	$ 65	$ 3	$ 68

For additional information regarding environmental matters, refer to Notes 8, 9, and 18 to the Consolidated Financial Statements, "Asset Retirement Obligations," "Regulatory Matters," and "Commitments and Contingencies."

HUMAN CAPITAL MANAGEMENT

DTE Energy and its subsidiaries had approximately 10,300 employees as of December 31, 2021, of which approximately 5,200 were represented by unions. DTE Electric had approximately 4,700 employees as of December 31, 2021, of which approximately 2,700 were represented by unions. The workforce is comprised almost entirely of full-time employees.

DTE Energy and utilities across the country are managing the turnover of our workforce due to a significant number of retirements expected in the next ten years - a period that will be impacted by major transformation of our business through technology investments, changes to our electric generation portfolio, and upgrades to our distribution infrastructure.

Amidst this challenge, DTE Energy is building a culture of highly engaged employees with skills and expertise in science, technology, engineering, math, analytics, and skilled trades, which are in high demand and critical to our industry. To attract and retain the best talent, DTE Energy promotes the engagement of its employees through diversity, equity, and inclusion; health, safety, and well-being; and compensation and benefits.

DTE Energy also provides continuous learning to optimize employee performance and engagement. DTE Energy provides tuition reimbursement and an internal learning platform that includes free instructor-led and online courses, learning-focused events with expert guest speakers, and a comprehensive development program for new front-line leaders. DTE Energy also has a Talent Planning Committee that oversees talent and succession planning. These efforts have been critical in supporting employees transitioning to new roles as coal-fired plants are retired and replaced with new, cleaner generation.

Diversity, Equity, and Inclusion (DEI)

DTE Energy is committed to building a diverse, empowered, and engaged team that delivers safe, reliable service and energy to our customers. A diverse workforce and inclusive culture contribute to DTE Energy's success and sustainability by driving innovation and creating trusted relationships with employees, customers, suppliers, and community partners. By tapping into the talent, unique perspectives, and cultural and life experiences of every employee, DTE Energy can ensure its continued success.

As of December 31, 2021, DTE Energy’s workforce was comprised of 28% women and 29% minorities. DTE Energy measures DEI performance by its workforce representation of women, minorities, veterans, and employees with disabilities, as well as the following:

- Diversity of candidates, hires, high potential talent, and leadership promotions
- Employee engagement, including specific elements that measure a culture of inclusion
- Number of DEI related communications and events
- Supplier diversity spend
- Rankings and scores from DEI benchmarking surveys
- Formal training programs, including unconscious bias training for employees and leaders

Health, Safety, and Well-being

The health, safety, and well-being of people is DTE Energy's top priority - for employees, contractors, customers, and everyone in the communities that DTE Energy serves. DTE Energy's health, safety, and well-being culture is maintained and strengthened with the help of multiple safety and well-being committees spanning all levels of the company. Members include union representatives, DTE Energy executives, office workers, and field employees.

Safety

All workplace injuries and incidents that could have caused an injury are documented and thoroughly reviewed for potential preventive measures. DTE Energy directs its employees to be responsible for their own safety and the safety of everyone around them. DTE Energy also administers regular safety training. Hazardous work is identified and categorized according to risk and training is provided to mitigate risk of any serious injuries.

DTE Energy monitors its safety performance by reviewing the rate of safety incidents, as defined by the Office of Safety and Health Administration ("OSHA rate"), and the rate of Days Away, Restricted, or Transferred ("DART").

COVID-19 Response

During the first quarter 2020, the COVID-19 pandemic began impacting Michigan and the other service territories throughout the United States in which DTE Energy operates. DTE Energy took quick action to ensure the safety and well-being of its employees. DTE Energy successfully implemented work from home for over half of its employees and extensive new safety procedures to ensure plant and employee safety, including the use of personal protective equipment, contact tracing, and cleaning of facilities. To further support employees during the pandemic, DTE Energy enhanced communications around its employee assistance programs, established an occupational health call center, and provided clinical case management for cases related to COVID-19.

DTE Energy continues to actively monitor risks related to COVID-19 and proper application of our safety protocols. DTE Energy is also committed to providing consistent, transparent communication to employees around safe practices, quarantine, monitoring and testing protocols, vaccine availability, and plans for safely returning to office work.

Culture of Health and Well-being

DTE Energy aspires to become the healthiest and most supportive organization of well-being. DTE Energy is focused on supporting employees holistically, including physical health, emotional well-being, social connectivity, and financial security. Resources are provided to promote and support healthier lifestyles, including an on-site clinic, fitness centers, on-site and virtual well-being classes, and a team of well-being coordinators, registered dieticians and athletic trainers. DTE Energy offers a Healthy Living Program to complete both an annual physical with biometric screenings and a Health Risk Assessment to ensure employees have a relationship with a trusted physician and early detection of health conditions. Additionally, DTE Energy offers extensive well-being education and disease management programs.

DTE Energy monitors health and well-being performance across various metrics including an Employer Health Opportunity Assessment, completion of required well-being trainings, and measurement of collective health of the DTE family including medical trends and spend.

Compensation and Benefits

DTE Energy is committed to offering compensation that is competitive, market driven, and internally equitable. Approximately half of DTE Energy's employees are represented by labor unions through which pay is uniformly determined through collectively bargained agreements. For non-represented employees, DTE Energy's human resources professionals establish pay ranges for each job classification and work with hiring leaders to make competitive offers within the range to candidates based on objective factors like years of experience and strength of skills relevant to the job. Annually, DTE Energy conducts a review of compensation practices as part of its affirmative action program and makes adjustments as needed to ensure that pay is fair and equitable.

DTE Energy provides competitive, customizable benefits for all regular full-time and regular part-time employees. Innovative compensation and benefits initiatives at DTE Energy include:

- A 401(k) plan/Employee Stock Ownership Plan that is available to all regular full-time and regular part-time employees, including automatic enrollment of new hires, automatic annual escalation of employee 401(k) contributions up to 10% of pay, and 401(k) matching contributions
- Competitive health and welfare benefits
- Child bonding/parental leave of absence
- Additional vacation days available for employee purchase
- Competitive incentive plans, which are offered to all non-represented employees to create alignment of corporate and individual goals

Incentive Plans

DTE Energy has two primary types of incentives that reward individuals for performance. The incentives are designed to tie compensation to performance and encourage individuals to align their interests with those of the shareholders and customers of the Company.

- Annual incentive plans allow DTE Energy to reward individuals with annual cash bonuses for performance against pre-established objectives based on work performed in the prior year. Objectives are aligned with our core priorities and include metrics for employee engagement and safety, customer satisfaction, utility operating excellence, and financial metrics such as earnings per share and cash flows.
- Long-term incentive plans allow DTE Energy to grant individuals long-term equity incentives to encourage continued employment with DTE Energy, to accomplish pre-defined long-term performance objectives, and to create shareholder alignment. Metrics generally include total shareholder return relative to industry peers, utility return on equity, and balance sheet health.

For additional information on the metrics above, please see the "Annual and Long-term Incentives" section of DTE Energy's Proxy Statement.

Additionally, refer to DTE Energy’s 2021 Environmental, Social, Governance and Sustainability report for further information on metrics tracked for DEI, health and safety, and other components of DTE Energy’s human capital management, as well as the annual Culture of Health and Well-being report. These reports are available through the Environmental, Social, and Governance section of the Investor Relations page on DTE Energy’s website (*www.dteenergy.com*), and shall not be deemed incorporated by reference into this Form 10-K.

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.

Regulatory, Legislative, and Legal Risks

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 incurring 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.

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, or if existing deadlines for these regulations are accelerated, 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.

The Renewable Portfolio Standard 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.

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.

Operational Risks

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.

Construction and capital improvements to the Registrants' power facilities and DTE Energy's distribution systems 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 and at DTE Energy's gas distribution system. 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. 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. The price of environmental attributes generated by DTE Energy's renewable natural gas investments, including those related to the federal Renewable Fuel Standard and California's Low Carbon Fuel Standard, may also impact the market and financial results for DTE Energy's non-utility businesses.

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.

Weather, including extreme weather caused by climate change, 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, floods, 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. Prolonged and/or more frequent outages caused by extreme weather could also negatively impact DTE Energy's reputation and customer satisfaction or result in increased regulatory oversight, and related damages to customer assets could subject DTE Energy to litigation. DTE Gas can also 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.

A work interruption may adversely affect the Registrants. There are several bargaining units for DTE Energy's approximately 5,200 and DTE Electric's approximately 2,700 represented employees. The majority of represented employees are under contracts that expire in 2027. 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 may not achieve the net zero carbon emissions goals of its electric and gas utilities. DTE Energy has announced the voluntary commitments of its electric and gas utilities to achieve net zero carbon emissions by 2050. Technology research and developments, innovations, and advancements are critical to DTE Energy's ability to achieve this commitment. Other factors that may impact DTE Energy's ability to achieve these net zero goals include our service territory size and capacity needs remaining in line with current expectations, the impacts on our business of future regulations or legislation, the price and availability of carbon offsets, adoption of alternative energy products by the public such as greater use of electric vehicles, greater standardization of emissions reporting, and our ability over time to transition our electric generating portfolio. DTE Energy's net zero goals require making assumptions that involve risks and uncertainties. Should one or more of these underlying assumptions prove incorrect, our actual results and ability to achieve net zero emissions by 2050 could differ materially from expectations. In addition, DTE Energy cannot predict the ultimate impact of achieving this objective, or the various implementation aspects on its reliability or its results of operations, financial condition, or liquidity.

Financial, Economic, and Market Risks

DTE Energy's non-utility businesses may not perform to its expectations. DTE Energy relies on non-utility businesses for a portion of earnings and will depend on the successful execution of new business development in its non-utilities to help achieve overall growth targets. DTE Energy also expects that the loss of earnings from ceasing the operations of its REF non-utility business will be offset by growth in renewable energy and industrial services projects over the long term; however, such opportunities may not materialize as anticipated. If DTE Energy's current and contemplated non-utility investments do not perform at expected levels, DTE Energy could experience diminished earnings and a corresponding decline in shareholder value.

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 needs 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 needs. 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 and 2025, 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.

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.

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.

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.

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.

Safety and Security Risks

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.

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. The Registrants have experienced, and expect to continue to be subject to, cybersecurity threats and incidents. 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 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.

General and Other Risks

The COVID-19 pandemic and resulting impact on business and economic conditions could negatively affect the Registrants' businesses and operations. The COVID-19 pandemic is currently impacting countries, communities, supply chains and markets. The continued spread of COVID-19 and efforts to contain the virus, such as quarantines, closures, or reduced operations of businesses, governmental agencies and other institutions, have resulted in disruptions in various public, commercial, and industrial activities and have caused employee absences which interfered with certain operation and maintenance of the Registrants' facilities. Travel bans and restrictions, quarantines, and shelter in place orders could also cause us to experience operational delays, delay the delivery of critical infrastructure and other supplies we source globally, or delay the connection of electric or gas service to new customers, and have reduced the use of electricity and gas by certain customers in the commercial and industrial segments. Any of the foregoing circumstances could adversely affect customer demand or revenues, impact the ability of the Registrants' suppliers, vendors or contractors to perform, or cause other unpredictable events, which could adversely affect the Registrants' businesses, results of operations or financial condition. The continued spread of COVID-19 has also led to disruption and volatility in the financial markets, which could increase the Registrants' costs to fund capital requirements and impact the operating results of our energy trading operations. To the extent that the Registrants' access to the capital markets is adversely affected by COVID-19, the Registrants may need to consider alternative sources of funding for our operations and for working capital, any of which could increase the Registrants' cost of capital. The extent to which COVID-19 may continue to impact the Registrants' liquidity, financial condition, and results of operations will depend on future developments, which are highly uncertain and cannot be predicted, including new information concerning the severity of COVID-19 and its related variants, vaccine distribution and public acceptance, and other actions taken to contain it or treat its impact, and the extent to which normal economic and operating conditions can resume, among others. Our business continuity plans and insurance coverage may be insufficient to mitigate these adverse impacts to our business.

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.

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 spin-off of DT Midstream (the "Spin-off") may not achieve its intended benefits and may present additional risk to DTE Energy. As a result of the Spin-off, DTE Energy faces new and unique risks, including having fewer assets, reduced financial resources and less diversification of revenue sources. The Spin-off may not achieve some or all of its anticipated benefits and we face risks providing DT Midstream with transition services. Each of these factors may adversely impact DTE Energy's financial condition, results of operations, and cash flows.

In connection with the Spin-off, DTE received a legal opinion that the distribution of shares of DT Midstream to DTE Energy shareholders qualifies as tax-free under Section 355 of the U.S. Internal Revenue Code. However, if the IRS determined on audit that the distribution is taxable, both DTE Energy and our shareholders could incur significant U.S. federal income tax liabilities.

Following the Spin-off, the management and directors of each of DTE Energy and DT Midstream own common stock in both companies, and Robert Skaggs, Jr., who is DT Midstream's Executive Chairman, also serves on DTE Energy's Board and may be required to recuse himself from deliberations relating to arrangements between DTE Energy and DT Midstream in the future. This ownership and directorship overlap could create, or appear to create, potential conflicts of interest when the management and directors of one company face decisions that could have different implications for themselves and the other company. Potential conflicts of interest may also arise out of commercial arrangements that DTE Energy and DT Midstream have or may enter into in the future.

Item 1B. ***Unresolved Staff Comments***

None.

Item 3. ***Legal Proceedings***

For more information on legal proceedings and matters related to the Registrants, see Notes 9 and 18 to the Consolidated Financial Statements, "Regulatory Matters" and "Commitments and Contingencies," respectively.

For environmental proceedings in which the government is a party, the Registrants include disclosures if any sanctions of $1 million or greater are expected.

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, 2021, there were 193,747,509 shares of DTE Energy common stock outstanding. These shares were held by a total of 45,230 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 16 to the Consolidated Financial Statements, "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 21 to the Consolidated Financial Statements, "Stock-Based Compensation."

See the following table for information as of December 31, 2021:

	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	—	$ —	4,221,599

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, 2021:

	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
10/01/2021 — 10/31/2021	1,028	$ 108.95	—	—	—
11/01/2021 — 11/30/2021	2,653	$ 105.32	—	—	—
12/01/2021 — 12/31/2021	505	$ 115.23	—	—	—
Total	**4,186**		—		

(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.

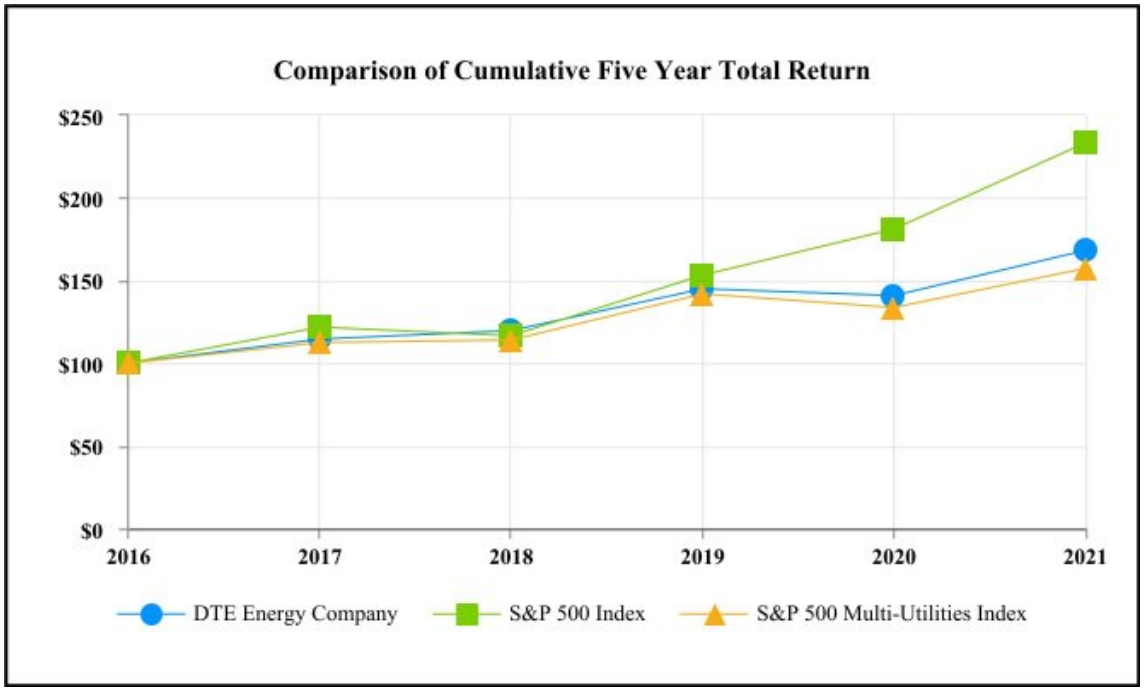
COMPARISON OF CUMULATIVE FIVE YEAR TOTAL RETURN

Total Return to DTE Energy Shareholders

(Includes reinvestment of dividends)

	Annual Return Percentage Year Ended December 31,				
Company/Index	**2017**	**2018**	**2019**	**2020**	**2021**
DTE Energy Company	14.59	4.19	21.36	(2.90)	**19.42**
S&P 500 Index	21.82	(4.39)	31.48	18.39	**28.68**
S&P 500 Multi-Utilities Index	12.09	1.77	24.36	(5.87)	**17.67**

		Indexed Returns Year Ended December 31,				
	Base Period					
Company/Index	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
DTE Energy Company	100.00	114.59	119.39	144.90	140.69	**168.01**
S&P 500 Index	100.00	121.82	116.47	153.14	181.29	**233.29**
S&P 500 Multi-Utilities Index	100.00	112.09	114.07	141.86	133.53	**157.13**



Item 6. ***Selected Financial Data***

Information is no longer required as the Registrants have adopted the SEC amendment to Regulation S-K to eliminate Item 301, Selected Financial Data.

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 2021 Operating Revenues of approximately $15.0 billion and Total Assets of approximately $39.7 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 also operates two energy-related non-utility segments with operations throughout the United States.

On July 1, 2021, DTE Energy completed the separation of its natural gas pipeline, storage and gathering non-utility business. Effective with the separation, DTE retains no ownership in the new company, DT Midstream, which was formerly comprised of DTE Energy's Gas Storage and Pipelines segment and certain DTE Energy holding company activity within the Corporate and Other segment. Gas Storage and Pipelines is no longer a reportable segment of DTE Energy, and financial results of DT Midstream are presented as discontinued operations in the Consolidated Financial Statements. Refer to Note 4 to the Consolidated Financial Statements, "Dispositions and Impairments," for additional information regarding the separation of DT Midstream and discontinued operations.

Management's Discussion and Analysis of Financial Condition and Results of Operations below reflect DTE Energy's continuing operations, unless noted otherwise. The following table summarizes DTE Energy's financial results:

	Years Ended December 31,		
	2021	**2020**	**2019**
	(In millions, except per share amounts)		
Net Income Attributable to DTE Energy Company — Continuing operations	**$ 796**	$ 1,054	$ 955
Diluted Earnings per Common Share — Continuing operations	**$ 4.10**	$ 5.45	$ 5.15

The decrease in 2021 Net Income Attributable to DTE Energy Company was primarily due to lower earnings in the Corporate and Other segment, driven primarily by losses on the extinguishment of debt incurred in 2021. The decrease was also due to lower earnings in the Energy Trading segment, partially offset by higher earnings in the Electric, Gas, and DTE Vantage segments. The increase in 2020 Net Income Attributable to DTE Energy Company was primarily due to higher earnings in the Electric and Corporate and Other segments, partially offset by lower earnings in the Energy Trading segment.

STRATEGY

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

DTE Energy's utilities are investing capital to support a modern, reliable grid and cleaner, affordable energy through investments in base infrastructure and new generation. An increasing amount of high wind and other extreme weather events driven by climate change, coupled with increasing electric vehicle adoption, will drive a continued need for substantial grid investment over the long-term.

DTE Energy is committed to reducing the carbon emissions of its electric utility operations by 32% by 2023, 50% by 2028, and 80% by 2040 from 2005 carbon emissions levels. DTE Energy is also committed to a net zero carbon emissions goal by 2050 for its electric and gas utility operations. To achieve the carbon reduction goals at the electric utility, DTE Energy has begun to transition away from coal-powered sources and is replacing or offsetting the generation from these facilities with renewable energy and energy waste reduction initiatives. Refer to the "Capital Investments" section below for further discussion regarding DTE Energy's retirement of its aging coal-fired plants and transition to renewable energy and other sources. Over the long-term, DTE Energy is also monitoring the viability of emerging technologies involving energy storage, carbon capture and sequestration, alternative fuels such as hydrogen, and advanced nuclear power.

For gas utility operations, DTE Energy aims to cut carbon emissions across the entire value chain. To achieve net zero emissions by 2050 for both internal operations and from suppliers, DTE Energy is working to source gas with lower methane intensity, reduce emissions through its gas main renewal and pipeline integrity programs, and if necessary, use carbon offsets to address any remaining emissions. DTE Energy is also committed to helping DTE Gas customers reduce their emissions by 35% by 2050 by increasing energy efficiency, pursuing advanced technologies such as hydrogen, and through the CleanVision Natural Gas Balance program which provides customers the option to use carbon offsets and renewable natural gas.

DTE Energy expects that these initiatives at the electric and gas utilities will continue to provide significant opportunities for capital investments and result in earnings growth. DTE Energy is focused on executing its plans to achieve operational excellence and customer satisfaction with a focus on customer affordability. DTE Energy's utilities operate in a constructive regulatory environment and have solid relationships with their regulators.

DTE Energy also has significant investments in non-utility businesses and expects growth opportunities in its DTE Vantage segment. 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 markets with attractive competitive dynamics where meaningful scale is in alignment with its risk profile.

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. Capital plans may be regularly updated as these requirements change.

DTE Electric's capital investments over the 2022-2026 period are estimated at $15 billion, comprised of $8 billion for distribution infrastructure, $4 billion for base infrastructure, and $3 billion for cleaner generation including renewables. DTE Electric has retired six coal-fired generation units at the Trenton Channel, River Rouge, and St. Clair facilities and has announced plans to retire its remaining eleven coal-fired generating units, including five units at Trenton Channel and St. Clair in 2022. The two units at the Belle River facility will cease the use of coal by 2028 and will be evaluated for conversion to cleaner energy resources. The four units at the Monroe facility are expected to be retired by 2040. Generation from the retired facilities will be replaced or offset with a combination of renewables, energy waste reduction, demand response, and natural gas fueled generation, including the Blue Water Energy Center which will commence operations in 2022.

DTE Gas' capital investments over the 2022-2026 period are estimated at $3.1 billion, comprised of $1.5 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 in the DTE Vantage segment, including approximately $1 billion to $1.5 billion from 2022-2026 for renewable energy and industrial energy services projects.

ENVIRONMENTAL MATTERS

The Registrants are subject to extensive environmental regulations, including those to address climate change. 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.

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 18 to the Consolidated Financial Statements, "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 and decarbonization;
- gas distribution system renewal;
- rate competitiveness and affordability;
- regulatory stability and investment recovery for the electric and gas utilities;
- strategic investments in growth projects at DTE Vantage;
- employee engagement, health, safety and well-being, and diversity, equity, and inclusion;
- cost structure optimization across all business segments; and
- cash, capital, and liquidity to maintain or improve financial strength.

The separation of DT Midstream on July 1, 2021 will result in a reduction to DTE Energy's net income and cash flows in the near term. However, DTE Energy remains well-positioned for long-term growth and focused on the key objectives noted above. 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.

COVID-19 Pandemic

DTE Energy has been monitoring the COVID-19 pandemic and any related impacts to operating costs, customer demand, and the recoverability of assets in our business segments that could materially impact the Registrants' financial results.

As noted in Note 18 to the Consolidated Financial Statements, "Commitments and Contingencies," the pandemic has contributed to a shift in electric sales volumes from commercial and industrial customers to residential customers. DTE Energy expects this shift to continue in the near term as businesses maintain more remote operations. Other impacts from COVID-19 have related primarily to health and safety-related costs at the utilities and volumes at certain non-utility businesses, but these impacts have not been significant in 2021.

Please see detailed explanations of segment performance in the "Results of Operations" section below, including impacts from the COVID-19 pandemic where applicable.

DTE Energy will continue to monitor these impacts as well as any regulatory and legislative activities related to COVID-19. The Registrants cannot predict the ultimate impact of these factors to our Consolidated Financial Statements as future developments involving COVID-19 and related impacts on economic and operating conditions are highly uncertain. For further discussion of these uncertainties, refer to "Risk Factors" in Item 1A. of this Report.

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 DTE Vantage and Energy Trading segments. For the DTE Vantage 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 related credits, 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.

	2021	2020	2019
		(In millions)	
Net Income (Loss) Attributable to DTE Energy by Segment			
Electric	**$ 864**	$ 777	$ 714
Gas	**214**	186	185
DTE Vantage	**168**	134	133
Energy Trading	**(83)**	36	49
Corporate and Other	**(367)**	(79)	(126)
Income From Continuing Operations Attributable to DTE Energy Company	**796**	1,054	955
Discontinued Operations	**111**	314	214
Net Income Attributable to DTE Energy Company	**$ 907**	$ 1,368	$ 1,169

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 and outlook are discussed below:

	2021	2020	2019
		(In millions)	
Operating Revenues — Utility operations	**$ 5,809**	$ 5,506	$ 5,224
Fuel and purchased power — utility	**1,531**	1,386	1,387
Utility Margin	**4,278**	4,120	3,837
Operating Revenues — Non-utility operations	**12**	14	5
Operation and maintenance	**1,556**	1,489	1,434
Depreciation and amortization	**1,122**	1,057	949
Taxes other than income	**321**	297	311
Asset (gains) losses and impairments, net	**1**	41	13
Operating Income	**1,290**	1,250	1,135
Other (Income) and Deductions	**322**	365	284
Income Tax Expense	**104**	108	137
Net Income Attributable to DTE Energy Company	**$ 864**	$ 777	$ 714

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 non-utility operations at DTE Sustainable Generation and the classification of certain benefit costs. Refer to Note 20 to the Consolidated Financial Statements, "Retirement Benefits and Trusteed Assets" for additional information.

Utility Margin increased $158 million in 2021 and $283 million in 2020. 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:

	2021	2020
	(In millions)	
Implementation of new rates	**$ 71**	$ 215
Regulatory mechanism — EWR	**61**	18
Regulatory mechanism — RPS	**57**	19
Weather	**14**	8
Base sales / rate mix	**13**	52
Regulatory mechanism — TRM	**6**	(12)
Voluntary refunds[(a)]	**(60)**	(30)
Other regulatory mechanisms and other	**(4)**	13
Increase in Utility Margin	**$ 158**	$ 283

(a) Variances reflect the $90 million voluntary refund recognized in 2021 for the incremental tree trim surge and the $30 million COVID-19 voluntary refund recognized in 2020. Refer to Note 9 to the Consolidated Financial Statements, "Regulatory Matters," for additional information regarding these refunds and the related regulatory liabilities.

	2021	2020	2019
		(In thousands of MWh)	
DTE Electric Sales			
Residential	**16,386**	16,315	15,066
Commercial	**16,393**	15,648	16,955
Industrial	**8,487**	8,446	9,826
Other	**216**	220	226
	41,482	40,629	42,073
Interconnection sales[(a)]	**4,263**	1,808	3,046
Total DTE Electric Sales	**45,745**	42,437	45,119
DTE Electric Deliveries			
Retail and wholesale	**41,482**	40,629	42,073
Electric retail access, including self-generators[(b)]	**4,357**	3,746	4,550
Total DTE Electric Sales and Deliveries	**45,839**	44,375	46,623

(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 sales volumes increased in 2021, primarily attributable to commercial customers which were impacted more significantly in 2020 by the COVID-19 pandemic and temporary shut-downs of certain commercial operations.

Operating Revenues — Non-utility operations decreased $2 million in 2021 and increased $9 million in 2020. The decrease in 2021 was primarily due to lower sales volumes at DTE Sustainable Generation. The increase in 2020 was due to renewable energy projects acquired in January 2020.

Operation and maintenance expense increased $67 million in 2021 and $55 million in 2020. The increase in 2021 was primarily due to higher EWR expense of $45 million, higher distribution operations expense of $42 million (primarily due to higher storm costs), higher corporate support costs of $21 million, higher legal and environmental expense of $15 million, and higher benefits expense of $13 million. These increases were partially offset by lower COVID-19 related expenses of $43 million, lower uncollectible expense of $26 million, and lower plant generation expense of $4 million.

The increase in 2020 was primarily due to COVID-19 related expenses of $50 million, higher benefits expense of $15 million, higher EWR expense of $11 million, higher RPS expenses of $9 million, and an $11 million adjustment in 2019 to defer expenses previously accrued for a new customer billing system. These increases were partially offset by lower plant generation expense of $25 million and lower distribution operations expense of $12 million.

Depreciation and amortization expense increased $65 million in 2021 and $108 million in 2020. In 2021, the increase was primarily due to a $64 million increase resulting from a higher depreciable base. In 2020, the increase was primarily due to a $108 million increase resulting from a higher depreciable base and change in depreciation rates effective May 2019 and a $10 million increase resulting from new non-utility assets at DTE Sustainable Generation, partially offset by a decrease of $11 million associated with the TRM.

Taxes other than income increased $24 million in 2021 and decreased $14 million in 2020. In 2021, the increase was primarily due to higher property taxes of $22 million as a result of an increase in tax base and a favorable property tax settlement in 2020. In 2020, the decrease was primarily due to lower property taxes of $9 million as a result of a property tax settlement, partially offset by an increase in tax base. The decrease in 2020 was also due to lower payroll taxes of $3 million, which was primarily attributable to employee retention credits recognized pursuant to the CARES Act.

Asset (gains) losses and impairments, net decreased $40 million in 2021 and increased $28 million in 2020. The decrease in 2021 was primarily due to lower activity in the current year compared to a $41 million write-off of capital expenditures related to incentive compensation in 2020. The increase in 2020 was primarily due to the $41 million write-off of capital expenditures, which were disallowed in the May 8, 2020 rate order from the MPSC, compared to losses of $13 million in 2019.

Other (Income) and Deductions decreased $43 million in 2021 and increased $81 million in 2020. The decrease in 2021 was primarily due to lower contributions to the DTE Energy Foundation and other not-for-profit organizations of $28 million, a change in rabbi trust investment earnings (net gain of $7 million in 2021 compared to a net loss of $3 million in 2020), and lower non-operating retirement benefits expense of $4 million. The increase in 2020 was primarily due to a change in rabbi trust investment earnings (net loss of $3 million in 2020 compared to a gain of $37 million in 2019), $30 million of contributions to the DTE Energy Foundation and other not-for-profit organizations, and $22 million of higher interest expense. These increases were partially offset by a 2019 accrual of $6 million associated with an environmental-related settlement.

Income Tax Expense decreased $4 million in 2021 and $29 million in 2020. The decrease in both 2021 and 2020 was primarily due to higher amortization of the TCJA regulatory liability and higher production tax credits, partially offset by higher earnings.

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.

On March 26, 2021, DTE Electric filed an application requesting a financing order approving the securitization financing of $184 million of qualified costs related to the net book value of the River Rouge generation plant and tree trimming surge program costs. The filing requested recovery of these qualifying costs from DTE Electric's customers. A final MPSC financing order was issued on June 23, 2021 authorizing DTE Electric to proceed with the issuance of securitization bonds for qualified costs of up to $236 million, increased for the inclusion of deferred taxes. The financing order further authorized customer charges for the timely recovery of the debt service costs on the securitization bonds and other ongoing qualified costs. Securitization financing is expected to occur in March 2022.

DTE Electric filed a rate case with the MPSC on January 21, 2022 requesting an increase in base rates of $388 million based on a projected twelve-month period ending October 31, 2023. The requested increase in base rates is primarily due to an increase in net plant resulting from generation and distribution investments, as well as related increases to depreciation and property tax expenses. The rate filing also requests an increase in return on equity from 9.9% to 10.25% and includes projected changes in sales. A final MPSC order in this case is expected in November 2022. Refer to Note 9 to the Consolidated Financial Statements, "Regulatory Matters", for additional information.

GAS

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

	2021	2020	2019
		(In millions)	
Operating Revenues — Utility operations	**$ 1,553**	$ 1,414	$ 1,482
Cost of gas — utility	**422**	356	427
Utility Margin	**1,131**	1,058	1,055
Operation and maintenance	**521**	496	515
Depreciation and amortization	**177**	157	144
Taxes other than income	**93**	84	80
Asset (gains) losses and impairments, net	**4**	14	—
Operating Income	**336**	307	316
Other (Income) and Deductions	**84**	73	69
Income Tax Expense	**38**	48	62
Net Income Attributable to DTE Energy Company	**$ 214**	$ 186	$ 185

Utility Margin increased $73 million in 2021 and $3 million in 2020. 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:

	2021	2020
	(In millions)	
Implementation of new rates	**$ 75**	$ 32
Home protection program	**6**	4
Regulatory mechanism — EWR	**3**	9
TCJA rate reduction liability	**—**	(9)
Weather	**(7)**	(46)
Infrastructure recovery mechanism	**(15)**	17
Other regulatory mechanisms and other	**11**	(4)
Increase in Utility Margin	**$ 73**	$ 3

	2021	2020	2019
	(In Bcf)		
Gas Markets			
Gas sales	**128**	126	139
End-user transportation	**165**	180	185
	293	306	324
Intermediate transportation	**488**	477	497
Total Gas sales	**781**	783	821

The change in sales in 2021 was primarily due to a decrease in End-user transportation volumes, including lower generation needs at certain industrial customers. The decrease in sales in 2020 was primarily due to more unfavorable weather compared to 2019. Intermediate transportation volumes fluctuate period to period based on available market opportunities.

Operation and maintenance expense increased $25 million in 2021 and decreased $19 million in 2020. The increase in 2021 was primarily due to higher gas operations expense of $41 million, partially offset by lower uncollectible expense of $15 million. The decrease in 2020 was primarily due to lower gas operations expense of $36 million, partially offset by higher EWR expense of $7 million, higher corporate overhead costs of $3 million, and a $6 million adjustment in 2019 to defer expenses previously accrued for a new customer billing system.

Depreciation and amortization expense increased $20 million in 2021 and $13 million in 2020. The increase in both periods was primarily due to a higher depreciable base and change in depreciation rates effective October 2020.

Taxes other than income increased $9 million in 2021 and $4 million in 2020. The 2021 increase was primarily due to higher property taxes of $6 million and employee retention credits of $3 million recognized in 2020 pursuant to the CARES Act. The 2020 increase was primarily due to higher property taxes of $8 million, partially offset by the employee retention credits of $3 million.

Asset (gains) losses and impairments, net decreased $10 million in 2021 and increased $14 million in 2020. The decrease in 2021 was due to lower activity in the current year, including $4 million of capital write-offs, compared to a $14 million write-off of capital expenditures related to incentive compensation in 2020. The increase in 2020 was primarily due to the $14 million write-off of capital expenditures, which were disallowed in the July 17, 2020 rate case settlement.

Other (Income) and Deductions increased $11 million in 2021 and $4 million in 2020. The increase in 2021 was primarily due to contributions to the DTE Energy Foundation and other not-for-profit organizations. The increase in 2020 was primarily due to lower investment earnings of $2 million and higher interest expense of $2 million.

Income Tax Expense decreased $10 million in 2021 and $14 million in 2020. The decrease in 2021 was primarily due to higher amortization of the TCJA regulatory liability, partially offset by higher earnings. The decrease in 2020 was primarily due to higher amortization of the TCJA regulatory liability and lower earnings.

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 VANTAGE

The DTE Vantage 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. DTE Vantage results and outlook are discussed below:

	2021	2020	2019
		(In millions)	
Operating Revenues — Non-utility operations	**$ 1,482**	$ 1,224	$ 1,560
Fuel, purchased power, and gas — non-utility	**1,086**	901	1,220
Non-utility Margin	**396**	323	340
Operation and maintenance	**301**	294	328
Depreciation and amortization	**71**	72	69
Taxes other than income	**11**	10	11
Asset (gains) losses and impairments, net	**28**	(18)	1
Operating Loss	**(15)**	(35)	(69)
Other (Income) and Deductions	**(142)**	(120)	(126)
Income Taxes			
Expense	**37**	26	20
Production Tax Credits	**(68)**	(66)	(83)
	(31)	(40)	(63)
Net Income	**158**	125	120
Less: Net Loss Attributable to Noncontrolling Interests	**(10)**	(9)	(13)
Net Income Attributable to DTE Energy Company	**$ 168**	$ 134	$ 133

Operating Revenues — Non-utility operations increased $258 million in 2021 and decreased $336 million in 2020. The changes are due to the following:

	2021
	(In millions)
Higher production partially offset by the sale of membership interests in the REF business	**$ 175**
Higher demand partially offset by lower prices in the Steel business	**104**
New projects in the Renewables business	**42**
Recognition of revenues from termination of a contract in the Steel business	**17**
Higher volumes partially offset by a terminated contract in the On-site business	**15**
Closed projects in the Renewables business	**(7)**
Site closures in the REF business	**(88)**
	$ 258

	2020
	(In millions)
Sale of membership interests and project terminations in the REF business	$ (234)
Lower demand in the Steel business	(142)
Expired contract in the Renewables business	(21)
New projects and higher production in the Renewables business	30
New projects in the On-site business	31
	$ (336)

Non-utility Margin increased $73 million in 2021 and decreased $17 million in 2020. The changes are due to the following:

	2021
	(In millions)
New projects in the Renewables business	**$ 42**
Higher demand partially offset by lower prices in the Steel business	**18**
Recognition of revenues from termination of a contract in the Steel business	**17**
Closed projects in the Renewables business	**(6)**
Other	**2**
	$ 73

	2020
	(In millions)
Lower demand in the Steel business	$ (50)
Expired contracts in the Renewables business	(18)
New projects in the On-site business	22
New projects and higher production in the Renewables business	27
Other	2
	$ (17)

Operation and maintenance expense increased $7 million in 2021 and decreased $34 million in 2020. The 2021 increase was primarily due to higher production and new projects, partially offset by closed projects. The 2020 decrease was primarily due to $46 million of lower maintenance spending associated with lower production and terminated contracts, partially offset by $12 million of costs associated with new projects.

Asset (gains) losses and impairments, net changed by $46 million in 2021 from the net gain of $18 million in 2020, and changed by $19 million in 2020 from the net loss of $1 million in 2019. The change in 2021 was primarily due to an asset impairment of $27 million recorded in the Steel business for the closure of a pulverized coal facility and $17 million of activity in 2020. Refer to Note 4 to the Consolidated Financial Statements, "Dispositions and Impairments," for additional information regarding the $27 million asset impairment.

The change in 2020 was primarily due to to $11 million in the Steel business for an asset sale and write-off of environmental liabilities upon completing site remediation, $4 million for the sale of assets in the On-site business, and $2 million for the divestiture of a project in the Renewables business.

Other (Income) and Deductions increased $22 million in 2021 and decreased $6 million in 2020. The 2021 increase was primarily due to a $22 million settlement charge associated with a qualified pension plan in the Steel business recorded in 2020. The 2021 increase also included higher production in the REF business, offset by profit recognized from the sale of membership interests recorded in 2020.

The 2020 decrease was primarily due to the $22 million settlement charge in the Steel business and a change in insurance proceeds in the REF and Renewables businesses ($7 million received in 2019). This decrease was partially offset by $12 million of higher interest income associated with lease transactions in the On-site business and $11 million of profit recognized from the sale of membership interests in the REF business.

Income Taxes — Production Tax Credits increased by $2 million in 2021 and decreased by $17 million in 2020. The increase in 2021 was primarily due to higher production partially offset by the sale of membership interests in the REF business. The decrease in 2020 was primarily due to the sale of membership interests in the REF business.

Net Loss Attributable to Noncontrolling Interests increased by $1 million in 2021 and decreased by $4 million in 2020. The 2020 decrease was primarily due to lower production in the REF business.

Outlook — DTE Vantage 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. Beginning in 2022, DTE Vantage expects decreases in Other Income and Production Tax Credits that will cause a corresponding reduction to Net Income as REF facilities will have ceased operations. Over the long-term, DTE Vantage expects that growth in renewable energy and industrial energy services projects will offset the decreases to Net Income caused by the REF phase-out. DTE Vantage is also exploring decarbonization opportunities relating to carbon capture and storage projects.

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 and outlook are discussed below:

	2021	2020	2019
		(In millions)	
Operating Revenues — Non-utility operations	**$ 6,831**	$ 3,863	$ 4,610
Purchased power and gas — non-utility	**6,825**	3,725	4,455
Non-utility Margin	**6**	138	155
Operation and maintenance	**81**	77	75
Depreciation and amortization	**6**	5	6
Taxes other than income	**5**	4	4
Operating Income (Loss)	**(86)**	52	70
Other (Income) and Deductions	**24**	4	4
Income Tax Expense (Benefit)	**(27)**	12	17
Net Income (Loss) Attributable to DTE Energy Company	**$ (83)**	$ 36	$ 49

Operating Revenues — Non-utility operations and *Purchased power and gas — non-utility* increased in 2021 primarily due to significantly higher gas prices in the gas structured and gas transportation strategies and decreased in 2020 primarily due to lower gas prices, primarily in the gas structured strategy.

Non-utility Margin decreased by $132 million in 2021 and $17 million in 2020. The change in both periods was primarily due to timing from the unrealized and realized margins presented in the following tables:

	2021
	(In millions)
Unrealized Margins[a]	
Favorable results, primarily in gas and power trading strategies	**$ 36**
Unfavorable results, primarily in gas structured, environmental trading, and gas storage strategies [b]	**(215)**
	(179)
Realized Margins[a]	
Favorable results, primarily in gas structured and gas transportation strategies[c]	**126**
Unfavorable results, primarily in power ERCOT trading and power full requirements strategies	**(79)**
	47
Decrease in Non-utility Margin	**$ (132)**

(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 $200 million of timing related losses related to gas strategies which will reverse in future periods as the underlying contracts settle.
(c) Amount includes $20 million of timing related losses related to gas strategies recognized in previous periods that reversed as the underlying contracts settled.

	2020
	(In millions)
Unrealized Margins[a]	
Favorable results, primarily in gas structured and gas transportation strategies[b]	$ 83
Unfavorable results, primarily in environmental and gas trading, and power full requirements strategies	(58)
	25
Realized Margins[a]	
Favorable results, primarily in power full requirements, environmental trading, and gas transportation strategies	21
Unfavorable results, primarily in gas structured and gas full requirements strategies[c]	(63)
	(42)
Decrease in Non-utility Margin	$ (17)

(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 $15 million of timing related losses related to gas strategies which will reverse in future periods as the underlying contracts settle.
(c) Amount includes $10 million of timing related gains related to gas strategies recognized in previous periods that reversed as the underlying contracts settled.

Operation and maintenance expense increased $4 million in 2021 and $2 million in 2020. The increase in 2021 was primarily due to higher compensation costs.

Other (Income) and Deductions increased $20 million in 2021 primarily due to contributions to the DTE Energy Foundation and other not-for-profit organizations.

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 12 and 13 to the Consolidated Financial Statements, "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 certain investments, including funds supporting regional development and economic growth. The 2021 net loss of $367 million represents an increase of $288 million from the 2020 net loss of $79 million. This increase was primarily due to higher losses on the extinguishment of debt in 2021 following the separation of DT Midstream, which reduced earnings by $294 million, higher net interest expense, and a valuation allowance established in 2021 for certain charitable contribution carryforwards. The higher loss was also due to the carryback of 2018 net operating losses to 2013 pursuant to the CARES Act, which resulted in a $34 million reduction to Income Tax Expense in 2020. The losses in 2021 were partially offset by the remeasurement of state deferred taxes following the separation of DT Midstream, which resulted in an $85 million reduction to Income Tax Expense in 2021.

For additional information regarding the loss on extinguishment of debt, refer to Note 14 to the Consolidated Financial Statements, "Long-term Debt". For additional information regarding the remeasurement of state deferred taxes and valuation allowances, refer to Note 10 to the Consolidated Financial Statements, "Income Taxes".

The 2020 net loss of $79 million represents a decrease of $47 million from the 2019 net loss of $126 million. This decrease was primarily due to the $34 million tax adjustment noted above resulting from the CARES Act. The decrease was also due to higher investment earnings in 2020 and the impairment of an equity method investment in 2019.

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 2022 will be approximately $2.6 billion. DTE Energy anticipates base level utility capital investments, including environmental, renewable, and energy waste reduction expenditures, and expenditures for non-utility businesses of approximately $3.7 billion in 2022. 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.

Refer below for analysis of cash flows relating to operating, investing, and financing activities, which reflect DTE Energy's change in financial condition. Any significant non-cash items are included in the Supplemental disclosure of non-cash investing and financing activities within the the Consolidated Statements of Cash Flows.

	2021	2020	2019
		(In millions)	
Cash, Cash Equivalents, and Restricted Cash at Beginning of Period	**$ 516**	$ 93	$ 76
Net cash from operating activities	**3,067**	3,697	2,649
Net cash used for investing activities	**(3,863)**	(4,070)	(5,732)
Net cash from financing activities	**315**	796	3,100
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	**(481)**	423	17
Cash, Cash Equivalents, and Restricted Cash at End of Period	**$ 35**	$ 516	$ 93

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 $630 million in 2021. The reduction was primarily due to a decrease in Deferred income taxes, working capital items, and Net Income, adjusted for the Loss on extinguishment of debt to reconcile Net Income to Net cash from operating activities. The decrease was partially offset by an increase in Depreciation and amortization.

Net cash from operations increased $1.0 billion in 2020. The increase was primarily due to an increase in Net Income, Depreciation and amortization, and cash from tax refunds and working capital items.

The change in working capital items in 2021 was primarily due to a decrease related to Accrued pension liability, Accounts receivable, net, Inventories, Accrued postretirement liability, and Other current and noncurrent assets and liabilities, partially offset by an increase related to Regulatory assets and liabilities, Accounts payable, and Derivative assets and liabilities. The change in working capital items in 2020 was primarily due to an increase related to Accounts receivable, net, Accounts payable, and Other current and noncurrent assets and liabilities, partially offset by a decrease related to Prepaid postretirement benefit costs 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 decreased $207 million in 2021 due primarily to decreases in non-utility plant and equipment expenditures and Acquisitions related to business combinations, net of cash acquired, partially offset by an increase in utility plant and equipment expenditures.

Net cash used for investing activities decreased $1.7 billion in 2020 due primarily to a decrease in Acquisitions related to business combinations, net of cash acquired, primarily driven by DTE Energy's acquisition of midstream natural gas assets in 2019 for net cash of $2.3 billion. The decrease was also due to lower Contributions to equity method investees, partially offset by an increase in Plant and equipment expenditures.

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 decreased $481 million in 2021. The decrease was primarily due to an increase in Redemption of long-term debt, Prepayment costs for redemption of long-term debt, Repurchase of common stock, and Dividends paid on common stock, partially offset by increases in the Issuance of long-term debt, net of issuance costs and Short-term borrowings, net, as well as the Acquisition related deferred payment made in 2020.

Net cash used for financing activities decreased $2.3 billion in 2020. The decrease was primarily due to to the issuance of equity units and common stock associated with the acquisition of midstream natural gas assets in 2019, as well as an increase in cash used for Short-term borrowings, net and the Acquisition related deferred payment in 2020. These decreases were partially offset by higher cash from the Issuance of long-term debt, net of issuance costs and lower Purchases of noncontrolling interest, principally SGG.

Outlook

Sources of Cash

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 in the DTE Vantage segment. DTE Vantage cash flows are expected to temporarily decrease beginning in 2022 as REF facilities will have ceased operations. Growth from new renewable energy investments and industrial energy services projects are expected to offset these decreases over the long-term.

DTE Energy's separation of DT Midstream will also reduce operating cash flows in the near term. However, DTE Energy still expects higher cash flows from operations over the long-term due to the growth of its utilities and other non-utility operations.

DTE Energy's utilities 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.

To finance the acquisition of midstream natural gas assets in December 2019, DTE Energy issued equity units that will result in the issuance of $1.3 billion of common stock in November 2022. Refer to Note 14 to the Consolidated Financial Statements, "Long-Term Debt," for additional information regarding the equity units. DTE Energy does not anticipate the issuance of any additional equity in 2022. However, at the discretion of management and depending upon economic and financial market conditions, DTE Energy could issue additional equity as part of its financial planning process. If issued, DTE Energy anticipates these discretionary equity issuances to be made through contributions to the dividend reinvestment plan or employee benefit plans.

Over the long-term, DTE Energy does not have any equity commitments other than the 2019 equity units noted above and will continue to evaluate equity needs on an annual basis.

Uses of Cash

DTE Energy has $2.9 billion in long-term debt, including finance leases, maturing in the next twelve months. Repayment of the debt is expected to be made through internally generated funds, the issuance or remarketing of new long-term debt, or equity issuances associated with the 2019 equity units.

Over-the long term, DTE Energy's debt and interest obligations have decreased as a result of the separation of DT Midstream and DTE Energy's ability to optionally redeem $2.6 billion of long-term debt during 2021. Refer to Note 4 to the Consolidated Financial Statements, "Dispositions and Impairments", for additional information regarding the separation of DT Midstream, and refer to Note 15 to the Consolidated Financial Statements, "Long-term Debt", for additional information regarding the optional redemptions as well as DTE Energy's scheduled debt maturities and interest obligations.

DTE Energy has paid quarterly cash dividends for more than 100 consecutive years and expects to continue paying regular cash dividends in the future, including approximately $0.7 billion in 2022. Any payment of future dividends is subject to approval by the Board of Directors and may depend on DTE Energy's future earnings, capital requirements, and financial condition. Over the long-term, DTE Energy expects continued dividend growth and is targeting a payout ratio consistent with pure-play utility companies. Dividends are subject to certain restrictions as discussed in Note 16 to the Consolidated Financial Statements, "Short-Term Credit Arrangements and Borrowings." However, these restrictions are not expected to impact DTE Energy's planned dividend payments.

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, environmental, and coal) and the provisions and maturities of the underlying transactions. As of December 31, 2021, 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 $667 million.

For cash obligations related to leases and future purchase commitments, refer to Note 17 and Note 18 to the Consolidated Financial Statements, "Leases" and "Commitments and Contingencies," respectively. Purchase commitments include capital expenditures that are contractually obligated. Also refer to the "Capital Investments" section above for additional information on DTE Energy's capital strategy and estimated spend over the next five years.

Other obligations are further detailed in Notes 9, 10, 14, 16, 18, and 20 to the Consolidated Financial Statements, "Regulatory Matters," "Income Taxes," "Long-Term Debt," "Short-Term Credit Arrangements and Borrowings," "Commitments and Contingencies," and "Retirement Benefits and Trusteed Assets," respectively.

Liquidity

DTE Energy has approximately $2.1 billion of available liquidity at December 31, 2021, consisting primarily of cash and cash equivalents and amounts available under unsecured revolving credit agreements.

DTE Energy believes it will have sufficient operating flexibility, cash resources and funding sources to maintain adequate 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.

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 DTE Vantage 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.

The separation of DT Midstream has resulted in a shift in DTE Energy's strategy to a predominately pure-play utility, but to date has not had any impact on DTE Energy's credit ratings. Since the announcement of the planned separation in October 2020 and completed separation in July 2021, Standard and Poor's Global Ratings, Fitch Ratings, and Moody's Investor Service have all affirmed the ratings and stable outlook of DTE Energy, DTE Electric, and DTE Gas.

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 the 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 9 to the Consolidated Financial Statements, "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, 2021 and 2020. 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 12 and 13 to the Consolidated Financial Statements, "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 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, an impairment loss would be recognized. A goodwill impairment loss is measured as the amount by which a reporting unit's carrying value exceeds fair value, not to exceed the carrying amount of goodwill.

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, 2021 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, 2021 valuation date:

Reporting Unit	Goodwill	Fair Value Reduction %[a]	Discount Rate	Valuation Methodology[b][c]
	(In millions)			
Electric	$ 1,208	51 %	5.2 %	DCF and market multiples analysis
Gas	743	47 %	5.3 %	DCF and market multiples analysis
DTE Vantage	25	50 %	7.7 %	DCF
Energy Trading	17	95 %	9.3 %	DCF
	$ 1,993			

(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 2022-2026 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 DTE Vantage and Energy Trading reporting units, DTE Energy did not perform a market multiples analysis.

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 both funded and unfunded 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 $139 million in 2021, $148 million in 2020, and $112 million in 2019. Other postretirement benefit credits were $59 million in 2021, $49 million in 2020, and $1 million in 2019. Pension costs and other postretirement benefit credits for 2021 were calculated based upon several actuarial assumptions, including an expected long-term rate of return on plan assets of 7.00% for the pension plans and 6.70% for the 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 2022 expected long-term rate of return on pension plan assets is based on an asset allocation assumption utilizing active and passive investment management of 29% in equity markets, 48% in fixed income markets, including long duration bonds, and 23% invested in other assets. DTE Energy's 2022 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 22% in equity markets, 54% in fixed income markets, and 24% 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 6.80% and lowering the other postretirement plans to 6.40% for 2022. DTE Energy believes these rates are reasonable assumptions for the long-term rates of return on the plans' assets for 2022 given their respective asset allocations and DTE Energy'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 2021 resulted in unrecognized net gains. As of December 31, 2021, DTE Energy had $241 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 other postretirement benefit plans, DTE Energy uses fair value when determining the MRV of 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 2.91% for both the pension and other postretirement plans at December 31, 2021 compared to 2.57% and 2.58%, respectively, for the pension and other postretirement plans at December 31, 2020.

DTE Energy changed the mortality assumptions as of December 31, 2021 to reflect the updated projection scale published by the Society of Actuaries. The mortality assumptions used at December 31, 2021 are the PRI-2012 mortality table projected to 2018 using Scale MP-2019, and projected forward from 2018 using Scale MP-2021 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 that total pension costs will be approximately $30 million in 2022, compared to $139 million in 2021. The expected decrease is primarily due to a higher discount rate and continued recognition of asset returns greater than expected. The 2022 other postretirement benefit credit is estimated at approximately $65 million compared to $59 million in 2021. The expected increase in the credit is primarily due to a higher discount rate.

The health care trend rates for DTE Energy assume 6.75% for pre-65 participants and 7.25% for post-65 participants for 2022, trending down to 4.50% for both pre-65 and post-65 participants in 2034.

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 2021 pension costs by approximately $48 million. Lowering the discount rate and the salary increase assumptions by one percentage point would have increased the 2021 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 2021 other postretirement credit by approximately $20 million. Lowering the discount rate and the salary increase assumptions by one percentage point would have decreased the 2021 other postretirement credit by approximately $17 million.

The value of the qualified pension and other postretirement benefit plan assets was $7.5 billion at December 31, 2021 and December 31, 2020. At December 31, 2021, DTE Energy's qualified pension plans were underfunded by $201 million and its other postretirement benefit plans were overfunded by $319 million. In 2021, the funded status of the pension plans and other postretirement benefit plans improved due to favorable asset returns and an increase 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 did not make contributions to its qualified pension plans in 2021 and made contributions of $92 million in 2020. 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 $7 million in 2022 and up to $23 million over the next five years. In addition, DTE Energy anticipates transferring $50 million of qualified pension plan funds from DTE Gas to DTE Electric in 2022. DTE Energy did not make other postretirement benefit plan contributions in 2021 or 2020. DTE Energy does not anticipate making any contributions to its other postretirement plans in 2022 or over the next five years. The planned pension contributions will be made in cash and/or DTE Energy common stock.

See Note 20 to the Consolidated Financial Statements, "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, 2021 and 2020 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 10 to the Consolidated Financial Statements, "Income Taxes."

NEW ACCOUNTING PRONOUNCEMENTS

See Note 3 to the Consolidated Financial Statements, "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, some environmental contracts, and certain forwards, futures, options and swaps, and foreign currency exchange contracts. Items DTE Energy does not generally account for as derivatives include natural gas and environmental inventory, pipeline transportation contracts, storage assets, and some environmental contracts. See Notes 12 and 13 to the Consolidated Financial Statements, "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 some environmental contracts 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 12 to the Consolidated Financial Statements, "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, 2020	$ 28
Reclassified to realized upon settlement	14
Changes in fair value recorded to income	(184)
Amounts recorded to unrealized income	(170)
Changes in fair value recorded in Regulatory liabilities	19
Change in collateral	(36)
MTM at December 31, 2021	**$ (159)**

The table below shows the maturity of DTE Energy's MTM positions. The positions from 2025 and beyond principally represent longer tenor gas structured transactions:

Source of Fair Value	2022	2023	2024	2025 and Beyond	Total Fair Value
			(In millions)		
Level 1	$ 54	$ 30	$ 9	$ 3	$ 96
Level 2	37	(10)	(19)	(6)	2
Level 3	(93)	(38)	(15)	(69)	(215)
MTM before collateral adjustments	$ (2)	$ (18)	$ (25)	$ (72)	(117)
Collateral adjustments					(42)
MTM at December 31, 2021					**$ (159)**

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.

The DTE Vantage segment is subject to price risk for electricity, natural gas, coal products, and environmental attributes generated from its renewable natural gas investments. DTE Energy manages its exposure to commodity price risk through the use of long-term contracts and hedging instruments, when available.

DTE Energy's Energy Trading business segment has exposure to electricity, natural gas, environmental, 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 predetermined risk parameters.

Credit Risk

Allowance for Doubtful Accounts

The Registrants regularly review contingent matters, existing and future economic conditions, customer trends and other factors 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, 2021:

	Credit Exposure Before Cash Collateral	Cash Collateral	Net Credit Exposure
		(In millions)	
Investment Grade[a]			
A- and Greater	$ 325	$ —	$ 325
BBB+ and BBB	238	—	238
BBB-	50	(12)	38
Total Investment Grade	613	(12)	601
Non-investment grade[b]	4	—	4
Internally Rated — investment grade[c]	979	(32)	947
Internally Rated — non-investment grade[d]	61	(8)	53
Total	**$ 1,657**	**$ (52)**	**$ 1,605**

(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 10% 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 less than 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 18% 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 2% 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 other applicable short-term reference rates. As of December 31, 2021, DTE Energy had floating rate debt of $758 million and a floating rate debt-to-total debt ratio of 4.2%.

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 June 2030.

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, 2021 and 2020 by a hypothetical 10% and calculating the resulting change in the fair values. The hypothetical losses related to long-term debt would be realized only if DTE Energy transferred all of its fixed-rate long-term debt to other creditors.

The results of the sensitivity analyses:

Activity	Assuming a 10% Increase in Prices/Rates As of December 31, 2021	2020	Assuming a 10% Decrease in Prices/Rates As of December 31, 2021	2020	Change in the Fair Value of
	(In millions)				
Gas contracts	**$ 33**	$ 23	**$ (33)**	$ (23)	Commodity contracts
Power contracts	**$ 9**	$ 5	**$ (10)**	$ (5)	Commodity contracts
Environmental contracts	**$ (8)**	$ (7)	**$ 8**	$ 5	Commodity contracts
Interest rate risk — DTE Energy	**$ (662)**	$ (651)	**$ 687**	$ 671	Long-term debt
Interest rate risk — DTE Electric	**$ (329)**	$ (285)	**$ 348**	$ 300	Long-term debt

For further discussion of market risk, see Management's Discussion and Analysis in Item 7 of this Report and Note 13 to the Consolidated Financial Statements, "Financial and Other Derivative Instruments."

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

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

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, 2021, 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.

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, 2021. 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, 2021, 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, 2021 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, 2021 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, 2021 and 2020, 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, 2021, 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, 2021 (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2021, 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, 2021 and 2020**,** and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 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, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

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

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

As described in Note 9 to the consolidated financial statements, the Company recorded $3,677 million of regulatory assets and $3,262 million of regulatory liabilities as of December 31, 2021. 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 Company's accounting for the effects of new, or changes to existing, regulatory matters is a critical audit matter are the 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 a high degree of auditor judgment, subjectivity 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.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 10, 2022

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

DTE Energy Company
Consolidated Statements of Operations

	Year Ended December 31,		
	2021	**2020**	**2019**
	(In millions, except per share amounts)		
Operating Revenues			
Utility operations	**$ 7,288**	$ 6,845	$ 6,638
Non-utility operations	**7,676**	4,578	5,530
	14,964	11,423	12,168
Operating Expenses			
Fuel, purchased power, and gas — utility	**1,904**	1,719	1,798
Fuel, purchased power, gas, and other — non-utility	**7,304**	4,120	5,035
Operation and maintenance	**2,420**	2,305	2,316
Depreciation and amortization	**1,377**	1,292	1,169
Taxes other than income	**431**	395	406
Asset (gains) losses and impairments, net	**33**	37	14
	13,469	9,868	10,738
Operating Income	**1,495**	1,555	1,430
Other (Income) and Deductions			
Interest expense	**630**	601	568
Interest income	**(22)**	(29)	(9)
Non-operating retirement benefits, net	**17**	50	39
Loss on extinguishment of debt	**393**	6	—
Other income	**(254)**	(259)	(250)
Other expenses	**75**	104	69
	839	473	417
Income Before Income Taxes	**656**	1,082	1,013
Income Tax Expense (Benefit) (Note 10)	**(130)**	37	71
Net Income from Continuing Operations	**786**	1,045	942
Net Income from Discontinued Operations, Net of Taxes (Note 4)	**117**	326	230
Net Income	**903**	1,371	1,172
Less: Net Income (Loss) Attributable to Noncontrolling Interests			
Continuing operations	**(10)**	(9)	(13)
Discontinued operations	**6**	12	16
Net Income Attributable to DTE Energy Company	**$ 907**	$ 1,368	$ 1,169
Basic Earnings per Common Share			
Continuing operations	**$ 4.11**	$ 5.46	$ 5.16
Discontinued operations	**0.57**	1.63	1.16
Total	**$ 4.68**	$ 7.09	$ 6.32
Diluted Earnings per Common Share			
Continuing operations	**$ 4.10**	$ 5.45	$ 5.15
Discontinued operations	**0.57**	1.63	1.16
Total	**$ 4.67**	$ 7.08	$ 6.31
Weighted Average Common Shares Outstanding			
Basic	**193**	193	185
Diluted	**194**	193	185

See Combined Notes to Consolidated Financial Statements

DTE Energy Company

Consolidated Statements of Comprehensive Income

	Year Ended December 31,		
	2021	**2020**	**2019**
		(In millions)	
Net Income	**$ 903**	$ 1,371	$ 1,172
Other comprehensive income (loss), net of tax:			
Benefit obligations, net of taxes of $4, $3, and $2, respectively	**8**	8	8
Net unrealized gains (losses) on derivatives, net of taxes of $2, $1, and $(4), respectively	**7**	2	(12)
Foreign currency translation	**—**	1	1
Other comprehensive income (loss)	**15**	11	(3)
Comprehensive income	**918**	1,382	1,169
Less: Comprehensive income (loss) attributable to noncontrolling interests	**(4)**	3	3
Comprehensive Income Attributable to DTE Energy Company	**$ 922**	$ 1,379	$ 1,166

See Combined Notes to Consolidated Financial Statements

DTE Energy Company

Consolidated Statements of Financial Position

	December 31,	
	2021	**2020**
	(In millions)	
ASSETS		
Current Assets		
Cash and cash equivalents	**$ 28**	$ 472
Restricted cash	**7**	2
Accounts receivable (less allowance for doubtful accounts of $92 and $104, respectively)		
Customer	**1,695**	1,542
Other	**135**	127
Inventories		
Fuel and gas	**368**	335
Materials, supplies, and other	**490**	373
Derivative assets	**181**	116
Regulatory assets	**195**	129
Other	**218**	185
Current assets of discontinued operations	**—**	217
	3,317	3,498
Investments		
Nuclear decommissioning trust funds	**2,071**	1,855
Investments in equity method investees	**187**	177
Other	**194**	196
	2,452	2,228
Property		
Property, plant, and equipment	**37,083**	34,016
Accumulated depreciation and amortization	**(10,139)**	(9,517)
	26,944	24,499
Other Assets		
Goodwill	**1,993**	1,993
Regulatory assets	**3,482**	4,125
Intangible assets	**177**	199
Notes receivable	**310**	261
Derivative assets	**90**	40
Prepaid postretirement costs	**678**	561
Operating lease right-of-use assets	**97**	107
Other	**179**	126
Noncurrent assets of discontinued operations	**—**	7,859
	7,006	15,271
Total Assets	**$ 39,719**	$ 45,496

See Combined Notes to Consolidated Financial Statements

DTE Energy Company

Consolidated Statements of Financial Position — (Continued)

	December 31,	
	2021	2020
	(In millions, except shares)	
LIABILITIES AND EQUITY		
Current Liabilities		
Accounts payable	**$ 1,414**	$ 1,000
Accrued interest	**140**	158
Dividends payable	**171**	210
Short-term borrowings	**758**	38
Current portion long-term debt, including finance leases	**2,874**	469
Derivative liabilities	**238**	68
Regulatory liabilities	**156**	39
Operating lease liabilities	**14**	16
Other	**581**	594
Current liabilities of discontinued operations	**—**	99
	6,346	2,691
Long-Term Debt (net of current portion)		
Mortgage bonds, notes, and other	**13,629**	17,802
Junior subordinated debentures	**883**	1,175
Finance lease obligations	**19**	24
	14,531	19,001
Other Liabilities		
Deferred income taxes	**2,163**	2,069
Regulatory liabilities	**3,106**	3,363
Asset retirement obligations	**3,162**	2,829
Unamortized investment tax credit	**158**	162
Derivative liabilities	**192**	60
Accrued pension liability	**339**	797
Accrued postretirement liability	**358**	407
Nuclear decommissioning	**321**	283
Operating lease liabilities	**74**	83
Other	**256**	326
Noncurrent liabilities of discontinued operations	**—**	836
	10,129	11,215
Commitments and Contingencies (Notes 9 and 18)		
Equity		
Common stock (No par value, 400,000,000 shares authorized, and 193,747,509 and 193,770,617 shares issued and outstanding at December 31, 2021 and December 31, 2020, respectively)	**5,379**	5,406
Retained earnings	**3,438**	7,156
Accumulated other comprehensive loss	**(112)**	(137)
Total DTE Energy Company Equity	**8,705**	12,425
Noncontrolling interests of continuing operations	**8**	10
Noncontrolling interests of discontinued operations	**—**	154
Total Equity	**8,713**	12,589
Total Liabilities and Equity	**$ 39,719**	$ 45,496

See Combined Notes to Consolidated Financial Statements

DTE Energy Company

Consolidated Statements of Cash Flows

	Year Ended December 31,		
	2021	**2020**	**2019**
		(In millions)	
Operating Activities			
Net Income	**$ 903**	$ 1,371	$ 1,172
Adjustments to reconcile Net Income to Net cash from operating activities:			
Depreciation and amortization	**1,459**	1,443	1,263
Nuclear fuel amortization	**58**	37	60
Allowance for equity funds used during construction	**(27)**	(25)	(24)
Deferred income taxes	**(32)**	407	329
Equity earnings of equity method investees	**(97)**	(132)	(111)
Dividends from equity method investees	**79**	142	160
Loss on extinguishment of debt	**393**	6	—
Asset (gains) losses and impairments, net	**50**	47	14
Changes in assets and liabilities:			
Accounts receivable, net	**(146)**	111	49
Inventories	**(153)**	45	59
Prepaid postretirement benefit costs	**(117)**	(107)	(24)
Accounts payable	**308**	—	(288)
Accrued pension liability	**(458)**	(11)	(29)
Accrued postretirement liability	**(49)**	22	—
Derivative assets and liabilities	**187**	(23)	(28)
Regulatory assets and liabilities	**862**	104	160
Other current and noncurrent assets and liabilities	**(153)**	260	(113)
Net cash from operating activities	**3,067**	3,697	2,649
Investing Activities			
Plant and equipment expenditures — utility	**(3,633)**	(3,241)	(2,724)
Plant and equipment expenditures — non-utility	**(139)**	(616)	(273)
Acquisitions related to business combinations, net of cash acquired	**—**	(126)	(2,470)
Proceeds from sale of assets	**3**	13	—
Proceeds from sale of nuclear decommissioning trust fund assets	**1,047**	2,350	788
Investment in nuclear decommissioning trust funds	**(1,046)**	(2,350)	(794)
Distributions from equity method investees	**18**	24	10
Contributions to equity method investees	**(8)**	(37)	(149)
Notes receivable	**(74)**	(85)	(98)
Other	**(31)**	(2)	(22)
Net cash used for investing activities	**(3,863)**	(4,070)	(5,732)

See Combined Notes to Consolidated Financial Statements

DTE Energy Company

Consolidated Statements of Cash Flows — (Continued)

	Year Ended December 31,		
	2021	**2020**	**2019**
		(In millions)	
Financing Activities			
Issuance of long-term debt, net of issuance costs	**4,457**	3,692	2,506
Redemption of long-term debt	**(3,522)**	(882)	(821)
Issuance of equity units, net of issuance costs	**—**	—	1,265
Short-term borrowings, net	**720**	(790)	219
Issuance of common stock	**—**	2	1,023
Repurchase of common stock	**(66)**	—	—
Dividends paid on common stock	**(791)**	(760)	(692)
Contributions from noncontrolling interests, principally REF entities	**44**	36	38
Distributions to noncontrolling interests	**(45)**	(39)	(59)
Purchases of noncontrolling interest, principally SGG	**—**	—	(300)
Acquisition related deferred payment, excluding accretion	**—**	(380)	—
Prepayment cost for extinguishment of long-term debt	**(361)**	—	—
Transfer of cash to DT Midstream at separation	**(37)**	—	—
Other	**(84)**	(83)	(79)
Net cash from financing activities	**315**	796	3,100
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	**(481)**	423	17
Cash, Cash Equivalents, and Restricted Cash at Beginning of Period	**516**	93	76
Cash, Cash Equivalents, and Restricted Cash at End of Period	**$ 35**	$ 516	$ 93
Supplemental disclosure of cash information			
Cash paid (received) for:			
Interest, net of interest capitalized	**$ 671**	$ 679	$ 595
Income taxes[(a)]	**$ (3)**	$ (360)	$ 18
Supplemental disclosure of non-cash investing and financing activities			
Plant and equipment expenditures in accounts payable	**$ 353**	$ 266	$ 311
Separation of DT Midstream net assets, excluding cash transferred	**$ 3,973**	$ —	$ —
Premium on equity units	**$ —**	$ —	$ 150

(a) 2020 cash received primarily relates to AMT credit and other refunds, of which a portion was accelerated due to the CARES Act

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, 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
Net Income	—	—	1,368	—	3	1,371
Dividends declared on common stock ($4.12 per Common Share)	—	—	(796)	—	—	(796)
Issuance of common stock	192	22	—	—	—	22
Contribution of common stock to pension plan	694	82	—	—	—	82
Other comprehensive income, net of tax	—	—	—	11	—	11
Stock-based compensation, net distributions to noncontrolling interests, and other	676	69	(3)	—	(3)	63
Balance, December 31, 2020	193,771	$ 5,406	$ 7,156	$ (137)	$ 164	$ 12,589
Net Income (Loss)	—	—	907	—	(4)	903
Dividends declared on common stock ($3.88 per Common Share)	—	—	(752)	—	—	(752)
Repurchase of common stock	(529)	(66)	—	—	—	(66)
Other comprehensive income, net of tax	—	—	—	15	—	15
Stock-based compensation, net distributions to noncontrolling interests, and other	506	39	(4)	—	(1)	34
Separation of DT Midstream	—	—	(3,869)	10	(151)	(4,010)
Balance, December 31, 2021	**193,748**	**$ 5,379**	**$ 3,438**	**$ (112)**	**$ 8**	**$ 8,713**

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, 2021, 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, 2021. 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, 2021, 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, 2021 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, 2021 and 2020, 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, 2021, 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, 2021 (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, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 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.

Critical Audit Matters

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

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

As described in Note 9 to the consolidated financial statements, the Company recorded $3,136 million of regulatory assets and $2,375 million of regulatory liabilities as of December 31, 2021. 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 Company's accounting for the effects of new, or changes to existing, regulatory matters is a critical audit matter are the 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 a high degree of auditor judgment, subjectivity 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.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 10, 2022

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

DTE Electric Company

Consolidated Statements of Operations

	Year Ended December 31,		
	2021	**2020**	**2019**
		(In millions)	
Operating Revenues	**$ 5,809**	$ 5,506	$ 5,224
Operating Expenses			
Fuel and purchased power — utility	**1,541**	1,397	1,390
Operation and maintenance	**1,569**	1,505	1,452
Depreciation and amortization	**1,109**	1,043	946
Taxes other than income	**320**	296	310
Asset (gains) losses and impairments, net	**1**	41	13
	4,540	4,282	4,111
Operating Income	**1,269**	1,224	1,113
Other (Income) and Deductions			
Interest expense	**335**	331	313
Interest income	**—**	(2)	(2)
Non-operating retirement benefits, net	**(2)**	(1)	(1)
Other income	**(71)**	(87)	(107)
Other expenses	**37**	96	56
	299	337	259
Income Before Income Taxes	**970**	887	854
Income Tax Expense	**104**	109	138
Net Income	**$ 866**	$ 778	$ 716

See Combined Notes to Consolidated Financial Statements

DTE Electric Company

Consolidated Statements of Comprehensive Income

	Year Ended December 31,		
	2021	**2020**	**2019**
	(In millions)		
Net Income	**$ 866**	$ 778	$ 716
Other comprehensive income	**—**	—	—
Comprehensive Income	**$ 866**	$ 778	$ 716

See Combined Notes to Consolidated Financial Statements

DTE Electric Company

Consolidated Statements of Financial Position

	December 31,	
	2021	**2020**
	(In millions)	
ASSETS		
Current Assets		
Cash and cash equivalents	**$ 9**	$ 16
Accounts receivable (less allowance for doubtful accounts of $54 and $57, respectively)		
Customer	**694**	763
Affiliates	**36**	13
Other	**40**	62
Inventories		
Fuel	**171**	187
Materials and supplies	**316**	292
Regulatory assets	**168**	123
Other	**101**	71
	1,535	1,527
Investments		
Nuclear decommissioning trust funds	**2,071**	1,855
Other	**44**	42
	2,115	1,897
Property		
Property, plant, and equipment	**28,849**	26,171
Accumulated depreciation and amortization	**(7,676)**	(7,050)
	21,173	19,121
Other Assets		
Regulatory assets	**2,968**	3,440
Prepaid postretirement costs — affiliates	**402**	335
Operating lease right-of-use assets	**64**	75
Other	**148**	118
	3,582	3,968
Total Assets	**$ 28,405**	$ 26,513

See Combined Notes to Consolidated Financial Statements

DTE Electric Company

Consolidated Statements of Financial Position — (Continued)

	December 31,	
	2021	**2020**
	(In millions, except shares)	
LIABILITIES AND SHAREHOLDER'S EQUITY		
Current Liabilities		
Accounts payable		
Affiliates	**$ 83**	$ 62
Other	**567**	410
Accrued interest	**95**	91
Current portion long-term debt, including finance leases	**322**	468
Regulatory liabilities	**154**	18
Short-term borrowings		
Affiliates	**53**	101
Other	**153**	—
Operating lease liabilities	**10**	11
Other	**206**	219
	1,643	1,380
Long-Term Debt (net of current portion)		
Mortgage bonds, notes, and other	**8,591**	7,774
Finance lease obligations	**7**	13
	8,598	7,787
Other Liabilities		
Deferred income taxes	**2,741**	2,525
Regulatory liabilities	**2,221**	2,432
Asset retirement obligations	**2,932**	2,607
Unamortized investment tax credit	**158**	162
Nuclear decommissioning	**321**	283
Accrued pension liability — affiliates	**405**	731
Accrued postretirement liability — affiliates	**340**	384
Operating lease liabilities	**46**	56
Other	**97**	96
	9,261	9,276
Commitments and Contingencies (Notes 9 and 18)		
Shareholder's Equity		
Common stock ($10 par value, 400,000,000 shares authorized, and 138,632,324 shares issued and outstanding for both periods)	**6,002**	5,447
Retained earnings	**2,901**	2,623
Total Shareholder's Equity	**8,903**	8,070
Total Liabilities and Shareholder's Equity	**$ 28,405**	$ 26,513

See Combined Notes to Consolidated Financial Statements

DTE Electric Company

Consolidated Statements of Cash Flows

	Year Ended December 31,		
	2021	**2020**	**2019**
Operating Activities		**(In millions)**	
Net Income	**$ 866**	$ 778	$ 716
Adjustments to reconcile Net Income to Net cash from operating activities:			
Depreciation and amortization	**1,109**	1,043	946
Nuclear fuel amortization	**58**	37	60
Allowance for equity funds used during construction	**(25)**	(23)	(22)
Deferred income taxes	**122**	89	97
Asset (gains) losses and impairments, net	**1**	41	13
Changes in assets and liabilities:			
Accounts receivable, net	**68**	(42)	20
Inventories	**(11)**	(12)	(17)
Prepaid postretirement benefit costs — affiliates	**(67)**	(69)	(77)
Accounts payable	**65**	20	(57)
Accrued pension liability — affiliates	**(326)**	14	(1)
Accrued postretirement liability — affiliates	**(44)**	17	89
Regulatory assets and liabilities	**716**	55	139
Other current and noncurrent assets and liabilities	**(216)**	(43)	(197)
Net cash from operating activities	**2,316**	1,905	1,709
Investing Activities			
Plant and equipment expenditures	**(3,017)**	(2,674)	(2,200)
Proceeds from sale of nuclear decommissioning trust fund assets	**1,047**	2,350	788
Investment in nuclear decommissioning trust funds	**(1,046)**	(2,350)	(794)
Notes receivable and other	**(31)**	(8)	(21)
Net cash used for investing activities	**(3,047)**	(2,682)	(2,227)
Financing Activities			
Issuance of long-term debt, net of issuance costs	**985**	1,683	643
Redemption of long-term debt	**(321)**	(632)	—
Capital contribution by parent company	**555**	636	180
Short-term borrowings, net — affiliate	**(48)**	4	(4)
Short-term borrowings, net — other	**153**	(354)	205
Dividends paid on common stock	**(588)**	(539)	(494)
Other	**(12)**	(17)	(18)
Net cash from financing activities	**724**	781	512
Net Increase (Decrease) in Cash and Cash Equivalents	**(7)**	4	(6)
Cash and Cash Equivalents at Beginning of Period	**16**	12	18
Cash and Cash Equivalents at End of Period	**$ 9**	$ 16	$ 12
Supplemental disclosure of cash information			
Cash paid for:			
Interest, net of interest capitalized	**$ 321**	$ 315	$ 295
Income taxes	**$ 5**	$ 14	$ 46
Supplemental disclosure of non-cash investing and financing activities			
Plant and equipment expenditures in accounts payable	**$ 286**	$ 174	$ 192

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	Total
	Shares	Amount			
	(Dollars in millions, shares in thousands)				
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
Net Income	—	—	—	778	778
Dividends declared on common stock	—	—	—	(539)	(539)
Capital contribution by parent company	—	—	636	—	636
Balance, December 31, 2020	138,632	$ 1,386	$ 4,061	$ 2,623	$ 8,070
Net Income	—	—	—	866	866
Dividends declared on common stock	—	—	—	(588)	(588)
Capital contribution by parent company	—	—	555	—	555
Balance, December 31, 2021	**138,632**	**$ 1,386**	**$ 4,616**	**$ 2,901**	**$ 8,903**

See 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

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 2.3 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 include 1) DTE Vantage, formerly DTE Energy's Power and Industrial Projects segment, which is primarily involved in renewable natural gas projects, providing industrial energy services, and reduced emissions fuel projects, and 2) 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 and CARB.

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.

Separation of DT Midstream

On July 1, 2021, DTE Energy completed the previously announced separation of its natural gas pipeline, storage and gathering non-utility business. Effective with the separation, DTE retains no ownership in the new company, DT Midstream, which was formerly comprised of DTE Energy's Gas Storage and Pipelines segment and also included certain DTE Energy holding company activity within the Corporate and Other segment. Gas Storage and Pipelines is no longer a reportable segment of DTE Energy, and financial results of DT Midstream are presented as Income from discontinued operations, net of taxes on DTE Energy's Consolidated Statements of Operations. Assets and liabilities of DT Midstream are also presented as discontinued operations on DTE Energy's Consolidated Statements of Financial Position. Prior periods have been recast to reflect this presentation.

No adjustments were made to the historical activity within the Consolidated Statements of Comprehensive Income, Consolidated Statements of Cash Flows, or the Consolidated Statements of Changes in Equity. Unless noted otherwise, discussion in the Notes to the Consolidated Financial Statements relate to continuing operations. Refer to Note 4 to the Consolidated Financial Statements, “Dispositions and Impairments,” for additional information regarding the separation of DT Midstream and discontinued operations.

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 equity investment is valued at cost minus any impairments, if applicable. 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.

During the third quarter of 2021, the Registrants performed reassessments of certain VIEs owned by DT Midstream. Upon the separation of DT Midstream, DTE Energy no longer owns any interest in SGG, owner and operator of certain midstream natural gas assets. Therefore, SGG has been removed from the amounts for DTE Energy's consolidated VIEs in the table below. Additionally, as a result of the separation of DT Midstream, DTE Energy no longer has an equity interest in NEXUS, owner of a pipeline which transports shale gas to Ohio, Michigan, and Ontario market centers. DTE Energy has removed its equity investment in NEXUS from the amounts for its non-consolidated VIEs. The Registrants maintain a variable interest in NEXUS relating to DTE Electric's transportation services contract. Assets, liabilities, and earnings related to SGG and NEXUS are included in discontinued operations in the Consolidated Financial Statements.

During the fourth quarter of 2021, DTE Energy also performed reassessments of REF entities that were previously concluded to be VIEs. The REF entities have ceased operations as of December 31, 2021 and DTE Energy has concluded the REF entities are no longer VIEs. Therefore, the REF entities have been removed from the VIE tables below.

Other entities within the DTE Vantage 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.

The Registrants hold ownership interests in certain limited partnerships. The limited partnerships include investment funds which support regional development and economic growth, and 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 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, 2021, 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, 2021, 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. For non-consolidated VIEs, the maximum risk exposure of the Registrants is generally limited to their investment, notes receivable, and future funding commitments.

The following table summarizes the major Consolidated Statements of Financial Position items for consolidated VIEs as of December 31, 2021 and 2020. 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,	
	2021	2020
	(In millions)	
ASSETS		
Cash and cash equivalents	**$ 11**	$ 20
Restricted cash	**6**	—
Accounts receivable	**1**	28
Inventories	**3**	107
Property, plant, and equipment, net	**4**	14
Notes receivable and other	**70**	33
	$ 95	$ 202
LIABILITIES		
Accounts payable	**$ 5**	$ 22
Short-term borrowings	**75**	38
Other current and long-term liabilities	—	4
	$ 80	$ 64

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

	December 31,	
	2021	2020
	(In millions)	
Investments in equity method investees	**$ 172**	$ 159
Notes receivable	**$ 13**	$ 21
Future funding commitments	**$ 3**	$ 6

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, 2021 and 2020, DTE Energy's Investments in equity method investees were $187 million and $177 million, respectively. The balances are primarily comprised of investments in the DTE Vantage and Corporate and Other segments, of which no investment is individually significant. DTE Vantage investments include projects that deliver energy and utility-type products and services to industrial customers, sell electricity from renewable energy projects under long-term power purchase agreements, and produce and sell metallurgical coke. Corporate and Other holds various ownership interests in limited partnerships that include investment funds supporting regional development and economic growth. For further information by segment, see Note 22 to the Consolidated Financial Statements, "Segment and Related Information."

At December 31, 2021 and 2020, 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 $99 million and $93 million, respectively. The difference is being amortized over the life of the underlying assets. As of December 31, 2021 and 2020, DTE Energy's consolidated retained earnings balance includes undistributed earnings from equity method investments of $32 million and $15 million, respectively.

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 from trading securities, primarily from those held in DTE Energy's rabbi trust. The DTE Vantage 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 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:

	2021	2020	2019
		(In millions)	
Income from REF entities	**$ 141**	$ 139	$ 130
Equity earnings of equity method investees	**38**	26	14
Contract services	**27**	28	29
Allowance for equity funds used during construction	**27**	25	24
Gains from rabbi trust securities[(a)]	**8**	28	37
Other	**13**	13	16
	$ 254	$ 259	$ 250

(a) Losses from rabbi trust securities are recorded separately to Other expenses on the Consolidated Statements of Operations.

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

	2021	2020	2019
		(In millions)	
Contract services	**$ 27**	$ 28	$ 32
Allowance for equity funds used during construction	**25**	23	22
Gains from rabbi trust securities allocated from DTE Energy[(a)]	**8**	28	37
Other	**11**	8	16
	$ 71	$ 87	$ 107

(a) Losses from rabbi trust securities are recorded separately to Other expenses on the Consolidated Statements of Operations.

For information on equity earnings of equity method investees by segment, see Note 22 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, gas, and other — 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 13 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, 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, if any. For the years ended December 31, 2021 and 2020, reclassifications out of Accumulated other comprehensive income (loss) were not material.

The following table summarizes the changes in DTE Energy's Accumulated other comprehensive income (loss) by component[(a)] for the years ended December 31, 2021 and 2020:

	Net Unrealized Gain (Loss) on Derivatives	Benefit Obligations[(b)]	Foreign Currency Translation	Total
	(In millions)			
Balance, December 31, 2019	$ (25)	$ (117)	$ (6)	$ (148)
Other comprehensive income (loss) before reclassifications	(3)	(2)	1	(4)
Amounts reclassified from Accumulated other comprehensive loss	5	10	—	15
Net current period Other comprehensive income	2	8	1	11
Balance, December 31, 2020	$ (23)	$ (109)	$ (5)	$ (137)
Other comprehensive income before reclassifications	1	1	—	2
Amounts reclassified from Accumulated other comprehensive loss	6	7	—	13
Net current period Other comprehensive income	7	8	—	15
Separation of DT Midstream	5	—	5	10
Balance, December 31, 2021	**$ (11)**	**$ (101)**	**$ —**	**$ (112)**

(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 20 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 in separate bank accounts to satisfy contractual obligations, fund certain construction projects, and guarantee performance. Restricted cash designated for payments within one year is classified as a Current Asset.

Financing Receivables

Financing receivables are primarily composed of trade receivables, notes receivable, and unbilled revenue. The Registrants' financing receivables are stated at net realizable value.

DTE Energy had unbilled revenues of $1.0 billion and $0.8 billion at December 31, 2021 and 2020, respectively, including $270 million and $260 million of DTE Electric unbilled revenues, respectively, included in Customer Accounts receivable.

The Registrants monitor the credit quality of their financing receivables on a regular basis by reviewing credit quality indicators and monitoring for trigger events, such as a credit rating downgrade or bankruptcy. Credit quality indicators include, but are not limited to, ratings by credit agencies where available, collection history, collateral, counterparty financial statements and other internal metrics. Utilizing such data, the Registrants have determined three internal grades of credit quality. Internal grade 1 includes financing receivables for counterparties where credit rating agencies have ranked the counterparty as investment grade. To the extent credit ratings are not available, the Registrants utilize other credit quality indicators to determine the level of risk associated with the financing receivable. Internal grade 1 may include financing receivables for counterparties for which credit rating agencies have ranked the counterparty as below investment grade; however, due to favorable information on other credit quality indicators, the Registrants have determined the risk level to be similar to that of an investment grade counterparty. Internal grade 2 includes financing receivables for counterparties with limited credit information and those with a higher risk profile based upon credit quality indicators. Internal grade 3 reflects financing receivables for which the counterparties have the greatest level of risk, including those in bankruptcy status.

The following represents the Registrants' financing receivables by year of origination, classified by internal grade of credit risk. The related credit quality indicators and risk ratings utilized to develop the internal grades have been updated through December 31, 2021.

	DTE Energy				DTE Electric
	Year of origination				
	2021	2020	2019 and prior	Total	2021 and prior
	(In millions)				
Notes receivable					
Internal grade 1	$ —	$ —	$ 21	**$ 21**	**$ 14**
Internal grade 2	16	107	6	**129**	**3**
Total notes receivable[a]	**$ 16**	**$ 107**	**$ 27**	**$ 150**	**$ 17**
Net investment in leases					
Net investment in leases, internal grade 1	$ —	$ 1	$ 38	**$ 39**	**$ —**
Net investment in leases, internal grade 2	—	159	1	**160**	—
Total net investment in leases[a]	**$ —**	**$ 160**	**$ 39**	**$ 199**	**$ —**

(a) For DTE Energy, included in Current Assets — Other and Other Assets — Notes Receivable on the Consolidated Statements of Financial Position. For DTE Electric, included in Current Assets — Other on the Consolidated Statements of Financial Position.

The allowance for doubtful accounts on accounts receivable for the utility entities is generally calculated using an 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 and future 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 generally 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 non-utility businesses and other receivables for both utility and non-utility businesses is generally calculated based on specific review of probable future collections based on receivable balances generally in excess of 30 days. Existing and future economic conditions, customer trends and other factors are also considered. Receivables are written off on a specific identification basis and determined based upon the specific circumstances of the associated receivable.

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

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. 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 including existing and future economic conditions.

Cash payments received on nonaccrual status notes receivable, that do not bring the account contractually current, are first applied to the contractually owed past due interest, with any remainder applied to principal. Accrual of interest is generally resumed when the note receivable becomes contractually current.

The following tables present a roll-forward of the activity for the Registrants' financing receivables credit loss reserves:

	DTE Energy			DTE Electric
	Trade accounts receivable	Other receivables	Total	Trade and other accounts receivable
	(In millions)			
Beginning reserve balance, January 1, 2021	$ 101	$ 3	**$ 104**	**$ 57**
Current period provision	53	1	**54**	**36**
Write-offs charged against allowance	(126)	(1)	**(127)**	**(77)**
Recoveries of amounts previously written off	61	—	**61**	**38**
Ending reserve balance, December 31, 2021	**$ 89**	**$ 3**	**$ 92**	**$ 54**

	DTE Energy			DTE Electric
	Trade accounts receivable	Other receivables	Total	Trade and other accounts receivable
	(In millions)			
Beginning reserve balance, January 1, 2020[(a)]	$ 79	$ 4	$ 83	$ 46
Current period provision	102	3	105	61
Write-offs charged against allowance	(130)	(4)	(134)	(80)
Recoveries of amounts previously written off	50	—	50	30
Ending reserve balance, December 31, 2020	$ 101	$ 3	$ 104	$ 57

(a) DTE Energy Trade accounts receivable beginning reserve balance excludes $8 million related to the discontinued operations of DT Midstream. Prospective activity includes only the continuing operations of DTE Energy.

Uncollectible expense for the Registrants is primarily comprised of the current period provision for allowance for doubtful accounts and is summarized as follows:

	Year Ended December 31,		
	2021	2020	2019
	(In millions)		
DTE Energy	**$ 55**	$ 105	$ 106
DTE Electric	**$ 36**	$ 62	$ 65

There are no material amounts of past due financing receivables for the Registrants as of December 31, 2021.

Inventories

Inventory related to utility and non-utility operations is valued at the lower of cost or net realizable value, where cost is generally valued using average cost. Inventory primarily includes fuel, gas, materials, and supplies. Other inventories include RECs, emission allowances, and other environmental products in the Energy Trading segment.

DTE Gas' natural gas inventory of $50 million and $40 million as of December 31, 2021 and 2020, respectively, is determined using the last-in, first-out (LIFO) method. The replacement cost of gas in inventory exceeded the LIFO cost by $136 million and $62 million at December 31, 2021 and 2020, 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 6 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.

Intangible Assets

The Registrants have certain Intangible assets as shown below:

		December 31, 2021			December 31, 2020		
	Useful Lives	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
				(In millions)			
Intangible assets subject to amortization							
Contract intangibles	6 to 26 years	**$ 271**	**$ (98)**	**$ 173**	$ 271	$ (83)	$ 188
Intangible assets not subject to amortization[(a)]		**4**	**—**	**4**	11	—	11
DTE Energy Long-term intangible assets		**$ 275**	**$ (98)**	**$ 177**	$ 282	$ (83)	$ 199

(a) Amounts primarily include Renewable energy credits and Gas carbon offsets that are charged to expense, using average cost, as the credits are consumed in the operation of the business. Amounts include DTE Electric intangible assets of $2 million and $11 million as of December 31, 2021 and 2020, respectively, and are included in Other Assets — Other on the DTE Electric Consolidated Statements of Financial Position.

The following table summarizes DTE Energy's estimated contract intangible amortization expense expected to be recognized during each year through 2026:

	2022	2023	2024	2025	2026
			(In millions)		
Estimated amortization expense	$ 16	$ 16	$ 16	$ 16	$ 14

DTE Energy amortizes contract intangible assets on a straight-line basis over the expected period of benefit. DTE Energy's Intangible assets amortization expense was $16 million in 2021 and 2020 and $9 million in 2019.

Cloud Computing Arrangements

Effective upon the adoption of ASU No. 2018-15 in January 2020, the Registrants capitalize implementation costs incurred in a cloud computing arrangement that is a service contract consistent with capitalized implementation costs incurred to develop or obtain internal-use software. Capitalized costs are recorded in Other noncurrent assets on the Consolidated Statements of Financial Position and amortization of the costs is reflected in Operation and maintenance within the Consolidated Statements of Operations. Costs are amortized on a straight-line basis over the life of the contract. Contracts primarily involve the implementation or upgrade of cloud-based solutions for generation and distribution operations and customer service support.

Capitalized cloud computing costs were $16 million for DTE Energy, including $12 million for DTE Electric, at December 31, 2021. Amortization of these costs was not material for the year ended December 31, 2021. There were no cloud computing costs capitalized in Other noncurrent assets at December 31, 2020.

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. Discounts, premiums, and expense on early redemptions of debt associated with DTE Energy's non-utility operations are charged to earnings.

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 12 of the Consolidated Financial Statements, "Fair Value."

DTE Energy Foundation

DTE Energy's contributions to the DTE Energy Foundation were $25 million and $20 million for the years ended December 31, 2021 and December 31, 2020, respectively. There were no charitable contributions made to the DTE Energy Foundation for the year ended December 31, 2019. 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
6	Property, Plant, and Equipment
8	Asset Retirement Obligations
9	Regulatory Matters
10	Income Taxes
12	Fair Value
13	Financial and Other Derivative Instruments
17	Leases
20	Retirement Benefits and Trusteed Assets
21	Stock-Based Compensation

NOTE 3 — NEW ACCOUNTING PRONOUNCEMENTS

Recently Adopted Pronouncements

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 Registrants adopted the ASU effective January 1, 2021 using the modified retrospective and prospective approaches, where applicable. The adoption of the ASU did not have a significant impact on the Registrants' Consolidated Financial Statements.

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848) - Facilitation of the Effects of Reference Rate Reform on Financial Reporting, as amended*. The amendments in this update provide optional expedients and exceptions for applying GAAP to contract modifications and hedging relationships, subject to meeting certain criteria, that reference LIBOR or another reference rate expected to be discontinued. The optional relief is temporary and cannot be applied to contract modifications and hedging relationships entered into or evaluated after December 31, 2022. The Registrants adopted the ASU and elected the optional expedients for contract modifications prospectively. The adoption of the ASU did not have a significant impact on the registrant's Consolidated Financial Statements.

In August 2020, the FASB issued ASU No. 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*. The amendments in this update simplify the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts indexed to and potentially settled in an entity's own equity. The Registrants adopted the ASU effective January 1, 2021 using the modified retrospective approach. The adoption of the ASU did not have a significant impact on the Registrants' Consolidated Financial Statements.

Recently Issued Pronouncements

In July 2021, the FASB issued ASU No. 2021-05, *Leases (Topic 842): Lessors – Certain Leases with Variable Lease Payments.* The amendments in this update modify lease classification requirements for lessors, providing that lease contracts with variable lease payments that do not depend on a reference index or a rate should be classified as operating leases if they would have been classified as a sales-type or direct financing lease and resulted in the recognition of a selling loss at lease commencement. The ASU is effective for the Registrants for fiscal years beginning after December 15, 2021, and interim periods therein. The Registrants will apply the guidance prospectively. The Registrants are currently assessing the impact of this standard on their Consolidated Financial Statements.

In October 2021, The FASB issued ASU No. 2021-08, *Business Combinations (Topic 805), Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*. The amendments in this update require contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606, *Revenue from Contracts with Customers*. Historically, such amounts were recognized by the acquirer at fair value in acquisition accounting. The ASU is effective for the Registrants for fiscal years beginning after December 15, 2022, and interim periods therein. Early adoption is permitted. The Registrants will apply the guidance prospectively to acquisitions occurring on or after the effective date.

NOTE 4 — DISPOSITIONS AND IMPAIRMENTS

Separation of DT Midstream

On October 27, 2020, DTE Energy announced that its Board of Directors had authorized management to pursue a plan to spin-off its natural gas pipeline, storage and gathering non-utility business. On July 1, 2021, DTE Energy completed the separation of the new company, DT Midstream, through the distribution of 96,732,466 shares of DT Midstream common stock to DTE Energy shareholders. The distribution reflected 100% of the outstanding common stock of DT Midstream as of 5:00 p.m. ET on June 18, 2021 (the "record date"). DTE Energy shareholders received one share of DT Midstream common stock for every two shares of DTE Energy common stock held at the close of business on the record date, with certain shareholders receiving cash in lieu of fractional shares of DT Midstream common stock. For U.S. federal income tax purposes, DTE Energy's U.S. shareholders generally should not recognize gain or loss as a result of the distribution of DT Midstream stock, except with respect to cash received in lieu of fractional shares.

In June 2021, in order to facilitate the separation and settle intercompany balances with DTE Energy, DT Midstream issued long-term debt in the form of $2.1 billion senior notes and a $1.0 billion term loan. Using the debt proceeds, net of discount and issuance costs of $53 million, DT Midstream made the following cash payments:

- Settled Short-term borrowings due to DTE Energy as of June 30, 2021 of $2,537 million
- Settled affiliate Accounts receivable due from DTE Energy and affiliate Accounts payable due to DTE Energy as of June 30, 2021 for net cash paid to DTE Energy of $9 million
- Provided a one-time special dividend to DTE Energy of $501 million

These payments eliminated in consolidation and had no direct impact on DTE Energy's Consolidated Financial Statements of Financial Position. During the third quarter 2021, DTE Energy used the proceeds received from DT Midstream to optionally redeem $2.6 billion of long-term debt. Refer to Note 10 to the Consolidated Financial Statements, "Long-term Debt," for additional information.

Continuing Involvement

Following the separation on July 1, 2021, DT Midstream became an independent public company listed under the symbol "DTM" on the New York Stock Exchange (NYSE) and DTE Energy no longer retains any ownership in DT Midstream. In order to govern the ongoing relationships between DT Midstream and DTE Energy after the separation and to facilitate an orderly transition, the parties entered into a series of agreements including the following:

- *Separation and Distribution Agreement* – sets forth the principal actions to be taken in connection with the separation, including the transfer of assets and assumption of liabilities, among others, and sets forth other agreements governing aspects of the relationship between DTE Energy and DT Midstream
- *Transition Services Agreement* – allows for DTE Energy to provide DT Midstream with specified services for a limited time and no longer than 24 months following the separation, with related costs to be paid by DT Midstream. Services include support for gas operations, information technology, accounting, tax, legal, human resources, and various other administrative services
- *Tax Matters Agreement* – governs the respective rights, responsibilities and obligations of DTE Energy and DT Midstream after the separation with respect to all tax matters
- *Employee Matters Agreement* – addresses certain employment, compensation and benefits matters, including the allocation and treatment of certain assets and liabilities relating to DT Midstream employees

In addition, DTE Energy and its subsidiaries have various commercial agreements that are continuing after the separation. These agreements include certain pipeline, gathering, and storage services and operating and maintenance agreements, and are not considered material to the Consolidated Financial Statements.

Discontinued Operations

The table below reflects the financial results of DT Midstream that have been reclassified from continuing operations and included in discontinued operations within the Consolidated Statements of Operations. These results include the impact of tax-related adjustments and all transaction costs related to the separation. General corporate overhead costs have been excluded and no portion of corporate interest costs were allocated to discontinued operations.

	Year Ended December 31,		
	2021	**2020**	**2019**
Operating Revenues — Non-utility operations	**$ 405**	$ 754	$ 501
Operating Expenses			
Cost of gas and other — non-utility	**15**	21	18
Operation and maintenance[a]	**123**	138	103
Depreciation and amortization	**82**	151	94
Taxes other than income	**13**	15	8
Asset (gains) losses and impairments, net	**17**	(2)	1
	250	323	224
Operating Income	**155**	431	277
Other (Income) and Deductions			
Interest expense	**50**	113	73
Interest income	**(4)**	(9)	(8)
Other income	**(62)**	(129)	(100)
Other expenses	**—**	—	1
	(16)	(25)	(34)
Income from Discontinued Operations Before Income Taxes	**171**	456	311
Income Tax Expense	**54**	130	81
Net Income from Discontinued Operations, Net of Taxes	**117**	326	230
Less: Net Income Attributable to Noncontrolling Interests	**6**	12	16
Net Income from Discontinued Operations	**$ 111**	$ 314	$ 214

(a) Includes separation transaction costs of $59 million and $8 million for the years ended December 31, 2021 and 2020, respectively, for various legal, accounting and other professional services fees.

The table below reflects the major assets and liabilities that were transferred to DT Midstream and presented as discontinued operations in the Consolidated Statements of Financial Position as of December 31, 2020.

	December 31, 2020 (In millions)
Total Assets of Discontinued Operations	
Cash	$ 42
Accounts receivable	126
Inventories	8
Other	44
Current assets of DT Midstream	220
Less: Previously affiliated amounts eliminated at DTE Energy	3
Current assets of discontinued operations for DTE Energy	217
Investments in equity method investees	1,691
Net property, plant, and equipment	3,470
Goodwill	473
Intangible assets	2,140
Notes receivable	19
Operating lease right-of-use assets	45
Other	21
Noncurrent assets of discontinued operations for DTE Energy	7,859
Total Assets of Discontinued Operations for DTE Energy	$ 8,076
Total Liabilities of Discontinued Operations	
Accounts payable	$ 39
Operating lease liabilities	17
Short-term borrowings due to DTE Energy	2,913
Other	53
Current liabilities of DT Midstream	3,022
Less: Previously affiliated amounts eliminated at DTE Energy	2,923
Current liabilities of discontinued operations for DTE Energy	99
Deferred income taxes	753
Asset retirement obligations	10
Operating lease liabilities	28
Other	45
Noncurrent liabilities of discontinued operations for DTE Energy	836
Total Liabilities of Discontinued Operations for DTE Energy	$ 935

There were no assets or liabilities from discontinued operations as of December 31, 2021. DT Midstream had net assets of $4.0 billion that separated on July 1, 2021 that resulted in a reduction to DTE Energy's equity. Refer to the Separation of DT Midstream line within DTE Energy's Consolidated Statements of Changes in Equity for further details.

The following table is a summary of significant non-cash items, capital expenditures, and significant financing activities of discontinued operations included in DTE Energy's Consolidated Statements of Cash Flows:

	Year Ended December 31,		
	2021	2020	2019
		(In millions)	
Operating Activities			
Depreciation and amortization	**$ 82**	$ 151	$ 94
Deferred income taxes	**53**	125	78
Equity earnings of equity method investees	**(59)**	(106)	(97)
Asset (gains) losses and impairments, net	**19**	(2)	1
Investing Activities			
Plant and equipment expenditures — non-utility	**$ (60)**	$ (517)	$ (214)
Acquisitions related to business combinations, net of cash acquired	**—**	—	(2,296)
Financing Activities			
Purchase of noncontrolling interest	**$ —**	$ —	$ (297)
Acquisition related deferred payment, excluding accretion	**—**	(380)	—

DTE Vantage Segment Impairment

DTE Vantage owns a pulverized coal facility located at DTE Electric's River Rouge power plant. The facility provides pulverized coal to a steel industry customer through a supply agreement expiring in 2028. The River Rouge plant provides operation and maintenance services to the facility through an agreement which also expires in 2028.

During the second quarter 2021, DTE Electric retired the River Rouge plant and provided an early termination notice of the operation and maintenance services agreement with the pulverized coal facility. The termination became effective December 31, 2021 and DTE Vantage has ceased operations at the facility.

In connection with these events, DTE Energy performed an impairment analysis of the pulverized coal facility long-lived assets in accordance with ASC 360, *Property, Plant and Equipment*. Based on its undiscounted cash flow projections, DTE Energy determined that the carrying value of the pulverized coal facility asset group is not recoverable. As a result, DTE Energy recorded a non-cash impairment charge of $27 million, which is included in Asset (gains) losses and impairments, net on DTE Energy's Consolidated Statements of Operations for the year ended December 31, 2021. The charge included $18 million to fully impair the long-lived assets recorded to Property, plant and equipment and a $9 million write-down of Other noncurrent assets to fair value. Fair value of the assets was determined using an income approach, which utilized assumptions including management's best estimates of the expected future cash flows, the estimated useful life of the asset group and discount rate.

During the fourth quarter 2021, DTE Energy terminated the supply agreement with the steel industry customer and settled all outstanding claims. As a result, DTE Energy reversed $17 million of deferred revenues that were previously recorded, which increased Operating Revenues - Non-utility operations for the year ended December 31, 2021.

NOTE 5 — REVENUE

Significant Accounting Policy

Revenue is measured based upon the consideration specified in a contract with a customer at the time when performance obligations are satisfied. 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.

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 13 to the Consolidated Financial Statements, "Financial and Other Derivative Instruments."

Disaggregation of Revenue

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

	2021	2020	2019
		(In millions)	
Electric[a]			
Residential	$ 2,926	$ 2,825	$ 2,427
Commercial	1,908	1,739	1,795
Industrial	628	592	659
Other[b]	359	364	348
Total Electric operating revenues	**$ 5,821**	$ 5,520	$ 5,229
Gas			
Gas sales	$ 1,058	$ 971	$ 1,043
End User Transportation	233	218	219
Intermediate Transportation	82	79	78
Other[b]	180	146	142
Total Gas operating revenues	**$ 1,553**	$ 1,414	$ 1,482
Other segment operating revenues			
DTE Vantage	**$ 1,482**	$ 1,224	$ 1,560
Energy Trading	**$ 6,831**	$ 3,863	$ 4,610

(a) Revenues generally represent those of DTE Electric, except $12 million, $14 million, and $5 million of Other revenues related to DTE Sustainable Generation for the years ended December 31, 2021, 2020, and 2019, respectively.
(b) Includes revenue adjustments related to various regulatory mechanisms.

Revenues included the following which were outside the scope of Topic 606:

	2021	2020	2019
		(In millions)	
Electric — Alternative Revenue Programs	**$ 36**	$ 26	$ 22
Electric — Other revenues	**19**	22	19
Gas — Alternative Revenue Programs	**10**	10	8
Gas — Other revenues	**6**	8	7
DTE Vantage — Leases	**103**	99	121
Energy Trading — Derivatives	**5,603**	2,690	3,415

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 22 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.

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 cancellable 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 cancellable 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.

DTE Vantage

DTE Vantage 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 DTE Vantage, 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.

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 and other environmental products are recognized at a point in time when control is transferred to the customer which is deemed to be when these products are entered for transfer to the customer in the applicable 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, 2021[(a)]	$ 65
Increases due to cash received or receivable, excluding amounts recognized as revenue during the period	72
Revenue recognized that was included in the deferred revenue balance at the beginning of the period	(59)
Ending Balance, December 31, 2021	**$ 78**

(a) Excludes $22 million of deferred revenue related to the discontinued operations of DT Midstream. Prospective activity includes only the continuing operations of DTE Energy.

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)
2022	$ 75
2023	1
2024	1
2025	—
2026	—
2027 and thereafter	1
	$ 78

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.

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 cancellable 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)	
2022	$ 292	$ 8
2023	285	8
2024	171	8
2025	91	—
2026	59	—
2027 and thereafter	364	—
	$ 1,262	**$ 24**

NOTE 6 — PROPERTY, PLANT, AND EQUIPMENT

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

	2021	2020
Property, plant, and equipment	**(In millions)**	
DTE Electric		
Zero carbon generation		
Nuclear	**$ 3,394**	$ 3,295
Renewables	**2,522**	1,817
Fossil and other generation	**8,640**	8,031
Distribution	**11,414**	10,354
Other	**2,879**	2,674
Total DTE Electric	**28,849**	26,171
DTE Gas		
Distribution	**4,900**	4,517
Storage	**593**	576
Transmission and other	**1,415**	1,341
Total DTE Gas	**6,908**	6,434
DTE Vantage	**1,118**	1,194
Other	**208**	217
Total DTE Energy	**$ 37,083**	$ 34,016
Accumulated depreciation and amortization		
DTE Electric		
Zero carbon generation		
Nuclear	**$ (413)**	$ (373)
Renewables	**(357)**	(295)
Fossil and other generation	**(3,214)**	(3,014)
Distribution	**(2,842)**	(2,686)
Other	**(850)**	(682)
Total DTE Electric	**(7,676)**	(7,050)
DTE Gas		
Distribution	**(1,265)**	(1,215)
Storage	**(154)**	(146)
Transmission and other	**(426)**	(403)
Total DTE Gas	**(1,845)**	(1,764)
DTE Vantage	**(545)**	(619)
Other	**(73)**	(84)
Total DTE Energy	**$ (10,139)**	$ (9,517)
Net DTE Energy Property, plant, and equipment	**$ 26,944**	$ 24,499
Net DTE Electric Property, plant, and equipment	**$ 21,173**	$ 19,121

AFUDC and Capitalized Interest

AFUDC represents the cost of financing construction projects for regulated businesses, including the estimated cost of debt and authorized return-on-equity. The debt component is recorded as a reduction to interest expense and the equity component is recorded as other income. Non-regulated businesses record capitalized interest as a reduction to interest expense.

The AFUDC and capitalized interest rates were as follows for the years ended December 31:

	2021	2020	2019
DTE Electric AFUDC	**5.46 %**	5.47 %	5.43 %
DTE Gas AFUDC	**5.55 %**	5.56 %	5.56 %
Non-regulated businesses capitalized interest	**3.30 %**	3.90 %	4.00 %

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

DTE Energy	2021	2020	2019
		(In millions)	
Allowance for debt funds used during construction and interest capitalized	$ 12	$ 11	$ 14
Allowance for equity funds used during construction	27	25	24
Total	$ 39	$ 36	$ 38

DTE Electric	2021	2020	2019
		(In millions)	
Allowance for debt funds used during construction	$ 11	$ 10	$ 10
Allowance for equity funds used during construction	25	23	22
Total	$ 36	$ 33	$ 32

Depreciation and Amortization

The composite depreciation rate for DTE Electric was approximately 4.2%, 4.2%, and 4.0% in 2021, 2020 and 2019, respectively. The composite depreciation rate for DTE Gas was 2.9%, 2.8%, and 2.7% in 2021, 2020, and 2019, respectively. The average estimated useful life for each major class of utility Property, plant, and equipment as of December 31, 2021 follows:

	Estimated Useful Lives in Years		
Utility	Generation	Distribution	Storage
DTE Electric	34	38	N/A
DTE Gas	N/A	49	58

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 80 years. The estimated useful lives for major classes of DTE Energy's non-utility assets and facilities range from 3 to 50 years.

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

	2021	2020	2019
		(In millions)	
Property, plant, and equipment	$ 1,095	$ 1,025	$ 927
Regulatory assets and liabilities	259	244	227
Intangible assets	16	16	9
Other	7	7	6
	$ 1,377	$ 1,292	$ 1,169

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

	2021	2020	2019
		(In millions)	
Property, plant, and equipment	$ 890	$ 831	$ 748
Regulatory assets and liabilities	214	207	193
Other	5	5	5
	$ 1,109	$ 1,043	$ 946

Capitalized Software

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 both DTE Energy and DTE Electric.

The following balances for capitalized software relate to DTE Energy:

	Year Ended December 31,		
	2021	2020	2019
	(In millions)		
Amortization expense of capitalized software	**$ 145**	$ 128	$ 122
Gross carrying value of capitalized software	**$ 920**	$ 863	
Accumulated amortization of capitalized software	**$ 493**	$ 430	

The following balances for capitalized software relate to DTE Electric:

	Year Ended December 31,		
	2021	2020	2019
	(In millions)		
Amortization expense of capitalized software	**$ 132**	$ 118	$ 112
Gross carrying value of capitalized software	**$ 826**	$ 756	
Accumulated amortization of capitalized software	**$ 439**	$ 363	

NOTE 7 — 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, 2021 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)	$ 1,952	$ 618
Accumulated depreciation (in millions)	$ 1,007	$ 128

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 8 — 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.

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 2021, 2020, and 2019 were as follows:

DTE Energy	2021	2020	2019
		(In millions)	
Asset retirement obligations at January 1	**$ 2,829**	$ 2,656	$ 2,463
Accretion	**167**	156	148
Liabilities incurred	**28**	24	11
Liabilities settled	**(30)**	(13)	(17)
Revision in estimated cash flows	**168**	6	51
Asset retirement obligations at December 31	**$ 3,162**	$ 2,829	$ 2,656

DTE Electric	2021	2020	2019
		(In millions)	
Asset retirement obligations at January 1	**$ 2,607**	$ 2,447	$ 2,271
Accretion	**155**	145	138
Liabilities incurred	**29**	18	1
Liabilities settled	**(27)**	(8)	(14)
Revision in estimated cash flows	**168**	5	51
Asset retirement obligations at December 31	**$ 2,932**	$ 2,607	$ 2,447

Approximately $2.4 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 12 to the Consolidated Financial Statements, "Fair Value."

NOTE 9 — 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, wholesale electric market activities, certain affiliate transactions, the acquisition and disposition of certain generation and other facilities, and, in conjunction with the NERC, compliance with mandatory reliability standards. 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 any unresolved regulatory matters discussed herein. Resolution of these matters is dependent upon future MPSC and FERC 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.

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

	DTE Energy		DTE Electric	
	2021	2020	2021	2020
Assets		(In millions)		
Recoverable pension and other postretirement costs				
Pension	**$ 1,372**	$ 1,938	**$ 1,056**	$ 1,477
Other postretirement costs	**53**	165	**27**	108
Recoverable undepreciated costs on retiring plants	**667**	664	**667**	664
Fermi 2 asset retirement obligation	**613**	645	**613**	645
Enhanced Tree Trimming Program deferred costs	**189**	119	**189**	119
Recoverable Michigan income taxes	**163**	176	**133**	142
Accrued PSCR/GCR revenue	**160**	100	**142**	100
Energy Waste Reduction incentive	**79**	62	**63**	49
Recoverable income taxes related to AFUDC equity	**68**	64	**61**	54
Deferred environmental costs	**51**	57	**—**	—
Unamortized loss on reacquired debt	**51**	55	**38**	41
Customer360 deferred costs	**46**	51	**46**	51
Nuclear Performance Evaluation and Review Committee Tracker	**39**	55	**39**	55
Non-service pension and other postretirement costs	**25**	21	**—**	—
Energy Waste Reduction	**20**	19	—	—
Other recoverable income taxes	**16**	19	**16**	19
Transitional Reconciliation Mechanism	**8**	11	**8**	11
Other	**57**	33	**38**	28
	3,677	4,254	**3,136**	3,563
Less amount included in Current Assets	**(195)**	(129)	**(168)**	(123)
	$ 3,482	$ 4,125	**$ 2,968**	$ 3,440

	DTE Energy		DTE Electric	
	2021	2020	2021	2020
Liabilities		(In millions)		
Refundable federal income taxes	**$ 2,117**	$ 2,255	**$ 1,729**	$ 1,827
Removal costs liability	**679**	831	**283**	410
Negative other postretirement offset	**150**	122	**106**	86
Non-service pension and other postretirement costs	**110**	78	**54**	36
Incremental tree trim surge	**90**	—	**90**	—
COVID-19 voluntary refund	**30**	30	**30**	30
Energy Waste Reduction	**27**	15	**27**	15
Renewable energy	**13**	21	**13**	21
Other	**46**	50	**43**	25
	3,262	3,402	**2,375**	2,450
Less amount included in Current Liabilities	**(156)**	(39)	**(154)**	(18)
	$ 3,106	$ 3,363	**$ 2,221**	$ 2,432

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.

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 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 Regulatory assets 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. Refer to Note 20 to the Consolidated Financial Statements, "Retirement Benefits and Trusteed Assets," for additional information regarding the changes in pension and other postretirement costs for the period and the impact on Regulatory assets.[(a)]

- *Recoverable undepreciated costs on retiring plants* — Deferral of estimated remaining balances associated with coal power plants expected to be retired by the end of 2022. Amounts also include $73 million for the remaining undepreciated cost of the River Rouge power plant, which was retired in 2021 and approved for securitization and recovery in the MPSC's June 2021 order. Refer to the "2021 Securitization Filing" section below for additional information.

- *Fermi 2 asset retirement obligation* — Obligation 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)]

- *Enhanced Tree Trimming Program deferred costs* — The MPSC approved the deferral of costs for a tree trimming surge through 2022, aimed at reducing the number and duration of customer interruptions. The MPSC also approved the securitization and recovery of up to $157 million of these costs in their June 2021 order. Refer to the "2021 Securitization Filing" section below for additional information. Additional tree trim surge costs are expected to be recovered through future securitization filings. DTE Electric also requested continued deferral of tree trimming surge costs through 2024 in its January 21, 2022 rate case filing, with an MPSC order expected in November 2022.

- *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.

- *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.

- *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)]

- *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.

- *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)]

- *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. The deferred costs are recorded as Regulatory Assets at DTE Electric and DTE Gas receives an intercompany charge for their proportionate share of amortization expense.
- *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, and operational and financial performance, pursuant to MPSC authorization. Deferrals are amortized over a five-year period with recovery through base rate filings.
- *Non-service pension and other postretirement costs* — Upon adoption of ASU 2017-07 on January 1, 2018, certain non-service pension and other postretirement 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.
- *Energy Waste Reduction* — Receivable for the under-recovery of energy waste reduction costs incurred by DTE Gas which are recoverable through a surcharge.[(a)]
- *Other recoverable income taxes* — Income tax 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.
- *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.

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

LIABILITIES

- *Refundable federal income taxes* — In December 2017, the TCJA was enacted and reduced the corporate income tax rate, effective January 1, 2018. DTE Electric and DTE Gas remeasured deferred taxes, resulting in a reduction to deferred tax liabilities, to reflect the impact of the TCJA on the cumulative temporary differences expected to reverse after the effective date. Regulatory liabilities were also recorded to offset the impact of the deferred tax remeasurement reflected in rates.
- *Removal costs liability* — The amounts collected from customers to fund future asset removal activities in excess of removal costs incurred.
- *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.
- *Non-service pension and other postretirement costs* — Upon adoption of ASU 2017-07 on January 1, 2018, certain non-service pension and other postretirement 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.
- *Incremental tree trim surge* — One-time voluntary refund to be administered by investing in tree trimming, incremental to the Enhanced Tree Trimming Program, without seeking future cost recovery. Refer to the “2020-2021 Accounting Applications” section below for additional information regarding the refund.
- *COVID-19 voluntary refund* — One-time refund obligation owed to DTE Electric customers due to certain sales increases driven by the COVID-19 pandemic. Amortization of the liability will be used to offset the cost of service related to new plant, beginning January 1, 2022 and continuing until the earlier of the implementation of new base rates or December 31, 2022.

- *Energy Waste Reduction* — Amounts collected in rates in excess of energy waste reduction costs incurred by DTE Electric.
- *Renewable energy* — Amounts collected in rates in excess of renewable energy expenditures.

2020-2021 Accounting Applications

On July 9, 2020, the MPSC approved DTE Electric's request to accelerate amortization of the portion of its refundable federal income taxes regulatory liability related to non-plant accumulated deferred income tax balances that resulted from the TCJA. DTE Electric was authorized to increase amortization by $102 million beginning in May 2021, which would fully amortize this portion of the liability by the end of 2021 instead of April 2033. The accelerated amortization would not impact customer rates and would allow DTE Electric to defer its next rate case filing previously set for July 2020 to March 2021.

On February 26, 2021, DTE Electric filed an additional application requesting a delay in the accelerated amortization approved in the 2020 application. DTE Electric requested delaying the start of amortization from May 2021 to December 1, 2021, which would fully amortize these balances by the end of 2022 and allow DTE Electric to further defer its next rate case filing. The accounting application was approved by the MPSC on April 8, 2021.

On August 31, 2021, DTE Electric filed an accounting application with the MPSC requesting approval of a one-time voluntary refund of $70 million collected in 2021 associated with the unexpected customer usage patterns due to the COVID-19 pandemic. This refund will be administered by investing in additional tree trimming without seeking future cost recovery. Such efforts would serve to improve customer reliability without impacting rates, thus providing an affordability benefit to customers. These investments will be incremental to the Tree Trim Surge expenses previously authorized by the MPSC.

On November 4, 2021, the MPSC issued an order authorizing the one-time accounting and a regulatory liability for a minimum of $70 million. In that order, the MPSC directed DTE Electric to file a letter before December 31, 2021 indicating the amount of the final regulatory liability it planned to record.

On December 27, 2021, DTE Electric submitted a letter to the MPSC substantiating that a regulatory liability of $90 million would be recorded. On December 28, 2021, the MPSC Staff confirmed that DTE Electric complied with the requirements set forth in the November 4th order. Accordingly, DTE Electric recognized the regulatory liability of $90 million and will relieve the liability as the additional tree trim expenses are incurred during 2022-2023. If the full $90 million is not spent by the end of 2023, DTE Electric will provide refunds to customers via bill credits for any shortage.

2021 Securitization Filing

On March 26, 2021, DTE Electric filed an application requesting a financing order approving the securitization financing of $184 million of qualified costs related to the net book value of the River Rouge generation plant and tree trimming surge program costs. The filing requested recovery of these qualifying costs from DTE Electric's customers.

A final MPSC financing order was issued on June 23, 2021 authorizing DTE Electric to proceed with the issuance of securitization bonds for qualified costs of up to $236 million, increased for the inclusion of deferred income taxes. The financing order further authorized customer charges for the timely recovery of the debt service costs on the securitization bonds and other ongoing qualified costs. Securitization financing is expected to occur in March 2022.

2021 Gas Rate Case Filing

DTE Gas filed a rate case with the MPSC on February 12, 2021 requesting an increase in base rates of $195 million based on a projected twelve-month period ending December 31, 2022. The requested increase in base rates was primarily due to an increase in net plant resulting from infrastructure investments and operating and maintenance expenses. The rate filing also requested an increase in return on equity from 9.9% to 10.25% and included projected changes in sales and working capital. On December 9, 2021, the MPSC issued an order approving an annual revenue increase of $84 million for services rendered on or after January 1, 2022 and a return on equity of 9.9%.

2022 Electric Rate Case Filing

DTE Electric filed a rate case with the MPSC on January 21, 2022 requesting an increase in base rates of $388 million based on a projected twelve-month period ending October 31, 2023. The requested increase in base rates is primarily due to an increase in net plant resulting from generation and distribution investments, as well as related increases to depreciation and property tax expenses. The rate filing also requested an increase in return on equity from 9.9% to 10.25% and includes projected changes in sales. A final MPSC order in this case is expected in November 2022.

NOTE 10 — 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 $31 million and $8 million at December 31, 2021 and 2020, respectively.

On July 1, 2021, DTE Energy completed the separation of its natural gas pipeline, storage and gathering non-utility business, DT Midstream. Refer to Note 4 to the Consolidated Financial Statements, "Dispositions and Impairments" for additional information regarding the separation. The separation was a tax free distribution to shareholders, but triggered certain tax effects at DTE Energy including the remeasurement of state deferred tax assets and liabilities and the recognition of a deferred intercompany gain. The state remeasurement reduced deferred tax liabilities and generated a deferred tax benefit of $85 million. The recognition of the deferred intercompany gain resulted in $9 million of additional deferred tax expense. Both of these impacts were reflected in Income Tax Expense (Benefit) in the Consolidated Statements of Operations for the year ended December 31, 2021.

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

	2021	2020	2019
DTE Energy		**(In millions)**	
Income Before Income Taxes	**$ 656**	$ 1,082	$ 1,013
Income tax expense at 21% statutory rate	**$ 138**	$ 227	$ 213
Production tax credits	**(138)**	(121)	(128)
TCJA regulatory liability amortization	**(103)**	(76)	(38)
State deferred tax remeasurement due to separation of DT Midstream, net of federal benefit	**(85)**	—	—
Investment tax credits	**(3)**	(4)	(4)
Net operating loss carryback	**—**	(34)	—
Enactment of West Virginia income tax legislation, net of federal benefit	**8**	—	—
Deferred intercompany gain	**9**	—	—
Valuation allowance on charitable contribution carryforwards	**18**	3	6
State and local income taxes, excluding items above, net of federal benefit	**30**	47	29
Other, net	**(4)**	(5)	(7)
Income Tax Expense (Benefit)	**$ (130)**	$ 37	$ 71
Effective income tax rate	**(19.9)%**	3.4 %	7.0 %

DTE Electric	2021	2020	2019
		(In millions)	
Income Before Income Taxes	**$ 970**	$ 887	$ 854
Income tax expense at 21% statutory rate	**$ 204**	$ 186	$ 179
TCJA regulatory liability amortization	**(73)**	(62)	(35)
Production tax credits	**(70)**	(55)	(45)
Investment tax credits	**(3)**	(4)	(4)
State and local income taxes, excluding items above, net of federal benefit	**54**	50	49
Other, net	**(8)**	(6)	(6)
Income Tax Expense	**$ 104**	$ 109	$ 138
Effective income tax rate	**10.7 %**	12.3 %	16.2 %

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

DTE Energy	2021	2020	2019
		(In millions)	
Current income tax expense (benefit)			
Federal	**$ (33)**	$ (249)	$ (183)
State and other income tax	**(12)**	4	3
Total current income taxes	**(45)**	(245)	(180)
Deferred income tax expense (benefit)			
Federal	**(42)**	227	218
State and other income tax	**(43)**	55	33
Total deferred income taxes	**(85)**	282	251
	$ (130)	$ 37	$ 71

DTE Electric	2021	2020	2019
		(In millions)	
Current income tax expense (benefit)			
Federal	**$ (11)**	$ 15	$ 25
State and other income tax	**(7)**	5	16
Total current income taxes	**(18)**	20	41
Deferred income tax expense			
Federal	**47**	30	51
State and other income tax	**75**	59	46
Total deferred income taxes	**122**	89	97
	$ 104	$ 109	$ 138

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 Registrants' Consolidated Financial Statements.

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

	DTE Energy		DTE Electric	
	2021	2020	2021	2020
	(In millions)			
Property, plant, and equipment	**$ (3,970)**	$ (3,691)	**$ (3,428)**	$ (3,099)
Regulatory assets and liabilities	**(117)**	(102)	**(64)**	(53)
Tax credit carry-forwards	**1,260**	1,144	**379**	278
Pension and benefits	**310**	310	**282**	264
Federal net operating loss carry-forward	**199**	109	**5**	—
State and local net operating loss carry-forwards	**73**	36	**15**	—
Investments in equity method investees	**58**	51	**(1)**	—
Other	**75**	115	**71**	85
	(2,112)	(2,028)	**(2,741)**	(2,525)
Less: Valuation allowance	**(51)**	(41)	**—**	—
Long-term deferred income tax liabilities	**$ (2,163)**	$ (2,069)	**$ (2,741)**	$ (2,525)
Deferred income tax assets	**$ 2,224**	$ 2,050	**$ 988**	$ 883
Deferred income tax liabilities	**(4,387)**	(4,119)	**(3,729)**	(3,408)
	$ (2,163)	$ (2,069)	**$ (2,741)**	$ (2,525)

Tax credit carry-forwards for DTE Energy include $1.3 billion of general business credits that expire from 2032 through 2041. No valuation allowance is required for the tax credits carry-forward deferred tax asset.

DTE Energy has a pre-tax federal net operating loss carry-forward of $950 million as of December 31, 2021. 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 $73 million and $36 million at December 31, 2021 and 2020, respectively. Most of the state and local net operating loss carry-forwards expire from 2022 through 2041 with the remainder being carried forward indefinitely.

DTE Energy has recorded valuation allowances of $51 million and $41 million at December 31, 2021 and 2020, respectively, including $29 million and $30 million for the respective periods related to the state net operating loss carryforwards noted above. The remaining valuation allowances related to charitable contribution carryforwards. The change in balances in 2021 includes establishing a valuation allowance of $18 million based on a change in expected ability to utilize certain of these charitable contributions carryforwards.

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 $379 million of general business credits that expire from 2036 through 2041. No valuation allowance is required for the tax credits carry-forward deferred tax asset.

DTE Electric has a pre-tax federal net operating loss carry-forward of $24 million as of December 31, 2021. The net operating loss carry-forward will be carried forward indefinitely. No valuation allowance is required for the federal net operating loss deferred tax asset.

DTE Electric has $15 million in state and local deferred tax assets related to net operating loss carry-forwards at December 31, 2021 which will expire in 2030 and 2031. DTE Electric had no state and local deferred tax assets related to net operating loss carry-forwards at December 31, 2020. No valuation allowance is required for the state and local net operating loss deferred tax assets.

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.

Uncertain Tax Positions

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

DTE Energy	2021	2020	2019
		(In millions)	
Balance at January 1	**$ 10**	$ 10	$ 10
Additions for tax positions of prior years	**—**	—	—
Balance at December 31	**$ 10**	$ 10	$ 10

DTE Electric	2021	2020	2019
		(In millions)	
Balance at January 1	**$ 13**	$ 13	$ 13
Additions for tax positions of prior years	**—**	—	—
Balance at December 31	**$ 13**	$ 13	$ 13

If recognized, all of the Registrants' unrecognized tax benefits would favorably impact their effective tax rate in future years. The Registrants do 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 the Consolidated Statements of Operations.

Accrued interest pertaining to income taxes for DTE Energy totaled $5 million at December 31, 2021 and 2020. DTE Energy recognized a nominal amount of interest expense related to income taxes in 2021 and $1 million in 2020 and 2019. DTE Energy has not accrued any penalties pertaining to income taxes.

Accrued interest pertaining to income taxes for DTE Electric totaled $7 million at December 31, 2021 and $6 million at December 31, 2020. DTE Electric recognized interest expense related to income taxes of $1 million in 2021, 2020, and 2019. DTE Electric has not accrued any penalties pertaining to income taxes.

In 2021, DTE Energy, including DTE Electric, settled a federal tax audit for the 2019 tax year. DTE Energy's federal income tax returns for 2020 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 2017 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 11 — EARNINGS PER SHARE

Basic earnings per share is calculated by dividing 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 and performance shares do not receive cash dividends; as such, these awards are not considered participating securities. For additional information, see Notes 14 and 21 to the Consolidated Financial Statements, "Long-Term Debt" and "Stock-Based Compensation," respectively.

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

	2021	2020	2019
	(In millions, except per share amounts)		
Basic Earnings per Share			
Net Income Attributable to DTE Energy Company — continuing operations	**$ 796**	$ 1,054	$ 955
Less: Allocation of earnings to net restricted stock awards	**(2)**	(2)	(2)
	$ 794	$ 1,052	$ 953
Net Income Attributable to DTE Energy Company — discontinued operations	**111**	314	214
Net income available to common shareholders — basic	**$ 905**	$ 1,366	$ 1,167
Average number of common shares outstanding — basic	**193**	193	185
Income from continuing operations	**$ 4.11**	$ 5.46	$ 5.16
Income from discontinued operations	**0.57**	1.63	1.16
Basic Earnings per Common Share	**$ 4.68**	$ 7.09	$ 6.32
Diluted Earnings per Share			
Net Income Attributable to DTE Energy Company — continuing operations	**$ 796**	$ 1,054	$ 955
Less: Allocation of earnings to net restricted stock awards	**(2)**	(2)	(2)
	$ 794	$ 1,052	$ 953
Net Income Attributable to DTE Energy Company — discontinued operations	**111**	314	214
Net income available to common shareholders — diluted	**$ 905**	$ 1,366	$ 1,167
Average number of common shares outstanding — basic	**193**	193	185
Average dilutive equity units and performance share awards	**1**	—	—
Average number of common shares outstanding — diluted	**194**	193	185
Income from continuing operations	**$ 4.10**	$ 5.45	$ 5.15
Income from discontinued operations	**0.57**	1.63	1.16
Diluted Earnings per Common Share[a]	**$ 4.67**	$ 7.08	$ 6.31

(a) Equity units excluded from the calculation of diluted EPS were approximately 11.5 million for the year ended December 31, 2021 and 10.3 million for the years ended December 31, 2020 and 2019, respectively, as the dilutive stock price threshold was not met. For more information regarding equity units, see Note 14 to the Consolidated Financial Statements, "Long-Term Debt."

NOTE 12 — 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, 2021 and 2020. 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.

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

	December 31, 2021						December 31, 2020					
	Level 1	Level 2	Level 3	Other[a]	Netting[b]	Net Balance	Level 1	Level 2	Level 3	Other[a]	Netting[b]	Net Balance
	(In millions)											
Assets												
Cash equivalents[c]	**$ 4**	**$ —**	**$ —**	**$ —**	**$ —**	**$ 4**	$ 438	$ —	$ —	$ —	$ —	$ 438
Nuclear decommissioning trusts												
Equity securities	**917**	**—**	**—**	**190**	**—**	**1,107**	947	—	—	222	—	1,169
Fixed income securities	**124**	**418**	**—**	**102**	**—**	**644**	102	371	—	82	—	555
Private equity and other	**—**	**—**	**—**	**205**	**—**	**205**	—	—	—	104	—	104
Hedge funds and similar investments	**58**	**18**	**—**	**—**	**—**	**76**	—	—	—	—	—	—
Cash equivalents	**39**	**—**	**—**	**—**	**—**	**39**	27	—	—	—	—	27
Other investments[d]												
Equity securities	**68**	**—**	**—**	**—**	**—**	**68**	55	—	—	—	—	55
Fixed income securities	**7**	**—**	**—**	**—**	**—**	**7**	8	—	—	—	—	8
Cash equivalents	**86**	**—**	**—**	**—**	**—**	**86**	97	—	—	—	—	97
Derivative assets												
Commodity contracts[e]												
Natural gas	**273**	**115**	**66**	**—**	**(394)**	**60**	99	74	60	—	(156)	77
Electricity	**—**	**500**	**143**	**—**	**(441)**	**202**	—	128	52	—	(120)	60
Environmental & Other	**—**	**285**	**9**	**—**	**(285)**	**9**	—	150	4	—	(135)	19
Total derivative assets	**273**	**900**	**218**	**—**	**(1,120)**	**271**	99	352	116	—	(411)	156
Total	**$ 1,576**	**$ 1,336**	**$ 218**	**$ 497**	**$ (1,120)**	**$ 2,507**	$ 1,773	$ 723	$ 116	$ 408	$ (411)	$ 2,609
Liabilities												
Derivative liabilities												
Commodity contracts[e]												
Natural gas	**$ (177)**	**$ (172)**	**$ (245)**	**$ —**	**$ 347**	**$ (247)**	$ (88)	$ (59)	$ (76)	$ —	$ 151	$ (72)
Electricity	**—**	**(434)**	**(188)**	**—**	**443**	**(179)**	—	(126)	(42)	—	125	(43)
Environmental & Other	**—**	**(288)**	**—**	**—**	**288**	**—**	—	(137)	—	—	129	(8)
Foreign currency exchange contracts	**—**	**(4)**	**—**	**—**	**—**	**(4)**	—	(5)	—	—	—	(5)
Total	**$ (177)**	**$ (898)**	**$ (433)**	**$ —**	**$ 1,078**	**$ (430)**	$ (88)	$ (327)	$ (118)	$ —	$ 405	$ (128)
Net Assets (Liabilities) at end of period	**$ 1,399**	**$ 438**	**$ (215)**	**$ 497**	**$ (42)**	**$ 2,077**	$ 1,685	$ 396	$ (2)	$ 408	$ (6)	$ 2,481
Assets												
Current	**$ 227**	**$ 646**	**$ 166**	**$ —**	**$ (854)**	**$ 185**	$ 532	$ 260	$ 92	$ —	$ (330)	$ 554
Noncurrent	**1,349**	**690**	**52**	**497**	**(266)**	**2,322**	1,241	463	24	408	(81)	2,055
Total Assets	**$ 1,576**	**$ 1,336**	**$ 218**	**$ 497**	**$ (1,120)**	**$ 2,507**	$ 1,773	$ 723	$ 116	$ 408	$ (411)	$ 2,609
Liabilities												
Current	**$ (168)**	**$ (609)**	**$ (260)**	**$ —**	**$ 799**	**$ (238)**	$ (84)	$ (223)	$ (79)	$ —	$ 318	$ (68)
Noncurrent	**(9)**	**(289)**	**(173)**	**—**	**279**	**(192)**	(4)	(104)	(39)	—	87	(60)
Total Liabilities	**$ (177)**	**$ (898)**	**$ (433)**	**$ —**	**$ 1,078**	**$ (430)**	$ (88)	$ (327)	$ (118)	$ —	$ 405	$ (128)
Net Assets (Liabilities) at end of period	**$ 1,399**	**$ 438**	**$ (215)**	**$ 497**	**$ (42)**	**$ 2,077**	$ 1,685	$ 396	$ (2)	$ 408	$ (6)	$ 2,481

(a) Amounts represent assets valued at NAV as a practical expedient for fair value.
(b) 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.
(c) Amounts consisted of $1 million and $2 million of cash equivalents included in Restricted cash on DTE Energy's Consolidated Statements of Financial Position at December 31, 2021 and December 31, 2020, respectively. All other amounts are included in Cash and cash equivalents on the Consolidated Statements of Financial Position.
(d) Excludes cash surrender value of life insurance investments.
(e) For contracts with a clearing agent, DTE Energy nets all activity across commodities. This can result in some individual commodities having a contra balance.

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

	December 31, 2021					December 31, 2020				
	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	$ —	$ —	$ —	$ —	$ —	$ 4	$ —	$ —	$ —	$ 4
Nuclear decommissioning trusts										
Equity securities	917	—	—	190	1,107	947	—	—	222	1,169
Fixed income securities	124	418	—	102	644	102	371	—	82	555
Private equity and other	—	—	—	205	205	—	—	—	104	104
Hedge funds and similar investments	58	18	—	—	76	—	—	—	—	—
Cash equivalents	39	—	—	—	39	27	—	—	—	27
Other investments										
Equity securities	20	—	—	—	20	16	—	—	—	16
Fixed income securities	—	—	—	—	—	—	—	—	—	—
Cash equivalents	11	—	—	—	11	11	—	—	—	11
Derivative assets — FTRs	—	—	9	—	9	—	—	4	—	4
Total	$ 1,169	$ 436	$ 9	$ 497	$ 2,111	$ 1,107	$ 371	$ 4	$ 408	$ 1,890
Assets										
Current	$ —	$ —	$ 9	$ —	$ 9	$ 4	$ —	$ 4	$ —	$ 8
Noncurrent	1,169	436	—	497	2,102	1,103	371	—	408	1,882
Total Assets	$ 1,169	$ 436	$ 9	$ 497	$ 2,111	$ 1,107	$ 371	$ 4	$ 408	$ 1,890

(a) Amounts represent assets valued at NAV as a practical expedient for fair value.

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, as well as publicly traded commingled funds, are valued using quoted market prices in actively traded markets. Non-exchange traded fixed income securities are valued based upon quotations available from brokers or pricing services.

Non-publicly traded commingled funds holding exchange-traded equity or debt securities are valued based on stated NAVs. There are no significant restrictions for these funds and investments may be redeemed with 7 to 65 days notice depending on the fund. There is no intention to sell the investment in these commingled funds.

Private equity and other assets include a diversified group of funds that are classified as NAV assets. These funds primarily invest in limited partnerships, including private equity, private real estate and private credit. Distributions are received through the liquidation of the underlying fund assets over the life of the funds. There are generally no redemption rights. The limited partner must hold the fund for its life or find a third-party buyer, which may need to be approved by the general partner. The funds are established with varied contractual durations generally in the range of 7 years to 12 years. The fund life can often be extended by several years by the general partner, and further extended with the approval of the limited partners. Unfunded commitments related to these investments totaled $199 million and $183 million as of December 31, 2021 and 2020, respectively.

Hedge funds and similar investments utilize a diversified group of strategies that attempt to capture uncorrelated sources of return. These investments include publicly traded mutual funds that are valued using quoted prices in actively traded markets, as well as insurance-linked and asset-backed securities and that are valued using quotations from broker or pricing services.

For pricing the nuclear decommissioning trusts and other investments, 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 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.

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, 2021				Year Ended December 31, 2020			
	Natural Gas	Electricity	Other	Total	Natural Gas	Electricity	Other	Total
	(In millions)							
Net Assets (Liabilities) as of January 1	**$ (16)**	**$ 10**	**$ 4**	**$ (2)**	$ (15)	$ 16	$ 3	$ 4
Transfers from Level 3 into Level 2	**—**	**—**	**—**	**—**	(2)	—	—	(2)
Total gains (losses)								
Included in earnings[a]	**(343)**	**54**	**—**	**(289)**	(75)	113	(7)	31
Recorded in Regulatory liabilities	**—**	**—**	**19**	**19**	—	—	20	20
Purchases, issuances, and settlements:								
Settlements	**180**	**(109)**	**(14)**	**57**	76	(119)	(12)	(55)
Net Assets (Liabilities) as of December 31	**$ (179)**	**$ (45)**	**$ 9**	**$ (215)**	$ (16)	$ 10	$ 4	$ (2)
Total gains (losses) included in Net Income attributed to the change in unrealized gains (losses) related to assets and liabilities held at December 31[a]	**$ (208)**	**$ 4**	**$ (72)**	**$ (276)**	$ (4)	$ 70	$ (70)	$ (4)
Total gains (losses) included in Regulatory liabilities attributed to the change in unrealized gains (losses) related to assets and liabilities held at December 31	**$ —**	**$ —**	**$ 9**	**$ 9**	$ —	$ —	$ 4	$ 4

(a) Amounts are reflected in Operating Revenues — Non-utility operations and Fuel, purchased power, gas, and other — non-utility in DTE Energy's Consolidated Statements of Operations.

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,	
	2021	2020
	(In millions)	
Net Assets as of January 1	$ 4	$ 3
Total gains recorded in Regulatory liabilities	19	20
Purchases, issuances, and settlements:		
Settlements	(14)	(19)
Net Assets as of December 31	$ 9	$ 4
Total gains (losses) included in Regulatory liabilities attributed to the change in unrealized gains (losses) related to assets and liabilities held at December 31	$ 9	$ 4

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 from or into Level 3 for DTE Electric during the years ended December 31, 2021 and 2020.

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

	December 31, 2021						
Commodity Contracts	Derivative Assets	Derivative Liabilities	Valuation Techniques	Unobservable Input	Range		Weighted Average
	(In millions)						
Natural Gas	$ 66	$ (245)	Discounted Cash Flow	Forward basis price (per MMBtu)	$ (1.36) —	$ 3.82 /MMBtu	$ (0.04)/MMBtu
Electricity	$ 143	$ (188)	Discounted Cash Flow	Forward basis price (per MWh)	$ (12) —	$ 7 /MWh	$ (2) /MWh

	December 31, 2020						
Commodity Contracts	Derivative Assets	Derivative Liabilities	Valuation Techniques	Unobservable Input	Range		Weighted Average
	(In millions)						
Natural Gas	$ 60	$ (76)	Discounted Cash Flow	Forward basis price (per MMBtu)	$ (0.86) —	$ 2.50 /MMBtu	$ (0.07)/MMBtu
Electricity	$ 52	$ (42)	Discounted Cash Flow	Forward basis price (per MWh)	$ (9) —	$ 6 /MWh	$ — /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 weighted average price for unobservable inputs was calculated using the average of forward price curves for natural gas and electricity and the absolute value of monthly volumes.

The inputs listed above would have had 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 have resulted 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, 2021				December 31, 2020			
	Carrying Amount	Fair Value			Carrying Amount	Fair Value		
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3
	(In millions)							
Notes receivable[a], excluding lessor finance leases	**$ 150**	**$ —**	**$ —**	**$ 167**	$ 141	$ —	$ —	$ 141
Short-term borrowings	**$ 758**	**$ —**	**$ 758**	**$ —**	$ 38	$ —	$ 38	$ —
Notes payable[b]	**$ 27**	**$ —**	**$ —**	**$ 27**	$ 19	$ —	$ —	$ 19
Long-term debt[c]	**$ 17,378**	**$ 2,284**	**$ 15,425**	**$ 1,207**	$ 19,439	$ 2,547	$ 18,230	$ 1,397

(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 and excludes finance lease obligations. Carrying value also includes unamortized debt discounts and issuance costs.

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

	December 31, 2021				December 31, 2020			
	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]	**$ 17**	**$ —**	**$ —**	**$ 17**	$ 16	$ —	$ —	$ 16
Short-term borrowings — affiliates	**$ 53**	**$ —**	**$ —**	**$ 53**	$ 101	$ —	$ —	$ 101
Short-term borrowings — other	**$ 153**	**$ —**	**$ 153**	**$ —**	$ —	$ —	$ —	$ —
Notes payable[b]	**$ 27**	**$ —**	**$ —**	**$ 27**	$ 17	$ —	$ —	$ 17
Long-term debt[c]	**$ 8,907**	**$ —**	**$ 9,898**	**$ 150**	$ 8,236	$ —	$ 9,579	$ 379

(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 and excludes finance lease obligations. Carrying value also includes unamortized debt discounts and issuance costs.

For further fair value information on financial and derivative instruments, see Note 13 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 8 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,	
	2021	2020
	(In millions)	
Fermi 2	**$ 2,051**	$ 1,841
Fermi 1	**3**	3
Low-level radioactive waste	**17**	11
	$ 2,071	$ 1,855

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,		
	2021	2020	2019
	(In millions)		
Realized gains	**$ 95**	$ 192	$ 56
Realized losses	**$ (12)**	$ (111)	$ (31)
Proceeds from sale of securities	**$ 1,047**	$ 2,350	$ 788

Realized gains and losses from the sale of securities and unrealized gains and losses incurred by the Fermi 2 trust are recorded to Regulatory assets and the 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.

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

	December 31, 2021			December 31, 2020		
	Fair Value	Unrealized Gains	Unrealized Losses	Fair Value	Unrealized Gains	Unrealized Losses
	(In millions)					
Equity securities	**$ 1,107**	**$ 546**	**$ (9)**	$ 1,169	$ 468	$ (6)
Fixed income securities	**644**	**23**	**(6)**	555	22	(1)
Private equity and other	**205**	**58**	**(8)**	104	11	—
Hedge funds and similar investments	**76**	**1**	**(2)**	—	—	—
Cash equivalents	**39**	**—**	**—**	27	—	—
	$ 2,071	**$ 628**	**$ (25)**	$ 1,855	$ 501	$ (7)

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

	December 31, 2021
	(In millions)
Due within one year	$ 20
Due after one through five years	135
Due after five through ten years	109
Due after ten years	278
	$ 542

Fixed income securities held in nuclear decommissioning trust funds include $102 million of non-publicly traded commingled funds that do not have a contractual maturity date.

Other Securities

At December 31, 2021 and 2020, the Registrants' securities included in Other investments on the Consolidated Statements of Financial Position were comprised primarily of investments within DTE Energy's rabbi trust. The rabbi trust was established to fund certain non-qualified pension benefits, and therefore changes in market value are recognized in earnings. Gains and losses are allocated from DTE Energy to DTE Electric and are included in Other Income or Other Expense, respectively, in the Registrants' Consolidated Statements of Operations. The following table summarizes the Registrants' gains (losses) related to the trust:

	Year Ended December 31,		
	2021	2020	2019
	(In millions)		
Gains (losses) related to equity securities	$ 7	$ (1)	$ 27
Gains (losses) related to fixed income securities	—	(2)	10
	$ 7	$ (3)	$ 37

NOTE 13 — 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 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, and buys and sells transportation and storage capacity. DTE Gas has fixed-priced contracts for portions of its expected natural gas supply requirements through March 2024. Substantially all of these contracts meet the normal purchases and normal sales exception and are therefore accounted for under the accrual method. Forward transportation and storage contracts are generally not derivatives and are therefore accounted for under the accrual method.

DTE Vantage — This segment manages and operates renewable gas recovery projects, industrial energy projects, reduced emissions fuel projects, 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, 2021 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.

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, 2021		December 31, 2020	
	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
	(In millions)			
Derivatives designated as hedging instruments				
Foreign currency exchange contracts	**$ —**	**$ (4)**	$ —	$ (4)
Derivatives not designated as hedging instruments				
Commodity contracts				
Natural gas	**$ 454**	**$ (594)**	$ 233	$ (223)
Electricity	**643**	**(622)**	180	(168)
Environmental & Other	**294**	**(288)**	154	(137)
Foreign currency exchange contracts	—	—	—	(1)
Total derivatives not designated as hedging instruments	**$ 1,391**	**$ (1,504)**	$ 567	$ (529)
Current	**$ 1,035**	**$ (1,037)**	$ 446	$ (386)
Noncurrent	**356**	**(471)**	121	(147)
Total derivatives	**$ 1,391**	**$ (1,508)**	$ 567	$ (533)

The fair value of derivative instruments at DTE Electric was $9 million and $4 million at December 31, 2021 and 2020, respectively, comprised of FTRs recorded to Other current assets on the Consolidated Statements of Financial Position and not designated as hedging instruments.

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 $18 million outstanding at December 31, 2021 and $7 million at December 31, 2020, 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 $37 million and $9 million at December 31, 2021 and 2020, 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,	
	2021	2020
	(In millions)	
Cash collateral netted against Derivative assets	**$ (90)**	$ (12)
Cash collateral netted against Derivative liabilities	**48**	**6**
Cash collateral recorded in Accounts receivable[(a)]	**55**	14
Cash collateral recorded in Accounts payable[(a)]	**(21)**	(1)
Total net cash collateral posted (received)	**$ (8)**	$ 7

(a) Amounts are recorded net by counterparty.

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

	December 31, 2021			December 31, 2020		
	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	**$ 454**	**$ (394)**	**$ 60**	$ 233	$ (156)	$ 77
Electricity	**643**	**(441)**	**202**	180	(120)	60
Environmental & Other	**294**	**(285)**	**9**	154	(135)	19
Total derivative assets	**$ 1,391**	**$ (1,120)**	**$ 271**	$ 567	$ (411)	$ 156
Derivative liabilities						
Commodity contracts						
Natural gas	**$ (594)**	**$ 347**	**$ (247)**	$ (223)	$ 151	$ (72)
Electricity	**(622)**	**443**	**(179)**	(168)	125	(43)
Environmental & Other	**(288)**	**288**	**—**	(137)	129	(8)
Foreign currency exchange contracts	**(4)**	**—**	**(4)**	(5)	—	(5)
Total derivative liabilities	**$ (1,508)**	**$ 1,078**	**$ (430)**	$ (533)	$ 405	$ (128)

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, 2021				December 31, 2020			
	Derivative Assets		Derivative Liabilities		Derivative Assets		Derivative Liabilities	
	Current	Noncurrent	Current	Noncurrent	Current	Noncurrent	Current	Noncurrent
	(In millions)							
Total fair value of derivatives	**$ 1,035**	**$ 356**	**$ (1,037)**	**$ (471)**	$ 446	$ 121	$ (386)	$ (147)
Counterparty netting	**(791)**	**(239)**	**791**	**239**	(318)	(81)	318	81
Collateral adjustment	**(63)**	**(27)**	**8**	**40**	(12)	—	—	6
Total derivatives as reported	**$ 181**	**$ 90**	**$ (238)**	**$ (192)**	$ 116	$ 40	$ (68)	$ (60)

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

		Gain (Loss) Recognized in Income on Derivatives for Years Ended December 31,		
	Location of Gain (Loss) Recognized in Income on Derivatives	2021	2020	2019
		(In millions)		
Commodity contracts				
Natural gas	Operating Revenues — Non-utility operations	**$ (224)**	$ (70)	$ 44
Natural gas	Fuel, purchased power, gas, and other — non-utility	**(89)**	20	(5)
Electricity	Operating Revenues — Non-utility operations	**169**	91	44
Environmental & Other	Operating Revenues — Non-utility operations	**(40)**	(118)	(26)
Foreign currency exchange contracts	Operating Revenues — Non-utility operations	**—**	(6)	(2)
Total		**$ (184)**	$ (83)	$ 55

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, gas, and other — non-utility.

The following represents the cumulative gross volume of DTE Energy's derivative contracts outstanding as of December 31, 2021:

Commodity	Number of Units
Natural gas (MMBtu)	2,139,606,569
Electricity (MWh)	32,140,743
Foreign currency exchange ($ CAD)	116,073,431
Renewable Energy Certificates (MWh)	7,711,766
Carbon emissions (Metric Ton)	1,142,009

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, environmental, and coal) and the provisions and maturities of the underlying transactions. As of December 31, 2021, 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 $667 million.

As of December 31, 2021, DTE Energy had $1.3 billion of derivatives in net liability positions, for which hard triggers exist. There is $8 million of 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 $1.0 billion. The net remaining amount of $232 million is derived from the $667 million noted above.

NOTE 14 — 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	2021	2020
			(In millions)	
Mortgage bonds, notes, and other				
DTE Energy Debt, Unsecured	2.1%	2022 — 2030	**$ 5,555**	$ 8,175
DTE Electric Debt, Principally Secured	3.7%	2022 — 2051	**8,988**	8,308
DTE Gas Debt, Principally Secured	3.9%	2023 — 2051	**2,065**	1,910
			16,608	18,393
Unamortized debt discount			**(23)**	(25)
Unamortized debt issuance costs			**(90)**	(104)
Long-term debt due within one year			**(2,866)**	(462)
			$ 13,629	$ 17,802
Junior Subordinated Debentures				
Subordinated Debentures	4.8%	2077 — 2081	**$ 910**	$ 1,210
Unamortized debt issuance costs			**(27)**	(35)
			$ 883	$ 1,175

(a) Weighted average interest rate as of December 31, 2021.

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

	Interest Rate[a]	Maturity Date	2021	2020
			(In millions)	
Mortgage bonds, notes, and other				
Long Term Debt, Principally Secured	3.7%	2022 — 2051	**$ 8,988**	$ 8,308
Unamortized debt discount			**(19)**	(16)
Unamortized debt issuance costs			**(62)**	(56)
Long-term debt due within one year			**(316)**	(462)
			$ 8,591	$ 7,774

(a) Weighted average interest rate as of December 31, 2021.

Debt Issuances

In 2021, the following debt was issued:

Company	Month	Type	Interest Rate	Maturity Date	Amount
					(In millions)
DTE Electric	March	Mortgage bonds[(a)]	1.90%	2028	$ 575
DTE Electric	March	Mortgage bonds[(a)]	3.25%	2051	425
DT Midstream	June	Senior notes[(b)]	4.125%	2029	1,100
DT Midstream	June	Senior notes[(b)]	4.375%	2031	1,000
DT Midstream	June	Term loan facility[(b)]	Variable	2028	1,000
DTE Gas	November	Mortgage bonds[(c)]	2.07%	2031	60
DTE Gas	November	Mortgage bonds[(c)]	2.85%	2051	95
DTE Energy	November	Junior subordinated debentures[(d)]	4.375%	2081	280
					$ 4,535

(a) Bonds were issued as Green Bonds and the proceeds will be used to finance qualified expenditures for solar and wind energy, payments under power purchase agreements for solar and wind energy, and energy optimization programs.
(b) Proceeds used for the repayment of short-term borrowings due to DTE Energy to facilitate the separation of DT Midstream, as well as a one-time special dividend provided to DTE Energy. The debt was transferred to DT Midstream upon its separation on July 1, 2021. Refer to Note 4 to the Consolidated Financial Statements, "Dispositions and Impairments," for additional information and to the Debt Redemptions section below for DTE Energy's use of the proceeds received from DT Midstream.
(c) Proceeds used for the repayment of short-term borrowings and general corporate purposes, including capital expenditures.
(d) Proceeds used for the repayment of $280 million of DTE Energy's 2016 Series F 6.00% Junior Subordinated Debentures due 2076.

In September 2021, DTE Electric completed a mandatory remarketing of $82 million of 1.45% Tax-Exempt Revenue Bonds at the same rate of 1.45% until maturity in 2030 and $59 million of 1.45% Tax-Exempt Revenue Bonds at a rate of 1.35% until maturity in 2029.

Debt Redemptions

In 2021, the following debt was redeemed:

Company	Month	Type	Interest Rate	Maturity Date	Amount
					(In millions)
DTE Electric	April	Mortgage bonds	3.90%	2021	$ 250
DTE Electric	May	Mortgage bonds	7.00%	2021	33
DTE Energy	June	Junior subordinated debentures[(a)]	5.375%	2076	300
DTE Energy	July	Senior notes	3.30%	2022	300
DTE Energy	July	Senior notes	2.60%	2022	300
DTE Energy	July	Senior notes	3.70%	2023	600
DTE Energy	July	Senior notes	3.85%	2023	135
DTE Energy	July	Senior notes	3.50%	2024	350
DTE Energy	July	Senior notes	3.80%	2027	350
DTE Energy	July	Senior notes	3.40%	2029	21
DTE Energy	July	Senior notes	6.375%	2033	191
DTE Energy	August	Senior notes	3.85%	2023	165
DTE Energy	August	Senior notes	6.375%	2033	209
DTE Electric	August	Mortgage bonds	6.90%	2021	38
DTE Energy	December	Junior subordinated debentures[(a)]	6.00%	2076	280
					$ 3,522

(a) Early redemptions and the write-off of unamortized issuance costs resulted in a total loss on extinguishment of debt of $17 million for the year ended December 31, 2021, including $8 million for the June redemption and $9 million for the December redemption.

During the third quarter 2021, DTE Energy optionally redeemed $2.6 billion of Senior Notes included in the table above using proceeds from DT Midstream's repayment of short-term borrowings and one-time special dividend. To early retire this debt and reduce future interest expense, DTE Energy incurred prepayment costs of $361 million and wrote off $15 million of unamortized issuance costs and discounts related to the debt. These amounts have been included within the Loss on extinguishment of debt line item within the Consolidated Statements of Operations for the year ended December 31, 2021.

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

	2022	2023	2024	2025	2026	2027 and Thereafter	Total
	(In millions)						
DTE Energy[a]	$ 2,866	$ 277	$ 1,075	$ 1,220	$ 777	$ 11,302	$ 17,517
DTE Electric	$ 316	$ 202	$ 400	$ 350	$ 177	$ 7,543	$ 8,988

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

The following table shows scheduled interest payments related to the Registrants' long-term debt:

	2022	2023	2024	2025	2026	2027 and Thereafter	Total
	(In millions)						
DTE Energy[a]	$ 575	$ 548	$ 529	$ 494	$ 450	$ 7,510	$ 10,106
DTE Electric	$ 330	$ 322	$ 305	$ 292	$ 284	$ 4,222	$ 5,755

(a) Amounts include DTE Electric's scheduled interest payments.

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, 2021, no interest payments have been deferred on the Junior Subordinated Debentures.

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.

Acquisition Financing

In December 2019, DTE Energy closed on the purchase of midstream natural gas assets. The acquisition was financed through the issuance of Senior Notes, common stock, and $1.3 billion of 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 a $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, a certain number of shares of DTE Energy's common stock. As a result of the separation of DT Midstream in July 2021, there was a change in the settlement rates in the stock purchase contract to reflect the dividend of DT Midstream stock to DTE Energy shareholders. As adjusted for this change, anti-dilution adjustments to date, and subject to future anti-dilution adjustments, the following number of shares must be purchased:

- 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 $133.08, 0.3757 shares of common stock;
- if the AMV is less than $133.08 but greater than $106.50, a number of shares of common stock equal to $50 divided by the AMV; and
- if the AMV is less than or equal to $106.50, 0.4695 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 interest thereafter 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. The holders of the RSNs would 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 would 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.

The present value of the future contract adjustment payments of $150 million was 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. On February 1, 2020, DTE Energy began paying 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. Interest payments on the RSNs are being recorded as Interest expense and stock purchase contract payments are being charged against the liability. Accretion of the stock purchase contract liability is recorded as imputed Interest expense.

The treasury stock method is 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 $133.08 (the threshold appreciation price). At December 31, 2021, the stock purchase price contract was anti-dilutive and, therefore, not included in the computation of diluted earnings per share.

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 9.8 million and 12.2 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 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[a]	RSN Maturity Date
			(In millions, except interest rates)					
11/1/19	26	$ 1,265	$ 1,300	2.25%	4.0%	11/1/2022	$ 150	11/1/2025

(a) Payments of $50 million and $49 million were made in 2021 and 2020, respectively. The stock purchase contract liability was $51 million and $101 million as of December 31, 2021 and 2020, respectively, exclusive of interest.

NOTE 15 — PREFERRED AND PREFERENCE SECURITIES

As of December 31, 2021, 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 16 — 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. DTE Energy also has other facilities to support letter of credit issuance.

In December 2021, DTE Energy entered into a $400 million unsecured term loan to raise additional liquidity, with terms consistent with the unsecured revolving credit agreements. No amount has been drawn as of December 31, 2021 and the loan will expire in June 2022.

The unsecured revolving credit agreements have historically required 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 June 2021, DTE Energy amended its total funded debt to capitalization ratio requirement to no more than 0.70 to 1 starting with the third quarter of 2021 and ending December 2022. The amendment was a result of temporary balance sheet impacts resulting from the separation of DT Midstream on July 1, 2021. 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, 2021, the total funded debt to total capitalization ratios for DTE Energy, DTE Electric, and DTE Gas were 0.66 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, 2021 is shown in the following table:

	DTE Energy	DTE Electric	DTE Gas	Total
		(In millions)		
Unsecured revolving credit facility, expiring April 2025[a]	$ 1,500	$ 500	$ 300	$ 2,300
Unsecured term loan, expiring June 2022	400	—	—	400
Unsecured Canadian revolving credit facility, expiring May 2023	87	—	—	87
Unsecured letter of credit facility, expiring February 2023	150	—	—	150
Unsecured letter of credit facility, expiring July 2023	70	—	—	70
Unsecured letter of credit facility[b]	50	—	—	50
	2,257	500	300	3,057
Amounts outstanding at December 31, 2021				
Revolver borrowings	75	—	—	75
Commercial paper issuances	320	153	210	683
Letters of credit	258	—	—	258
	653	153	210	1,016
Net availability at December 31, 2021	**$ 1,604**	**$ 347**	**$ 90**	**$ 2,041**

(a) Total availability of $102 million expires in April 2024, including $67 million at DTE Energy, $22 million at DTE Electric, and $13 million at DTE Gas. All other availability expires in April 2025.
(b) Uncommitted letter of credit facility with automatic renewal provision for each July and therefore no expiration.

For DTE Energy, the weighted average interest rate for short-term borrowings was 0.3% and 1.1% at December 31, 2021 and 2020, respectively. For DTE Electric, the weighted average interest rate for short-term borrowings was 0.2% at December 31, 2021. There were no short-term borrowings outstanding as of December 31, 2020.

In conjunction with maintaining certain exchange-traded risk management positions, DTE Energy may be required to post collateral with its clearing agents. DTE Energy has demand financing agreements with its clearing agents, including an agreement for up to $50 million with an indefinite term and an agreement for up to $150 million currently contracted through 2022 and subject to renewal. The $50 million 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. Both agreements allow the right of setoff with posted collateral. At December 31, 2021, the capacity under these facilities was $250 million. The amount outstanding under these agreements was $103 million and $49 million at December 31, 2021 and 2020, 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. As noted above, the total funded debt to capitalization ratio has been temporarily increased to 0.70 to 1 through December 2022. At December 31, 2021, the effect of this provision was a restriction on dividend payments to no more than $1.4 billion of DTE Energy's Retained earnings of $3.4 billion. There are no other effective limitations with respect to DTE Energy's ability to pay dividends.

NOTE 17 — LEASES

Lessee

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.

The following is a summary of the components of lease cost for the years ended December 31:

	DTE Energy			DTE Electric		
	2021	**2020**	**2019**	**2021**	**2020**	**2019**
			(In millions)			
Operating lease cost	**$ 19**	$ 21	$ 23	**$ 14**	$ 14	$ 17
Finance lease cost:						
Amortization of right-of-use assets	**7**	5	4	**6**	4	4
Interest of lease liabilities	**1**	—	—	**—**	—	—
Total finance lease cost	**8**	5	4	**6**	4	4
Variable lease cost	**9**	10	10	**—**	—	—
Short-term lease cost	**14**	11	9	**6**	6	3
	$ 50	$ 47	$ 46	**$ 26**	$ 24	$ 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.

The following is a summary of other information related to leases for the years ended December 31:

	DTE Energy			DTE Electric		
	2021	2020	2019	2021	2020	2019
	(In millions)					
Supplemental Cash Flows Information						
Cash paid for amounts included in the measurement of these liabilities:						
Operating cash flows for finance leases	**$ 8**	$ 3	$ 5	**$ 7**	$ 2	$ 5
Operating cash flows for operating leases	**$ 19**	$ 22	$ 22	**$ 14**	$ 14	$ 16
Right-of-use assets obtained in exchange for lease obligations:						
Operating leases	**$ 5**	$ 2	$ 42	**$ 1**	$ —	$ 27
Finance leases	**$ 3**	$ 19	$ 8	**$ 1**	$ 14	$ —
Weighted Average Remaining Lease Term (Years)						
Operating leases	**12.7**	12.1	12.1	**10.3**	10.4	10.6
Finance leases	**7.8**	7.6	9.1	**2.1**	3.1	2.0
Weighted Average Discount Rate						
Operating leases	**3.6 %**	3.6 %	3.5 %	**3.4 %**	3.3 %	3.3 %
Finance leases	**2.2 %**	2.0 %	3.1 %	**1.0 %**	1.0 %	3.1 %

The Registrants' future minimum lease payments under leases for remaining periods as of December 31, 2021 are as follows:

	DTE Energy		DTE Electric	
	Operating Leases	Finance Leases	Operating Leases	Finance Leases
	(In millions)			
2022	$ 16	$ 8	$ 12	$ 6
2023	13	9	10	6
2024	11	3	8	1
2025	8	1	6	—
2026	7	1	5	—
2027 and thereafter	56	8	27	—
Total future minimum lease payments	111	30	68	13
Imputed interest	(23)	(3)	(12)	—
Lease liabilities	**$ 88**	**$ 27**	**$ 56**	**$ 13**

Finance leases reported on the Consolidated Statements of Financial Position are as follows for the years ended December 31:

	DTE Energy		DTE Electric	
	2021	2020	2021	2020
	(In millions)			
Right-of-use assets, within Property, plant, and equipment, net	**$ 26**	$ 29	**$ 12**	$ 16
Current lease liabilities, within Current portion of long-term debt	**$ 8**	$ 7	**$ 6**	$ 6
Long-term lease liabilities	**$ 19**	$ 24	**$ 7**	$ 13

Lessor

During the first quarter 2021, DTE Energy completed construction of and began operating certain energy infrastructure assets for a large industrial customer under a long-term agreement, where the assets will transfer to the customer at the end of the contract term in 2040. DTE Energy has accounted for a portion of the agreement as a finance lease arrangement, recognizing an additional net investment of $31 million. DTE Energy also leases a portion of its pipeline system through a finance lease contract that has been renewed through 2025, with additional renewal options reasonably certain to be exercised through 2040.

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 2 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.

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, including the line items in which it was included on the Consolidated Statements of Operations, was as follows:

	2021	2020	2019
		(In millions)	
Fixed payments	**$ 67**	$ 57	$ 56
Variable payments	**131**	124	128
	$ 198	$ 181	$ 184
Operating revenues	**$ 103**	$ 99	$ 121
Other income	**95**	82	63
	$ 198	$ 181	$ 184

DTE Energy's minimum future rental revenues under operating leases for remaining periods as of December 31, 2021 are as follows:

	DTE Energy
	(In millions)
2022	$ 15
2023	15
2024	15
2025	15
2026	11
2027 and thereafter	51
	$ 122

Depreciation expense associated with DTE Energy's property under operating leases was $22 million, $24 million, and $23 million for the years ended December 31, 2021, 2020, and 2019 respectively.

The following is a summary of property under operating leases for DTE Energy as of December 31:

	2021	2020
	(In millions)	
Gross property under operating leases	**$ 341**	$ 389
Accumulated amortization of property under operating leases	**$ 181**	$ 191

The components of DTE Energy's net investment in finance leases for remaining periods as of December 31, 2021 are as follows:

	DTE Energy
	(In millions)
2022	$ 23
2023	22
2024	22
2025	21
2026	21
2027 and thereafter	271
Total minimum future lease receipts	380
Residual value of leased pipeline	17
Less unearned income	198
Net investment in finance lease	199
Less current portion	6
	$ 193

Interest income recognized under finance leases was $17 million, $16 million, and $5 million for the years ended December 31, 2021, 2020, and 2019, respectively. During 2020, DTE Energy also recognized $11 million of profit from the sale of membership interests in the REF business accounted for as a finance lease arrangement.

NOTE 18 — 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 SO_2 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 SO_2, NO_X, mercury, and other emissions. Additional rulemakings may occur over the next few years which could require additional controls for SO_2, 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 planning to submit a request for redesignation of the southeast Michigan ozone non-attainment area to the EPA. However, the State is required to develop and implement a plan to address the non-attainment area. The plan will likely be submitted to the EPA by mid-2022 The Registrants cannot predict the scope and associated financial impact of the State's plan to address the ozone non-attainment area at this time.

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 was vacated and remanded back to the EPA in a D.C. Circuit Court decision on January 19, 2021. Petitions were filed asking the Supreme Court to review the D.C. Circuit's decision vacating the ACE rule, and the petition was granted in October 2021. A decision from the Supreme Court is expected by June 2022. The next steps taken by the EPA with respect to regulation of GHGs from EGUs is uncertain. Regardless of future rules, DTE Energy remains committed for its electric utility operations to reduce carbon emissions 32% by 2023, 50% by 2028, and 80% by 2040 from 2005 carbon emissions levels, and its goal of net zero emissions from its electric utility operations by 2050.

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 rule was finalized on January 13, 2021 and immediately challenged. An order vacating the rule was filed by the D.C. Circuit Court of Appeals on April 5, 2021. 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 has spent approximately $2.4 billion. DTE Electric does not anticipate additional capital expenditures for air pollution requirements, 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 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 rule making 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. Cleanup of one of the MGP sites is complete, and the site is closed. 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 above ground 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, 2021 and 2020, DTE Electric had $14 million and $10 million, respectively, accrued for remediation. These costs are not discounted to their present value. 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.

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, July 2018, September 2020, and November 2020. 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 ongoing sampling and testing of monitoring wells, compliance with groundwater standards, and the closure of basins at the end of the useful life of the associated power plant.

On September 28, 2020, the CCR rule "A Holistic Approach to Closure Part A: Deadline to Initiate Closure and Enhancing Public Access to Information" became effective and established April 11, 2021 as the new deadline for all unlined impoundments (including units previously classified as "clay-lined") to initiate closure. Additionally, the rule amends certain reporting requirements and CCR website requirements. On November 12, 2020, an additional revision to the CCR Rule "A Holistic Approach to Closure Part B: Alternate Demonstration for Unlined Surface Impoundments" was published in the Federal Register that provides a process to determine if certain unlined impoundments consist of an alternative liner system that may be as protective as the current liners specified in the CCR rule, and therefore may continue to operate. DTE Electric has submitted applications to the EPA that support continued use of all impoundments through their active lives. The applications are currently under review and the forced closure date of April 11, 2021 is effectively delayed while the EPA completes their review.

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 statutory revision provides the basis of a CCR program that EGLE has submitted to the EPA for approval to fully regulate the CCR program in Michigan in lieu of a Federal permit program. The EPA is currently working with EGLE in reviewing the submitted State program, and DTE Electric will work with EGLE to implement a State program that may be approved in the future.

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 2015 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 October 13, 2020, the EPA finalized the ELG Reconsideration Rule which revised the regulations from the 2015 ELG rule. The Reconsideration Rule re-establishes the technology-based effluent limitations guidelines and standards applicable to FGD wastewater and bottom ash transport water. The EPA set the applicability dates for bottom ash transport water "as soon as possible" beginning October 13, 2021 and no later than December 31, 2025. FGD wastewater retrofits must be completed "as soon as possible" beginning October 13, 2021 and no later than December 31, 2025 or December 31, 2028 if a permittee decides to pursue the Voluntary Incentives Program (VIP) subcategory for FGD wastewater. If a facility applies for the VIP, they must meet more stringent standards, but are allowed an extended time period to complete the project.

The Reconsideration Rule also provides additional compliance opportunities by finalizing low utilization and cessation of coal burning subcategories. The Reconsideration Rule provides new opportunities for DTE Electric to evaluate existing ELG compliance strategies and make any necessary adjustments to ensure full compliance with the ELGs in a cost-effective manner.

Compliance schedules for individual facilities and individual waste streams are determined through issuance of new NPDES permits by the State of Michigan. The State of Michigan has issued an NPDES permit for the Belle River power plant establishing compliance deadlines based on the 2020 Reconsideration Rule. On October 11, 2021, in consideration of the deadlines above, DTE Electric submitted the appropriate documentation titled the Notice of Planned Participation (NOPP) to the State of Michigan that formally announced the intent to pursue compliance subcategories as ELG compliance options: the cessation of coal at the Belle River power plant no later than 2028 and the VIP for FGD wastewater at Monroe power plant.

On July 27, 2021, the EPA announced they will revisit some of the compliance requirements that were established in the 2020 Reconsideration Rule and plan to release a new proposed rule in Fall of 2022. The 2020 Reconsideration Rule remains in effect until that time.

DTE Electric continues to evaluate compliance strategies, technologies, and system designs for both FGD wastewater and bottom ash transport water system to achieve compliance with the EPA rules at the Monroe power plant.

DTE Electric has estimated the impact of the CCR and ELG rules to be $522 million of capital expenditures, including $417 million for 2022 through 2026.

DTE Gas

Air — In June 2020, DTE Energy expanded its net zero goal to include its gas utility operations by committing to reduce greenhouse gas emissions to net zero by 2050 from procurement of natural gas and within its gas utility. DTE Energy is working to source gas with lower methane intensity, reduce emissions through its gas main renewal and pipeline integrity programs, and if necessary, use carbon offsets to achieve net zero. DTE Gas also committed to helping its customers reduce their emissions from natural gas by 35% by 2050. To support this goal, DTE Gas launched its CleanVision Natural Gas Balance program in January 2021 that offers customers a way to reduce their carbon footprint using carbon offsets and renewable natural gas. The carbon offset program is focused on protecting Michigan forests that naturally absorb carbon dioxide.

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, 2021 and 2020, DTE Gas had $24 million accrued for remediation. These costs are not discounted to their present value. 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.

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 an FOV 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. In September 2020, the EPA issued another FOV alleging EES Coke's 2018 and 2019 SO2 emissions exceeded projections and hence violated non-attainment new source review requirements. EES Coke evaluated the EPA's alleged violations and believes that the permits approved by EGLE complied with the Clean Air Act. EES Coke also responded to the EPA's September 2020 allegations demonstrating its actual emissions are compliant with non-attainment new source review requirements. Discussions with the EPA are ongoing. At the present time, DTE Energy cannot predict the outcome or financial impact of this FOV.

Other

In 2010, the EPA finalized a new one-hour SO_2 ambient air quality standard that requires states to submit plans and associated timelines for non-attainment areas that demonstrate attainment with the new SO_2 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 SO_2 and modeled concentrations exceeding the National Ambient Air Quality Standards for SO_2. Phase 3 addresses smaller sources of SO_2 with modeled or monitored exceedances of the new SO_2 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 SO_2 emissions in these areas, including DTE Electric power plants and DTE Energy's Michigan coke battery facility. As part of Michigan's 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. The Michigan SIP was completed and submitted to the EPA on May 31, 2016 and supplemented on June 30, 2016. On March 19, 2021, the EPA published in the Federal Register partial approval and partial disapproval of Michigan's Detroit SO2 non-attainment area plan. The partial disapproval does not appear to impact DTE's sources and further discussions are underway with the EPA to finalize the plan. Since several non-DTE Energy sources are also part of the proposed compliance plan, DTE Energy is unable to determine the full impact of any further emissions reductions that may be required from DTE's facilities at this time.

Michigan's Phase 2 non-attainment area includes DTE Electric facilities in St. Clair County. The EPA recently approved a clean data determination request submitted by EGLE. This does not automatically redesignate the area to attainment. Until the area is officially redesignated as attainment, DTE Energy is unable to determine the impacts.

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, 2021 was approximately $70 million. Payment under these guarantees is 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, 2021 was $720 million. 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. The Registrants may also provide indirect guarantees for the indebtedness of others. DTE Energy’s guarantees are not individually material with maximum potential payments totaling $40 million at December 31, 2021. Payments under these guarantees are considered remote.

The Registrants are 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, 2021, DTE Energy had $168 million of performance bonds outstanding, including $119 million for DTE Electric. In the event that such bonds are called for nonperformance, the Registrants would be obligated to reimburse the issuer of the performance bond. The Registrants are 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.

Labor Contracts

There are several bargaining units for DTE Energy subsidiaries' approximately 5,200 represented employees, including DTE Electric's approximately 2,700 represented employees. This represents 50% and 57% of DTE Energy's and DTE Electric's total employees, respectively. Of these represented employees, approximately 15% and 21% have contracts expiring within one year for DTE Energy and DTE Electric, respectively.

Purchase Commitments

As of December 31, 2021, 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 2022 through 2051 for DTE Energy, and 2022 through 2051 for DTE Electric, as detailed in the following tables:

	2022	2023	2024	2025	2026	2027 and Thereafter	Total
DTE Energy			(In millions)				
Long-term power purchase agreements[a]	$ 87	$ 92	$ 103	$ 103	$ 103	$ 986	$ 1,474
Other purchase commitments[b]	3,203	1,704	1,174	482	357	980	7,900
Total commitments	**$ 3,290**	**$ 1,796**	**$ 1,277**	**$ 585**	**$ 460**	**$ 1,966**	**$ 9,374**

	2022	2023	2024	2025	2026	2027 and Thereafter	Total
DTE Electric			(In millions)				
Long-term power purchase agreements[a]	$ 92	$ 97	$ 108	$ 108	$ 109	$ 1,006	$ 1,520
Other purchase commitments[b]	365	402	431	197	118	275	1,788
Total commitments	**$ 457**	**$ 499**	**$ 539**	**$ 305**	**$ 227**	**$ 1,281**	**$ 3,308**

(a) 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 28% to 100%. Purchase commitments for DTE Electric include affiliate agreements with DTE Sustainable Generation that are eliminated in consolidation for DTE Energy.

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

Utility capital expenditures and expenditures for non-utility businesses will be approximately $3.7 billion and $2.7 billion in 2022 for DTE Energy and DTE Electric, respectively. The Registrants have made certain commitments in connection with the estimated 2022 annual capital expenditures.

COVID-19 Pandemic

DTE Energy has been actively monitoring the impact of the COVID-19 pandemic on supply chains, markets, counterparties, and customers, and any related impacts on operating costs, customer demand, and recoverability of assets that could materially impact the Registrants' financial results.

In 2021 and 2020, the COVID-19 pandemic has impacted DTE Electric sales volumes. As businesses have transitioned to more remote operations, related sales volumes have been lower for commercial and industrial customers and higher for residential customers as compared to historical volumes before the pandemic. This impact has contributed to a net reduction in DTE Electric sales for these customers, but has been offset by favorable rate mix. Therefore, there has not been a significant impact to the Registrants' Consolidated Financial Statements.

In 2020, COVID-19 also resulted in incremental operating expenses at the electric and gas utilities related to personal protective equipment and other health and safety-related matters, as well as lower volumes for certain companies within the DTE Vantage segment. For the year ended December 31, 2021, however, there has not been any significant impact to operating expenses or DTE Vantage volumes attributable to the COVID-19 pandemic.

In consideration of the above factors and all other current and expected impacts to the Registrants' performance and cash flows resulting from the COVID-19 pandemic, there have been no material adjustments or reserves deemed necessary as of December 31, 2021. The Registrants cannot predict the future impacts of the COVID-19 pandemic on the Consolidated Financial Statements, as developments involving COVID-19 and its related effects on economic and operating conditions remain highly uncertain.

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 9 and 13 to the Consolidated Financial Statements, "Regulatory Matters" and "Financial and Other Derivative Instruments," respectively.

NOTE 19 — 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 $1.8 billion and an aggregate of $328 million of coverage for extra expenses over a two-year period.

On December 20, 2019, the Terrorism Risk Insurance Program Reauthorization Act of 2019 was signed, extending TRIA through December 31, 2027. 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 $57 million per event if the loss associated with any one event at any nuclear plant should exceed the accumulated funds available to NEIL.

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 2022. 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 20 — 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, 2021:

	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[a]	X	
Non-qualified Pension Plans		
DTE Energy Company Supplemental Retirement Plan[b]	X	X
DTE Energy Company Executive Supplemental Retirement Plan[b]	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 Shenango, LLC
(b) Sponsored by DTE Energy Company

DTE Electric participates in various plans that provide pension and other postretirement benefits for DTE Energy and its affiliates. The plans are primarily sponsored by the LLC. DTE Electric accounts for its participation in DTE Energy's qualified and non-qualified 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 non-qualified, 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:

	2021	2020	2019
		(In millions)	
Service cost	**$ 108**	$ 99	$ 84
Interest cost	**158**	186	219
Expected return on plan assets	**(339)**	(334)	(325)
Amortization of:			
Net actuarial loss	**196**	171	131
Prior service cost	**—**	1	1
Settlements	**16**	25	2
Net pension cost	**$ 139**	$ 148	$ 112

	2021	2020
	(In millions)	
Other changes in plan assets and benefit obligations recognized in Regulatory assets and Other comprehensive income (loss)		
Net actuarial (gain) loss	**$ (376)**	$ 137
Amortization of net actuarial loss	**(209)**	(193)
Prior service cost	**4**	—
Amortization of prior service cost	**(3)**	(1)
Total recognized in Regulatory assets and Other comprehensive income (loss)	**$ (584)**	$ (57)
Total recognized in net periodic pension cost, Regulatory assets, and Other comprehensive income (loss)	**$ (445)**	$ 91

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	
	2021	2020
	(In millions)	
Accumulated benefit obligation, end of year	**$ 5,448**	$ 5,843
Change in projected benefit obligation		
Projected benefit obligation, beginning of year	**$ 6,304**	$ 5,810
Service cost	**108**	99
Interest cost	**158**	186
Plan amendments	**4**	—
Actuarial (gain) loss	**(255)**	619
Special termination benefits	**—**	3
Benefits paid	**(414)**	(353)
Settlements	**(48)**	(60)
Projected benefit obligation, end of year	**$ 5,857**	$ 6,304
Change in plan assets		
Plan assets at fair value, beginning of year	**$ 5,497**	$ 4,993
Actual return on plan assets	**460**	815
Company contributions	**12**	102
Benefits paid	**(414)**	(353)
Settlements	**(48)**	(60)
Plan assets at fair value, end of year	**$ 5,507**	$ 5,497
Funded status	**$ (350)**	$ (807)
Amount recorded as:		
Current liabilities	**$ (11)**	$ (10)
Noncurrent liabilities	**(339)**	(797)
	$ (350)	$ (807)
Amounts recognized in Accumulated other comprehensive income (loss), pre-tax		
Net actuarial loss	**$ 126**	$ 142
Prior service cost	**1**	3
	$ 127	$ 145
Amounts recognized in Regulatory assets[(a)]		
Net actuarial loss	**$ 1,381**	$ 1,949
Prior service credit	**(9)**	(11)
	$ 1,372	$ 1,938

(a) See Note 9 to the Consolidated Financial Statements, "Regulatory Matters."

The decrease in DTE Energy's pension benefit obligation for the year ended December 31, 2021 was primarily due to an actuarial gain driven by an increase in discount rates. The increase in the pension benefit obligation in 2020 was primarily due to an actuarial loss driven by a decrease in discount rates, partially offset by a one-time settlement.

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. There were no contributions made to the qualified pension plans in 2021. The following table provides a summary of annual contributions to the qualified plans:

	2021	2020	2019
		(In millions)	
DTE Energy	**$ —**	$ 92	$ 150
DTE Electric	**$ —**	$ 60	$ 100

At the discretion of management and depending upon financial market conditions, DTE Energy anticipates making up to $7 million in contributions to the qualified pension plans in 2022. In addition, DTE Energy anticipates a transfer of up to $50 million of qualified pension plan funds from DTE Gas to DTE Electric in 2022.

DTE Energy's subsidiaries are responsible for their share of qualified and non-qualified pension benefit costs. DTE Electric's allocated portion of pension benefit costs included in capital expenditures and operating and maintenance expense were $107 million, $106 million, and $93 million for the years ended December 31, 2021, 2020, and 2019, respectively. These amounts include recognized contractual termination benefit charges, curtailment gains, and settlement charges.

At December 31, 2021, the benefits related to DTE Energy's qualified and non-qualified 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)
2022	$ 346
2023	360
2024	341
2025	350
2026	346
2027-2031	1,723
Total	**$ 3,466**

Assumptions used in determining the projected benefit obligation and net pension costs of DTE Energy are:

	2021	2020	2019
Projected benefit obligation			
Discount rate	**2.91%**	2.57%	3.28%
Rate of compensation increase	**3.80%**	3.80%	3.85%
Cash balance interest crediting rate	**2.40%**	2.00%	3.30%
Net pension costs			
Discount rate	**2.57%**	3.28%	4.40%
Rate of compensation increase	**3.80%**	3.85%	3.85%
Expected long-term rate of return on plan assets	**7.00%**	7.10%	7.30%
Cash balance interest crediting rate	**2.00%**	3.30%	3.70%

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 a long-term rate of return assumption for the pension plans of 6.80%. The Registrants believe this rate is a reasonable assumption for the long-term rate of return on plan assets for 2022 given the current investment strategy.

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, 2021 are listed below:

U.S. Large Capitalization (Cap) Equity Securities	13 %
U.S. Small Cap and Mid Cap Equity Securities	3
Non-U.S. Equity Securities	13
Fixed Income Securities	48
Hedge Funds and Similar Investments	11
Private Equity and Other	12
	100 %

The following tables provide the fair value measurement amounts for DTE Energy's pension plan assets at December 31, 2021 and 2020[a]:

	December 31, 2021				December 31, 2020			
	Level 1	Level 2	Other[b]	Total	Level 1	Level 2	Other[b]	Total
DTE Energy asset category:			(In millions)					
Short-term Investments[c]	**$ 112**	**$ —**	**$ —**	**$ 112**	$ 92	$ —	$ —	$ 92
Equity Securities								
Domestic[d]	**155**	**—**	**758**	**913**	167	—	1,093	1,260
International[e]	**88**	**—**	**588**	**676**	100	—	791	891
Fixed Income Securities								
Governmental[f]	**943**	**83**	**—**	**1,026**	459	95	—	554
Corporate[g]	**—**	**1,466**	**—**	**1,466**	—	1,404	—	1,404
Hedge Funds and Similar Investments[h]	**139**	**63**	**365**	**567**	238	61	411	710
Private Equity and Other[i]	**—**	**—**	**747**	**747**	—	—	586	586
DTE Energy Total	**$ 1,437**	**$ 1,612**	**$ 2,458**	**$ 5,507**	$ 1,056	$ 1,560	$ 2,881	$ 5,497

(a) For a description of levels within the fair value hierarchy, see Note 12 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.
(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 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.
(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 quotations from broker or pricing services.
(h) This category utilizes a diversified group of strategies that attempt to capture uncorrelated sources of return and includes publicly traded mutual funds, insurance-linked and asset-backed securities, commingled funds and limited partnership funds. Pricing for mutual funds in this category is obtained from quoted prices in actively traded markets. Pricing for insurance-linked and asset-backed securities is obtained from quotations. from broker or pricing services. 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 private real estate and private debt. All investments in this category are classified as NAV assets.

The pension trust holds debt and equity securities directly and indirectly through commingled funds. Exchange-traded debt and equity securities held directly, as well as publicly traded commingled funds, are valued using quoted market prices in actively traded markets. Non-publicly traded 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 2021 and does not anticipate making any contributions to the trusts in 2022.

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. The following table provides contributions to the VEBA in:

	2021	2020	2019
		(In millions)	
DTE Energy	**$ 18**	$ 15	$ 13
DTE Electric	**$ 8**	$ 7	$ 6

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:

	2021	2020	2019
		(In millions)	
Service cost	**$ 30**	$ 26	$ 22
Interest cost	**46**	56	70
Expected return on plan assets	**(129)**	(128)	(96)
Amortization of:			
Net actuarial loss	**13**	16	12
Prior service credit	**(19)**	(19)	(9)
Net other postretirement credit	**$ (59)**	$ (49)	$ (1)

	2021	2020
	(In millions)	
Other changes in plan assets and accumulated postretirement benefit obligation recognized in Regulatory assets and Other comprehensive income (loss)		
Net actuarial gain	**$ (113)**	$ (38)
Amortization of net actuarial loss	**(13)**	(16)
Prior service cost	**1**	—
Amortization of prior service credit	**19**	19
Total recognized in Regulatory assets and Other comprehensive income (loss)	**$ (106)**	$ (35)
Total recognized in net periodic benefit cost, Regulatory assets, and Other comprehensive income (loss)	**$ (165)**	$ (84)

Net other postretirement credit for DTE Electric includes the following components:

	2021	2020	2019
		(In millions)	
Service cost	**$ 23**	$ 20	$ 16
Interest cost	**35**	43	53
Expected return on plan assets	**(86)**	(87)	(65)
Amortization of:			
Net actuarial loss	**11**	11	5
Prior service credit	**(14)**	(14)	(7)
Net other postretirement cost (credit)	**$ (31)**	$ (27)	$ 2

	2021	2020
	(In millions)	
Other changes in plan assets and accumulated postretirement benefit obligation recognized in Regulatory assets		
Net actuarial gain	**$ (84)**	$ (26)
Amortization of net actuarial loss	**(11)**	(11)
Amortization of prior service credit	**14**	14
Total recognized in Regulatory assets	**$ (81)**	$ (23)
Total recognized in net periodic benefit cost and Regulatory assets	**$ (112)**	$ (50)

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	
	2021	2020	2021	2020
	(In millions)			
Change in accumulated postretirement benefit obligation				
Accumulated postretirement benefit obligation, beginning of year	$ 1,807	$ 1,751	$ 1,369	$ 1,337
Service cost	30	26	23	20
Interest cost	46	56	35	43
Plan amendments	1	—	—	—
Actuarial (gain) loss	(100)	54	(73)	31
Benefits paid	(82)	(80)	(61)	(62)
Accumulated postretirement benefit obligation, end of year	$ 1,702	$ 1,807	$ 1,293	$ 1,369
Change in plan assets				
Plan assets at fair value, beginning of year	$ 1,960	$ 1,819	$ 1,320	$ 1,236
Actual return on plan assets	142	220	96	145
Benefits paid	(81)	(79)	(61)	(61)
Plan assets at fair value, end of year	$ 2,021	$ 1,960	$ 1,355	$ 1,320
Funded status	$ 319	$ 153	$ 62	$ (49)
Amount recorded as:				
Noncurrent assets	$ 678	$ 561	$ 402	$ 335
Current liabilities	(1)	(1)	—	—
Noncurrent liabilities	(358)	(407)	(340)	(384)
	$ 319	$ 153	$ 62	$ (49)
Amounts recognized in Accumulated other comprehensive income (loss), pre-tax				
Net actuarial gain	$ (1)	$ (7)	$ —	$ —
Amounts recognized in Regulatory assets[a]				
Net actuarial loss	$ 102	$ 234	$ 61	$ 156
Prior service credit	(49)	(69)	(34)	(48)
	$ 53	$ 165	$ 27	$ 108

(a) See Note 9 to the Consolidated Financial Statements, "Regulatory Matters."

The decrease in the Registrants' other postretirement benefit obligations for the year ended December 31, 2021 was primarily due to an actuarial gain driven by an increase in discount rates. The increase in the other postretirement benefit obligations in 2020 was primarily due to an actuarial loss driven by a decrease in discount rates, partially offset by favorable changes in healthcare cost assumptions.

The following table reflects other postretirement benefit plans with accumulated postretirement benefit obligations in excess of plan assets as of December 31:

	DTE Energy		DTE Electric	
	2021	2020	2021	2020
	(In millions)			
Accumulated postretirement benefit obligation	$ 822	$ 878	$ 775	$ 826
Fair value of plan assets	463	470	435	442
Accumulated postretirement benefit obligation in excess of plan assets	$ 359	$ 408	$ 340	$ 384

At December 31, 2021, 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)	
2022	$ 85	$ 64
2023	89	68
2024	91	69
2025	94	71
2026	95	72
2027-2031	493	375
Total	**$ 947**	**$ 719**

Assumptions used in determining the accumulated postretirement benefit obligation and net other postretirement benefit costs of the Registrants are:

	2021	2020	2019
Accumulated postretirement benefit obligation			
Discount rate	**2.91%**	2.58%	3.29%
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	**2034**	2033	2032
Other postretirement benefit costs			
Discount rate	**2.58%**	3.29%	4.40%
Expected long-term rate of return on plan assets	**6.70%**	7.20%	7.30%
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	**2033**	2032	2031

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. As a result of this process, the Registrants have a long-term rate of return assumption for the other postretirement benefit plans of 6.40% for 2022. The Registrants believe this rate is a reasonable assumption for the long-term rate of return on plan assets for 2022 given the current investment strategy.

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, 2021 are listed below:

U.S. Large Cap Equity Securities	10 %
U.S. Small Cap and Mid Cap Equity Securities	2
Non-U.S. Equity Securities	10
Fixed Income Securities	54
Hedge Funds and Similar Investments	10
Private Equity and Other	14
	100 %

The following tables provide the fair value measurement amounts for the Registrants' other postretirement benefit plan assets at December 31, 2021 and 2020[a]:

	December 31, 2021				December 31, 2020			
	Level 1	Level 2	Other[b]	Total	Level 1	Level 2	Other[b]	Total
	(In millions)							
DTE Energy asset category:								
Short-term Investments[c]	**$ 39**	**$ —**	**$ —**	**$ 39**	$ 21	$ —	$ —	$ 21
Equity Securities								
Domestic[d]	**27**	**—**	**199**	**226**	51	—	200	251
International[e]	**27**	**—**	**141**	**168**	23	—	178	201
Fixed Income Securities								
Governmental[f]	**343**	**32**	**—**	**375**	40	45	—	85
Corporate[g]	**—**	**355**	**271**	**626**	—	477	379	856
Hedge Funds and Similar Investments[h]	**58**	**26**	**120**	**204**	61	17	124	202
Private Equity and Other[i]	**—**	**—**	**383**	**383**	—	—	344	344
DTE Energy Total	**$ 494**	**$ 413**	**$ 1,114**	**$ 2,021**	$ 196	$ 539	$ 1,225	$ 1,960
DTE Electric asset category:								
Short-term Investments[c]	**$ 26**	**$ —**	**$ —**	**$ 26**	$ 14	$ —	$ —	$ 14
Equity Securities								
Domestic[d]	**18**	**—**	**132**	**150**	33	—	131	164
International[e]	**18**	**—**	**93**	**111**	16	—	117	133
Fixed Income Securities								
Governmental[f]	**230**	**21**	**—**	**251**	24	31	—	55
Corporate[g]	**—**	**235**	**187**	**422**	—	321	263	584
Hedge Funds and Similar Investments[h]	**39**	**17**	**81**	**137**	41	11	83	135
Private Equity and Other[i]	**—**	**—**	**258**	**258**	—	—	235	235
DTE Electric Total	**$ 331**	**$ 273**	**$ 751**	**$ 1,355**	$ 128	$ 363	$ 829	$ 1,320

(a) For a description of levels within the fair value hierarchy see Note 12 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.
(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 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.
(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 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 uncorrelated sources of income and includes publicly traded mutual funds, insurance-linked and asset-backed securities, commingled funds and limited partnership funds. Pricing for mutual funds in this category is obtained from quoted prices in actively traded markets. Prices for insurance-linked and asset-backed securities are obtained from quotations from broker or pricing services. 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 private real estate and private debt. All investments in this category are classified as NAV assets.

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, as well as publicly traded commingled funds, are valued using quoted market prices in actively traded markets. Non-publicly traded 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 $70 million, $73 million, and $65 million for the years ended December 31, 2021, 2020, and 2019, respectively. For DTE Electric, the cost of these plans was $34 million, $34 million, and $31 million for the years ended December 31, 2021, 2020, and 2019, respectively.

NOTE 21 — 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 20,162,716 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:

	2021	2020	2019
		(In millions)	
Stock-based compensation expense	**$ 71**	$ 63	$ 71
Tax benefit	**$ 13**	$ 12	$ 13
Stock-based compensation cost capitalized in Property, plant, and equipment[(a)]	**$ —**	$ —	$ 16

(a) In DTE Electric's May 2020 rate order, the MPSC disallowed certain capital expenditures related to incentive compensation. Therefore, beginning in 2020, no stock-based compensation cost will be capitalized in Property, plant, and equipment.

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, 2021, 2020, and 2019. Compensation cost charged against income was $14 million, $13 million, and $11 million for the years ended December 31, 2021, 2020, and 2019, respectively.

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 2021, 2020, and 2019 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 activity relating to performance share awards as follows:

	2021	2020	2019
	(In millions, except per share amounts)		
Weighted average grant date fair value of awards granted (per share)	**$ 118.43**	$ 129.68	$ 115.85
Awards settled in cash[(a)]	**$ 12**	$ 21	$ 19
Awards settled in stock[(a)]	**$ 74**	$ 53	$ 79
Compensation expense	**$ 58**	$ 50	$ 60

(a) Sum of awards settled in cash and stock 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, 2021:

	Performance Shares	Weighted Average Grant Date Fair Value
Balance at December 31, 2020	1,127,437	$ 117.06
Grants[a]	567,196	$ 118.43
Forfeitures[b]	(162,091)	$ 123.04
Payouts	(429,925)	$ 107.84
Balance at December 31, 2021	1,102,617	$ 120.33

(a) Includes 166,686 incremental shares granted in 2021 to DTE Energy employees who did not separate with DT Midstream. The shares were granted to preserve the value of unvested 2019-2021 awards, considering the impact from the spin-off of DT Midstream on DTE Energy's stock price.
(b) Includes the cancellation of 95,923 shares that were held by employees that separated due to the spin-off of DT Midstream.

Unrecognized Compensation Costs

As of December 31, 2021, 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	1.50
Performance shares	44	1.04
	$ 63	1.18

Allocated Stock-Based Compensation

DTE Electric received an allocation of costs from DTE Energy associated with stock-based compensation. DTE Electric's allocation for 2021, 2020, and 2019 for stock-based compensation expense was $45 million, $37 million, and $43 million, respectively.

NOTE 22 — 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 2.3 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.

DTE Vantage, formerly 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.

Energy Trading consists of energy marketing and trading operations.

Corporate and Other includes various holding company activities, holds certain non-utility debt, and holds certain investments, including funds supporting regional development and economic growth.

DTE Energy completed the separation of DT Midstream on July 1, 2021, which was comprised of the Gas Storage and Pipelines segment and also certain DTE Energy holding company activity within the Corporate and Other segment. Amounts relating to DT Midstream have been classified as discontinued operations, and Gas Storage and Pipelines is no longer a reportable segment of DTE Energy. Refer to Note 4 to the Consolidated Financial Statements, “Dispositions and Impairments,” for additional information.

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, natural gas sales, and renewable natural gas sales in the following segments:

	Year Ended December 31,		
	2021	2020	2019
		(In millions)	
Electric[a]	**$ 64**	$ 61	$ 56
Gas	**14**	16	12
DTE Vantage	**575**	464	596
Energy Trading	**56**	31	22
Corporate and Other	**2**	2	2
	$ 711	$ 574	$ 688

(a) Inter-segment billing for the Electric segment includes $4 million and $2 million relating to Non-utility operations for the years ended December 31, 2021 and 2020, respectively.

Centrally incurred costs such as labor and overheads are assigned directly to DTE Energy's business segments or allocated based on various cost drivers, depending on the nature of service provided.

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 also 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.

All inter-segment transactions and balances are eliminated in consolidation for DTE Energy. The Reclassifications and Eliminations group below also includes the reclassification of deferred tax assets, which are netted against deferred tax liabilities for presentation on the DTE Energy Consolidated Statements of Financial Position. Refer to Note 10 to the Consolidated Financial Statements, "Income Taxes," for additional information regarding the Registrants' deferred taxes.

Financial data of DTE Energy's business segments follows:

	Electric	Gas	DTE Vantage	Energy Trading	Corporate and Other[a]	Reclassifications and Eliminations	Total from Continuing Operations	Discontinued Operations	Total
					(In millions)				
2021									
Operating Revenues — Utility operations	$ 5,809	1,553	—	—	—	(74)	**$ 7,288**		
Operating Revenues — Non-utility operations	$ 12	—	1,482	6,831	2	(651)	**$ 7,676**		
Depreciation and amortization	$ 1,122	177	71	6	1	—	**$ 1,377**		
Interest expense	$ 338	81	28	5	270	(92)	**$ 630**		
Interest income	$ —	(6)	(23)	(1)	(84)	92	**$ (22)**		
Equity in earnings of equity method investees	$ —	1	8	—	29	—	**$ 38**		
Income Tax Expense (Benefit)	$ 104	38	(31)	(27)	(214)	—	**$ (130)**		
Net Income (Loss) Attributable to DTE Energy Company	$ 864	214	168	(83)	(367)	—	**$ 796**	111	**$ 907**
Investment in equity method investees	$ 6	13	118	—	50	—	**$ 187**		
Capital expenditures and acquisitions	$ 3,016	621	69	6	—	—	**$ 3,712**	60	**$ 3,772**
Goodwill	$ 1,208	743	25	17	—	—	**$ 1,993**		
Total Assets	$ 28,524	6,729	983	1,174	4,281	(1,972)	**$ 39,719**	—	**$ 39,719**

(a) Corporate and Other results include significant one-time items resulting from the separation of DT Midstream, including a loss on debt extinguishment of $376 million following the settlement of intercompany borrowings with DT Midstream and optional redemption of DTE Energy long-term debt. DTE Energy also recognized a tax benefit of $85 million for the remeasurement of state deferred tax liabilities following the separation of DT Midstream. Refer to Notes 10 and 14 to the Consolidated Financial Statements, "Income Taxes" and "Long-Term Debt," for additional information.

	Electric	Gas	DTE Vantage	Energy Trading	Corporate and Other	Reclassifications and Eliminations	Total from Continuing Operations	Discontinued Operations	Total
					(In millions)				
2020									
Operating Revenues — Utility operations	$ 5,506	1,414	—	—	—	(75)	$ 6,845		
Operating Revenues — Non-utility operations	$ 14	—	1,224	3,863	2	(525)	$ 4,578		
Depreciation and amortization	$ 1,057	157	72	5	1	—	$ 1,292		
Interest expense	$ 337	80	37	6	325	(184)	$ 601		
Interest income	$ (4)	(5)	(22)	(2)	(180)	184	$ (29)		
Equity in earnings of equity method investees	$ —	1	17	—	8	—	$ 26		
Income Tax Expense (Benefit)	$ 108	48	(40)	12	(91)	—	$ 37		
Net Income (Loss) Attributable to DTE Energy Company	$ 777	186	134	36	(79)	—	$ 1,054	314	$ 1,368
Investment in equity method investees	$ 6	12	125	—	34	—	$ 177		
Capital expenditures and acquisitions	$ 2,701	574	186	5	—	—	$ 3,466	517	$ 3,983
Goodwill	$ 1,208	743	25	17	—	—	$ 1,993		
Total Assets	$ 26,588	6,339	696	807	5,063	(2,073)	$ 37,420	8,076	$ 45,496

	Electric	Gas	DTE Vantage	Energy Trading	Corporate and Other	Reclassifications and Eliminations	Total from Continuing Operations	Discontinued Operations	Total
					(In millions)				
2019									
Operating Revenues — Utility operations	$ 5,224	1,482	—	—	—	(68)	$ 6,638		
Operating Revenues — Non-utility operations	$ 5	—	1,560	4,610	2	(647)	$ 5,530		
Depreciation and amortization	$ 949	144	69	6	1	—	$ 1,169		
Interest expense	$ 315	78	33	8	266	(132)	$ 568		
Interest income	$ (2)	(6)	(9)	(4)	(120)	132	$ (9)		
Equity in earnings of equity method investees	$ 1	2	14	—	(3)	—	$ 14		
Income Tax Expense (Benefit)	$ 137	62	(63)	17	(82)	—	$ 71		
Net Income (Loss) Attributable to DTE Energy Company	$ 714	185	133	49	(126)	—	$ 955	214	$ 1,169
Investment in equity method investees	$ 5	11	130	—	31	—	$ 177		
Capital expenditures and acquisitions	$ 2,368	530	54	5	—	—	$ 2,957	2,510	$ 5,467
Goodwill	$ 1,208	743	25	17	—	—	$ 1,993		
Total Assets	$ 24,617	5,717	537	798	4,779	(1,843)	$ 34,605	7,663	$ 42,268

Reclassifications and Eliminations include $14 million, $26 million, and $27 million of Operating Revenues — Non-utility operations for the years ended December 31, 2021, 2020, and 2019, respectively, for eliminations related to DTE Energy's prior Gas Storage and Pipelines segment that remain in continuing operations. Eliminations for these revenues are offset by related cost eliminations and have no impact on DTE Energy net income.

NOTE 23 — RELATED PARTY TRANSACTIONS

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 also has agreements with certain DTE Energy affiliates where it charges the affiliates for their use of the shared capital assets of DTE Electric. A shared services company accumulates various corporate support 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:

	2021	2020	2019
		(In millions)	
Revenues and Other Income			
Energy sales	**$ 9**	$ 8	$ 10
Other services and interest	**$ 2**	$ 2	$ 5
Shared capital assets	**$ 49**	$ 47	$ 42
Costs			
Fuel and purchased power	**$ 13**	$ 16	$ 6
Other services and interest	**$ —**	$ 1	$ 24
Corporate expenses	**$ 391**	$ 367	$ 372
Other			
Dividends declared	**$ 588**	$ 539	$ 494
Dividends paid	**$ 588**	$ 539	$ 494
Capital contribution from DTE Energy	**$ 555**	$ 636	$ 180

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, 2021 and 2020.

There were $2 million and $20 million in charitable contributions made by DTE Electric to the DTE Energy Foundation for the years ended December 31, 2021 and 2020, respectively, and no contributions for the year ended December 31, 2019. 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.

For a discussion of other related party transactions impacting DTE Electric, see Notes 20 and 21 to the Consolidated Financial Statements, "Retirement Benefits and Trusteed Assets" and "Stock-Based Compensation," respectively.

NOTE 24 — SUPPLEMENTARY QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

The Registrants have adopted the SEC amendment to Regulation S-K Item 302(a) which requires disclosure of supplemental quarterly financial data only if material retrospective adjustments have been applied. For DTE Energy, the information has been presented below to reflect the impact of the discontinued operations of DT Midstream. No retrospective adjustments have been applied for DTE Electric.

DTE Energy

The sum of quarterly earnings per share may not equal year-end amounts, 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)				
2021					
Operating Revenues	**$ 3,581**	**$ 3,021**	**$ 3,715**	**$ 4,647**	**$ 14,964**
Operating Income	**433**	**242**	**405**	**415**	**1,495**
Net Income from Continuing Operations[a]	**317**	**114**	**55**	**300**	**786**
Net Income (Loss) from Discontinued Operations	**80**	**65**	**(33)**	**5**	**117**
Net Income	**397**	**179**	**22**	**305**	**903**
Net Income Attributable to DTE Energy Company	**$ 397**	**$ 179**	**$ 25**	**$ 306**	**$ 907**
Basic Earnings per Share					
Continuing Operations	**$ 1.65**	**$ 0.60**	**$ 0.30**	**$ 1.56**	**$ 4.11**
Discontinued Operations	**0.40**	**0.32**	**(0.17)**	**0.02**	**0.57**
Total	**$ 2.05**	**$ 0.92**	**$ 0.13**	**$ 1.58**	**$ 4.68**
Diluted Earnings per Share					
Continuing Operations	**$ 1.65**	**$ 0.60**	**$ 0.30**	**$ 1.55**	**$ 4.10**
Discontinued Operations	**0.40**	**0.32**	**(0.17)**	**0.02**	**0.57**
Total	**$ 2.05**	**$ 0.92**	**$ 0.13**	**$ 1.57**	**$ 4.67**
2020					
Operating Revenues	$ 2,852	$ 2,411	$ 3,080	$ 3,080	$ 11,423
Operating Income	445	263	479	368	1,555
Net Income from Continuing Operations	268	201	370	206	1,045
Net Income from Discontinued Operations	74	76	107	69	326
Net Income	342	277	477	275	1,371
Net Income Attributable to DTE Energy Company	$ 340	$ 277	$ 476	$ 275	$ 1,368
Basic Earnings per Share					
Continuing Operations	$ 1.39	$ 1.06	$ 1.93	$ 1.08	$ 5.46
Discontinued Operations	0.38	0.38	0.54	0.34	1.63
Total	$ 1.77	$ 1.44	$ 2.47	$ 1.42	$ 7.09
Diluted Earnings per Share					
Continuing Operations	$ 1.39	$ 1.06	$ 1.92	$ 1.08	$ 5.45
Discontinued Operations	0.37	0.38	0.54	0.34	1.63
Total	$ 1.76	$ 1.44	$ 2.46	$ 1.42	$ 7.08

(a) Third Quarter 2021 results include significant one-time items resulting from the separation of DT Midstream, including a loss on debt extinguishment of $376 million following the settlement of intercompany borrowings with DT midstream and optional redemption of DTE Energy long-term debt. Refer to Note 14 to the Consolidated Financial Statements, "Long-Term Debt," for additional information. Third Quarter 2021 results also include a tax benefit of $85 million for the remeasurement of state deferred tax liabilities following the separation of DT Midstream. Refer to Note 10 to the Consolidated Financial Statements, "Income Taxes," for additional information.

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.

Item 9C. D*isclosure Regarding Foreign Jurisdictions that Prevent Inspections*

None.

Part III

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 2022 Annual Meeting of Shareholders to be held May 5, 2022. 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.

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 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***

Item 14. ***Principal Accountant Fees and Services***

DTE Electric

The following table presents fees for professional services rendered by PricewaterhouseCoopers LLP (PwC) for the audit of DTE Electric's consolidated annual financial statements for the years ended December 31, 2021 and 2020 and fees billed for other services rendered by PwC during those periods.

	2021	2020
Audit fees[(a)]	**$ 1,579,000**	$ 1,492,572
Audit-related fees[(b)]	**87,000**	12,000
Total	**$ 1,666,000**	$ 1,504,572

(a) Represents the aggregate fees for the audits of DTE Electric's consolidated financial statements included in the Annual Reports on Form 10-K, reviews of the consolidated financial statements included in the Quarterly Reports on Form 10-Q, and audit services provided in connection with certain regulatory filings and debt issuances. Audit fees are presented on an Audit Year basis in accordance with SEC guidelines and include an estimate of fees incurred for the most recent Audit Year.

(b) Represents the aggregate fees billed for audit-related services and 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. 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.

(a) Consolidated Financial Statements. See "Item 8 — Financial Statements and Supplementary Data."

(b) Financial statement schedule. See "Item 8 — Financial Statements and Supplementary Data."

(c) Exhibits.

Exhibit Number	Description	DTE Energy	DTE Electric
	(i) Exhibits filed herewith:		
4.1	Description of the Company's 2017 Series E 5.25% Junior Subordinated Debentures due 2077	X	
4.2	Description of the Company's 2021 Series E 4.375% Junior Subordinated Debentures due 2081	X	
4.3	Fifty-second Supplemental Indenture dated as of November 1, 2021, to Indenture of Mortgage and Deed of Trust, dated as of March 1, 1944, between DTE Gas Company and Citibank, N.A., trustee. (2021 Series C and D)	X	
10.1	Amendment No. 1 to Fourth Amended and Restated Five-Year Credit Agreement, dated as of March 26, 2021, by and among DTE Energy Company and the lenders party thereto, Citibank, N.A., as Administrative Agent and as Sole Book Runner	X	
10.2	Amendment No. 1 to Fourth Amended and Restated Five-Year Credit Agreement, dated as of March 26, 2021, by and among DTE Electric Company and the lenders party thereto,Citibank, N.A., as Administrative Agent and as Sole Book Runner		X
10.3	Amendment No. 1 to Fourth Amended and Restated Five-Year Credit Agreement, dated as of March 26, 2021, by and among DTE Gas Company and the lenders party thereto, Citibank, N.A., as Administrative Agent and as Sole Book Runner	X	
10.4	Amendment No. 2 to Fourth Amended and Restated Five-Year Credit Agreement, dated as of June 3, 2021, by and among DTE Energy Company and the lenders party thereto, Citibank, N.A., as Administrative Agent and as Sole Book Runner	X	
10.5	Credit Agreement, dated as of December 22, 2021, by and among DTE Energy Company and the lenders party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent and as Sole Book Runner, and JPMorgan Chase Bank, N.A. and The Bank of Nova Scotia as Co-Lead Arrangers	X	
10.6	DTE Energy Company Deferred Stock Compensation Plan for Non-Employee Directors as Amended and Restated, effective January 1, 2022	X	
10.7	Third Amendment to the DTE Energy Company Supplemental Retirement Plan (Amended and Restated, effective as of January 1, 2005) dated as of February 23, 2018	X	
10.8	Fourth Amendment to the DTE Energy Company Supplemental Retirement Plan (Amended and Restated, effective as of January 1, 2005) dated as of November 16, 2021	X	
21.1	Subsidiaries of DTE Energy	X	
23.1	Consent of PricewaterhouseCoopers LLP	X	
23.2	Consent of PricewaterhouseCoopers LLP		X
31.1	Chief Executive Officer Section 302 Form 10-K Certification of Periodic Report	X	
31.2	Chief Financial Officer Section 302 Form 10-K Certification of Periodic Report	X	
31.3	Chief Executive Officer Section 302 Form 10-K Certification of Periodic Report		X

Exhibit Number	Description	DTE Energy	DTE Electric
31.4	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
	(ii) Exhibits furnished herewith:		
32.1	Chief Executive Officer Section 906 Form 10-K Certification of Periodic Report	X	
32.2	Chief Financial Officer Section 906 Form 10-K Certification of Periodic Report	X	
32.3	Chief Executive Officer Section 906 Form 10-K Certification of Periodic Report		X
32.4	Chief Financial Officer Section 906 Form 10-K Certification of Periodic Report		X
	(iii) Exhibits incorporated by reference:		
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.			
2(a)	Separation and Distribution Agreement, dated June 25, 2021, between DTE Energy Company and DT Midstream, Inc. (Exhibit 2.1 to DTE Energy's Form 8-K dated July 1, 2021).	X	
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 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 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	

Exhibit Number	Description	DTE Energy	DTE Electric
	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 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	
	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 (Exhibit 4-310 to DTE Energy's Form 10-K for the year ended December 31, 2019). (2019 Series G and H)	X	
	Supplemental Indenture dated as of August 1, 2020, 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 4-318 to DTE Energy's Form 10-Q for the quarter ended September 30, 2020). (2020 Series F)	X	
	Supplemental Indenture, dated as of September 1, 2020, 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 1, 2020). (2020 Series G)	X	
	Supplemental Indenture dated as of October 1, 2020, 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 4-319 to DTE Energy's Form 10-Q for the quarter ended September 30, 2020). (2020 Series H)	X	
	Supplemental Indenture, dated as of November 1, 2021, 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 24, 2021). (2021 Series E)	X	
	Description of the Company's Common Stock (Exhibit 4-311 to DTE Energy's Form 10-K for the year ended December 31, 2019)	X	
	Description of the Company's 2019 6.25% Corporate Units (Exhibit 4-313 to DTE (Exhibit 4-313 to DTE Energy's Form 10-K for the year ended December 31, 2019)	X	
	Description of the Company's 2020 Series G 4.375% Junior Subordinated Debentures due 2080 (Exhibit 4.321 to DTE energy's Form 10-K for the year ended December 31, 2020)	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

Exhibit Number	Description	DTE Energy	DTE Electric
	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 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

Exhibit Number	Description	DTE Energy	DTE Electric
	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 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, E, and F)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X

Exhibit Number	Description	DTE Energy	DTE Electric
	Supplemental Indenture dated as of February 1, 2020, 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 4-314 to DTE Energy's Form 10-Q for the quarter ended March 31, 2020). (2020 Series A and B)	X	X
	Supplemental Indenture dated as of April 1, 2020, 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 4-315 to DTE Energy's Form 10-Q for the quarter ended March 31, 2020). (2020 Series C)	X	X
	Supplemental Indenture dated as of March 1, 2021, 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 4-323 to DTE Energy's Form 10-Q for the quarter ended March 31, 2021). (2021 Green Series A and B)	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
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X
	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)	X	X

Exhibit Number	Description	DTE Energy	DTE Electric
4(d)	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:	X	
	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)	X	
	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). (6.44% Senior Notes, 2008 Series C due 2023)	X	
	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)	X	
4(e)	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:	X	
	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)	X	
	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 C Collateral Bonds)	X	
	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)	X	
	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)	X	
	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)	X	
	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)	X	
	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)	X	
	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)	X	

Exhibit Number	Description	DTE Energy	DTE Electric
	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)	X	
	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)	X	
	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)	X	
	Fifty-first Supplemental Indenture dated as of August 1, 2020, to Indenture of Mortgage and Deed of Trust, dated as of March 1, 1944, between DTE Gas Company and Citibank, N.A., trustee (Exhibit 4-317 to DTE Energy's Form 10-Q for the quarter ended September 30, 2020). (2020 Series D and E)	X	
10(a)	Form of Indemnification Agreement between DTE Energy Company and each Executive Officer and non-employee Director (Exhibit 10-1 to DTE Energy's Form 8-K dated December 6, 2007)	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)	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)	X	X
10(d)	DTE Energy Company Annual Incentive Plan (Exhibit 10-44 to DTE Energy's Form 10-Q for the quarter ended March 31, 2001)	X	
10(e)	DTE Energy Company Long-Term Incentive Plan Amended and Restated Effective May 20, 2021 (Exhibit 4.3 to DTE Energy's Form S-8 filed on December 21, 2021)	X	
10(f)	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	
	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	
10(g)	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	
	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	
	Fourth Amendment to the DTE Energy Company Executive Supplemental Retirement Plan (Amended and Restated Effective January 1, 2005) dated as of March 23, 2020 (Exhibit 10.109 to DTE Energy's Form 10-Q for the quarter ended March 31, 2020)	X	
	Fifth Amendment to the DTE Energy Company Executive Supplemental Retirement Plan (Amended and Restated Effective January 1, 2005) dated as of May 5, 2021 (Exhibit 10.119 to DTE Energy's Form 10-Q for the quarter ended June 30, 2021)	X	

Exhibit Number	Description	DTE Energy	DTE Electric
10(h)	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	
	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	
10(i)	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	
	First 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	
10(j)	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	
	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	
10(k)	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	
	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	
10(l)	Form of Fourth Amended and Restated Five-Year Credit Agreement, dated as of April 15, 2019, by and among DTE Energy Company, the lenders party thereto, and Citibank, N.A., as Administrative Agent (Exhibit 10.01 to DTE Energy Company's Form 8-K filed April 16, 2019)	X	
10(m)	Form of Fourth Amended and Restated Five-Year Credit Agreement, dated as of April 15, 2019, by and among DTE Gas Company, the lenders party thereto, and Citibank, N.A., as Administrative Agent (Exhibit 10.02 to DTE Energy Company's Form 8-K filed April 16, 2019)	X	
10(n)	Form of Fourth Amended and Restated Five-Year Credit Agreement, dated as of April 15, 2019, by and among DTE Electric Company, the lenders party thereto, and Citibank, N.A., as Administrative Agent (Exhibit 10.01 to DTE Energy Company's and DTE Electric Company's Form 8-K filed April 16, 2019)	X	X
10(o)	Form of Change-in-Control Agreement, dated as of March 3, 2014, between DTE Energy Company and each of Gerard M. Anderson, JoAnn Chavez, Joi Harris, Trevor F. Lauer, David E. Meador,Gerardo Norcia, Robert Richard, David Ruud and Mark Stiers (Exhibit 10.1 to DTE Energy Company's Form 8-K filed on March 3, 2014)	X	
	Form of Change-In-Control Severance Agreement dated as of July 1, 2014, between DTE Energy Company and Lisa A. Muschong, (Exhibit 10-91 to DTE Energy's Form 10-Q for the quarter ended June 30, 2014)	X	
	Form of Change-In-Control Severance Agreement dated as of July 1, 2014, between DTE Energy Company and Tracy J. Myrick (Exhibit 10-90 to DTE Energy's Form 10-Q for the quarter ended June 30, 2014)		
10(p)	Certain arrangements pertaining to the employment of Gerardo Norcia, dated July 1, 2019 (Exhibit 10.107 to DTE Energy's Form 10-K for the year ended December 31, 2019)	X	

Exhibit Number	Description	DTE Energy	DTE Electric
10(q)	Transition Services Agreement, dated June 25, 2021, between DTE Energy Company and DT Midstream, Inc. (Exhibit 10.1 to DTE Energy Company's Form 8-K filed on July 1, 2021)	X	
	Tax Matters Agreement, dated June 25, 2021, between DTE Energy Company and DT Midstream, Inc. (Exhibit 10.2 to DTE Energy Company's Form 8-K filed on July 1, 2021)	X	
	Employee Matters Agreement, dated June 25, 2021, between DTE Energy Company and DT Midstream, Inc. (Exhibit 10.3 to DTE Energy Company's Form 8-K filed on July 1, 2021)	X	

Item 16. ***Form 10-K Summary***

None.

DTE Energy Company

Schedule II — Valuation and Qualifying Accounts

	Year Ending December 31,		
	2021	**2020**	**2019**
		(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	**$ 104**	$ 83	$ 91
Additions:			
Charged to costs and expenses	**54**	105	103
Charged to other accounts[a]	**61**	50	56
Deductions[b]	**(127)**	(134)	(167)
Balance at End of Period	**$ 92**	$ 104	$ 83

(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,		
	2021	**2020**	**2019**
		(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	**$ 57**	$ 46	$ 53
Additions:			
Charged to costs and expenses	**36**	61	65
Charged to other accounts[a]	**38**	30	36
Deductions[b]	**(77)**	(80)	(108)
Balance at End of Period	**$ 54**	$ 57	$ 46

(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 10, 2022

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/ DAVID RUUD David Ruud Senior Vice President and Chief Financial Officer (Principal Financial Officer)
By:	/S/ TRACY J. MYRICK Tracy J. Myrick 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/ CHARLES G. MCCLURE JR. Charles G. McClure Jr., Director	By:	/S/ GARY TORGOW Gary Torgow, Director
By:	/S/ GAIL J. MCGOVERN Gail J. McGovern, Director	By:	/S/ JAMES H. VANDENBERGHE James H. Vandenberghe, Director
By:	/S/ MARK A. MURRAY Mark A. Murray, Director	By:	/S/ VALERIE M. WILLIAMS Valerie M. Williams, Director

Date: February 10, 2022

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, DTE Electric Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DTE ELECTRIC COMPANY
(Registrant)

By: /S/ GERARDO NORCIA
Gerardo Norcia
Chief Executive Officer

Date: February 10, 2022

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 Electric Company and in the capacities and on the date indicated.

By: /S/ GERARDO NORCIA
Gerardo Norcia
Chief Executive Officer, and Director
(Principal Executive Officer)

By: /S/ DAVID RUUD
David Ruud
Chief Financial Officer, and Director
(Principal Financial Officer)

By: /S/ TRACY J. MYRICK
Tracy J. Myrick
Chief Accounting Officer
(Principal Accounting Officer)

By: /S/ JOANN CHAVEZ
JoAnn Chavez, Director

By: /S/ LISA A. MUSCHONG
Lisa A. Muschong, Director

Date: February 10, 2022

Supplemental Information to be Furnished with Reports Filed Pursuant to Section 15(d) of the Securities Exchange Act of 1934 by Registrants Which Have Not Registered Securities Pursuant to Section 12 of the Securities Exchange Act of 1934.

No annual report, proxy statement, form of proxy, or other proxy soliciting material has been sent to security holders of DTE Electric Company during the period covered by this Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

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 one series of junior subordinated debentures issued in 2017 registered under Section 12 of the Securities Exchange Act of 1934, as amended:

- 2017 Series E 5.25% Junior Subordinated Debentures due 2077 (the "2017 Series E debentures" or the "junior subordinated 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

The 2017 Series E 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 2017 Series E debentures are our unsecured obligations and will be subordinate in right of payment to our Senior Indebtedness (as described below under "Subordination"). The 2017 Series E debentures were initially issued in an aggregate principal amount of $400,000,000.

The 2017 Series E debentures are listed on the New York Stock Exchange under the trading symbol "DTW."

The indenture does not limit the amount of indebtedness that we may issue. As of December 31, 2021, approximately $5.6 billion aggregate principal amount of senior debt securities, excluding current maturities, and $0.9 billion of junior subordinated debentures were issued and outstanding under the indenture. On December 31, 2021, we and our subsidiaries had consolidated long-term indebtedness of approximately $17.5 billion, substantially all of which would be effectively senior to the junior subordinated debentures.

The authorized denominations for the junior subordinated debentures are $25 and integral multiples thereof.

Interest and Principal

The 2017 Series E debentures bear interest at a rate of 5.25% per year, payable in arrears quarterly on March 1, June 1, September 1, and December 1 of each year, subject to deferral as described below under "Deferral of Payment Periods."

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 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 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 2017 Series E debentures at our option, in whole or in part, on or after December 1, 2022 at a redemption price of 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 2017 Series E debentures before December 1, 2022 in whole, but not in part, within 90 days following the occurrence and continuance of a Tax Event (defined below) at a redemption price of 101% of the principal amount of junior subordinated debentures being redeemed plus accrued and unpaid interest to, but excluding, the redemption date.

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 the 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 depositary, the depositary shall determine, in accordance with its procedures, the principal amount of such junior subordinated debentures held by each depositary 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 the 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 author 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 regulator 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 o 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 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 the 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 the 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 junior subordinated debentures (the "current criteria"), which change results in 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.

Deferral of Payment Periods

So long as there is no event of default under the indenture with respect to the junior subordinated debentures, we may defer interest payments on the junior subordinated debentures for a period of up to 40 consecutive quarters; 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 40 consecutive quarters, we may further defer the period, so long as the entire deferral period does not exceed 40 consecutive quarters 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:

- declare or pay any dividend or distribution on DTE Energy Company capital stock;
- 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 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 rig 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.

The junior subordinated debentures will rank equally with 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 cour 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 o 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 Indebtednes 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 perso 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 o and any additional amounts with respect to all the junior subordinated debentures issued thereunder, and the performance of our obligations under the inden 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 effec 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 the 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 deferra 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 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 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, a 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 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;
- 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 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:

- 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 junior subordinated debentures;
- adding to the covenants of DTE Energy for the benefit of the holders of the junior subordinated debentures (and if such covenants are to be for the benefit of less than all series of junior subordinated debentures, 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 junior subordinated debentures;
- 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;
- 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 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$^{2}/_{3}$% 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 debe 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 be registered in the name of Cede & Co., as DTC's nominee. DTC may discontinue providing its services as securities depositary 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 depositary 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 depositary) 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

As of the end of its most recent fiscal year, DTE Energy Company ("DTE Energy," "we," "our," or "us") had one series of junior subordinated debentures issued during 2021 registered under Section 12 of the Securities Exchange Act of 1934, as amended:

- 2021 Series E 4.375% Junior Subordinated Debentures due 2081 (the "2021 Series E debentures" or the "junior subordinated 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

The 2021 Series E 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 2021 Series E debentures are our unsecured obligations and will be subordinate in right of payment to our Senior Indebtedness (as described below under "Subordination"). The 2021 Series E debentures were initially issued in an aggregate principal amount of $280,000,000.

The 2021 Series E debentures are listed on the New York Stock Exchange under the trading symbol "DTG."

The indenture does not limit the amount of indebtedness that we may issue. As of December 31, 2021, approximately $5.6 billion aggregate principal amount of senior debt securities, excluding current maturities, and $0.9 billion of junior subordinated debentures were issued and outstanding under the indenture. On December 31, 2021, we and our subsidiaries had consolidated long-term indebtedness of approximately $17.5 billion, substantially all of which would be effectively senior to the junior subordinated debentures.

The authorized denominations for the junior subordinated debentures are $25 and integral multiples thereof.

Interest and Principal

The 2021 Series E debentures bear interest at a rate of 4.375% per year, payable in arrears quarterly on March 1, June 1, September 1, and December 1 of each year, subject to deferral as described below under "Deferral of Payment Periods."

The 2021 Series E debentures will mature and become due and payable, together with any accrued and unpaid interest thereon, on December 1, 2081.

Interest will be paid to the person in whose name the 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 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 2021 Series E debentures at our option, in whole or in part, on or after December 1, 2026 at a redemption price of 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 2021 Series E debentures before December 1, 2026 in whole, but not in part, within 90 days following the occurrence and continuance of a Tax Event (defined below) at a redemption price of 100% of the principal amount of junior subordinated debentures being redeemed plus accrued and unpaid interest to, but excluding, the redemption date.

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 the 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 depositary, the depositary shall determine, in accordance with its procedures, the principal amount of such junior subordinated debentures held by each depositary 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 the 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 author 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 regulator 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 o 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 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 the 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 the 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 junior subordinated debentures (the "current criteria"), which change results in 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.

Deferral of Payment Periods

So long as there is no event of default under the indenture with respect to the junior subordinated debentures, we may defer interest payments on the junior subordinated debentures for a period of up to 40 consecutive quarters; 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 40 consecutive quarters, we may further defer the period, so long as the entire deferral period does not exceed 40 consecutive quarters 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:

- declare or pay any dividend or distribution on DTE Energy Company capital stock;
- 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.

The junior subordinated debentures will rank equally with 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 perso 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 o and any additional amounts with respect to all the junior subordinated debentures issued thereunder, and the performance of our obligations under the inden 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 effec 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 the 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 deferra 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 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 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, ar 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 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 ir 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;
- 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 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:

- 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 junior subordinated debentures;
- adding to the covenants of DTE Energy for the benefit of the holders of the junior subordinated debentures (and if such covenants are to be for the benefit of less than all series of junior subordinated debentures, 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 junior subordinated debentures;
- 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;
- 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 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$^{2}/_{3}$% 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 be registered in the name of Cede & Co., as DTC's nominee. DTC may discontinue providing its services as securities depositary 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 depositary 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 depositary) 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.

Exhibit 4.3

FIFTY-SECOND
SUPPLEMENTAL INDENTURE

TO

INDENTURE OF MORTGAGE AND
DEED OF TRUST
DATED AS OF MARCH 1, 1944

AS RESTATED IN
PART II OF THE TWENTY-NINTH
SUPPLEMENTAL INDENTURE DATED AS OF JULY 15, 1989
WHICH BECAME EFFECTIVE ON APRIL 1, 1994

DTE GAS COMPANY
formerly known as
Michigan Consolidated Gas Company
TO
CITIBANK, N.A.,
TRUSTEE
DATED AS OF NOVEMBER 1, 2021

CREATING TWO ISSUES OF FIRST MORTGAGE BONDS,
DESIGNATED AS
2021 Series C BONDS
2021 SERIES D BONDS

DTE GAS COMPANY

FIFTY-SECOND SUPPLEMENTAL INDENTURE
DATED AS OF NOVEMBER 1, 2021
SUPPLEMENTAL TO INDENTURE OF MORTGAGE
AND DEED OF TRUST
DATED AS OF MARCH 1, 1944

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THIS FIFTY-SECOND SUPPLEMENTAL INDENTURE, dated as of the 1st day of November, 2021, between DTE GAS COMPANY, formerly known as Michigan Consolidated Gas Company, a corporation duly organized and existing under and by virtue of the laws of the State of Michigan (hereinafter called the "Company"), having its principal place of business at One Energy Plaza, Detroit, Michigan, 48226 and CITIBANK, N.A., a national banking association incorporated and existing under and by virtue of the laws of the United States of America, having an office at 388 Greenwich Street in the Borough of Manhattan, the City of New York, New York, 10013 as successor trustee (hereinafter with its predecessors as trustee called the "Mortgage Trustee" or the "Trustee"):

WHEREAS, the Company has heretofore executed and delivered to the Trustee an Indenture of Mortgage and Deed of Trust (the "Original Indenture"), dated as of March 1, 1944;

WHEREAS, the Company has heretofore executed and delivered to the Trustee the Twenty-ninth Supplemental Indenture, which became effective April 1, 1994, to provide for the modification and restatement of the Original Indenture as previously amended (as so amended, supplemented and modified the "Indenture"), and to secure the Company's First Mortgage Bonds, unlimited in aggregate principal amount except as therein otherwise provided, issued pursuant to the:

Thirtieth Supplemental Indenture, dated as of September 1, 1991;
Thirty-first Supplemental Indenture, dated as of December 15, 1991;
Thirty-second Supplemental Indenture, dated as of January 5, 1993;
Thirty-third Supplemental Indenture, dated as of May 1, 1995;
Thirty-fourth Supplemental Indenture, dated as of November 1, 1996;
Thirty-fifth Supplemental Indenture, dated as of June 18, 1998;
Thirty-sixth Supplemental Indenture, dated as of August 15, 2001;
Thirty-seventh Supplemental Indenture, dated as of February 15, 2003;
Thirty-eighth Supplemental Indenture, dated as of October 1, 2004;
Thirty-ninth Supplemental Indenture, dated as of April 1, 2008;
Fortieth Supplemental Indenture, dated as of June 1, 2008;
Forty-first Supplemental Indenture, dated as of August 1, 2008;
Forty-second Supplemental Indenture, dated as of December 1, 2008;
Forty-third Supplemental Indenture, dated as of December 1, 2012;
Forty-fourth Supplemental Indenture, dated as of December 1, 2013;
Forty-fifth Supplemental Indenture, dated as of December 1, 2014;
Forty-sixth Supplemental Indenture, dated as of August 1, 2015;
Forty-seventh Supplemental Indenture, dated as of December 1, 2016;
Forty-eighth Supplemental Indenture, dated as of September 1, 2017;
Forty-ninth Supplemental Indenture, dated as of August 1, 2018;
Fiftieth Supplemental Indenture, dated as of October 1, 2019;
Fifty-first Supplemental Indenture, dated as of August 1, 2020; and

WHEREAS, at the date hereof there were outstanding First Mortgage Bonds of the Company issued under the Indenture, of 19 series in the principal amounts set forth below including Collateral Bonds):

Designation of Series	**Amount Initially Issued**	**Amount Outstanding**
First Mortgage Bonds		
2012 Series D First Mortgage Bonds	$70,000,000	$70,000,000
2013 Series C First Mortgage Bonds	$50,000,000	$50,000,000
2013 Series D First Mortgage Bonds	$70,000,000	$70,000,000
2013 Series E First Mortgage Bonds	$50,000,000	$50,000,000
2014 Series F First Mortgage Bonds	$150,000,000	$150,000,000
2015 Series C First Mortgage Bonds	$40,000,000	$40,000,000
2015 Series D First Mortgage Bonds	$125,000,000	$125,000,000
2016 Series G First Mortgage Bonds	$125,000,000	$125,000,000
2017 Series C First Mortgage Bonds	$40,000,000	$40,000,000
2017 Series D First Mortgage Bonds	$40,000,000	$40,000,000
2018 Series B First Mortgage Bonds	$195,000,000	$195,000,000
2018 Series C First Mortgage Bonds	$125,000,000	$125,000,000
2019 Series D First Mortgage Bonds	$140,000,000	$140,000,000
2019 Series E First Mortgage Bonds	$140,000,000	$140,000,000
2020 Series D First Mortgage Bonds	$125,000,000	$125,000,000
2020 Series E First Mortgage Bonds	$125,000,000	$125,000,000
Collateral Bonds (Senior Notes)		
5.70% Collateral Bonds due 2033	$200,000,000	$200,000,000
2008 Series C Collateral Bonds	$25,000,000	$25,000,000
2008 Series F Collateral Bonds	$75,000,000	$75,000,000

WHEREAS, the Company desires in and by this Supplemental Indenture to establish two series of bonds to be issued under the Indenture designated and distinguished as 2021 Series C Bonds and 2021 Series D Bonds (herein collectively sometimes called the "Bonds"), to designate the terms thereof, to specify the particulars necessary to describe and define the same and to specify such other provisions and agreements in respect thereof as are in the Indenture provided or permitted; and

WHEREAS, all the conditions and requirements necessary to make this Supplemental Indenture, when duly executed and delivered, a valid, binding and legal instrument in accordance with its terms and for the purposes herein expressed, have been done, performed and fulfilled, and the execution and delivery of this Supplemental Indenture in the form and with the terms hereof have been in all respects duly authorized;

NOW, THEREFORE, in consideration of the premises and in further consideration of the sum of One Dollar in lawful money of the United States of America paid to the Company by the Trustee at or before the execution and delivery of this Fifty-Second Supplemental Indenture, the receipt whereof is hereby acknowledged, and of other good and valuable consideration, it is agreed by and between the Company and the Trustee as follows:

ARTICLE I
ESTABLISHMENT OF AN ISSUE OF FIRST MORTGAGE BONDS, OF THE SERIES DESIGNATED AND DISTINGUISHED AS "2021 SERIES C BONDS"

SECTION 1

There is hereby established a series of bonds to be issued under and secured by the Indenture, to be known as "First Mortgage Bonds," designated and distinguished as "2021 Series C Bonds" of the Company. The 2021 Series C Bonds shall be limited in aggregate principal amount to $60,000,000 except as provided in Article II of the Indenture and in this Supplemental Indenture with respect to transfers, exchanges and replacements of the 2021 Series C Bonds. The 2021 Series C Bonds shall be registered bonds without coupons and shall be dated as of the date of the authentication thereof by the Trustee.

The 2021 Series C Bonds shall mature on the 1st day of December, 2031 (subject to earlier redemption, as provided herein), shall bear interest at the rate of 2.07% per annum, payable semi-annually on the 1st day of June and December of each year and at maturity (each a "2021 Series C Interest Payment Date"), beginning on June 1, 2022. The principal, Make-Whole Amount (as defined below), if any, and interest on the 2021 Series C Bonds shall be payable in lawful money of the United States of America; the place where such principal and Make-Whole Amount, if any, shall be payable shall be the corporate trust office of the Trustee in the Borough of Manhattan, the City of New York, New York, and the place where such interest shall be payable shall be the office or agency of the Company in said Borough of Manhattan, the City of New York, New York. The 2021 Series C Bonds shall have such other terms as set forth in the form of 2021 Series C Bond provided in Section 3.

SECTION 2

The 2021 Series C Bonds shall be subject to redemption at the option of the Company, in whole at any time or in part from time to time (any such date of redemption, a "2021 Series C Redemption Date"), at the applicable redemption price ("2021 Series C Redemption Price") set forth below.

At any time prior to September 1, 2031 (the "2021 Series C Par Call Date"), the 2021 Series C Redemption Price will be equal to 100% of the principal amount of the 2021 Series C Bonds to be redeemed on the 2021 Series C Redemption Date together with the Make-Whole Amount (as defined in the form of 2021 Series C Bond provided in Section 3), if any, plus, in each case, accrued and unpaid interest thereon to the 2021 Series C Redemption Date.

At any time on or after the 2021 Series C Par Call Date, the 2021 Series C Redemption Price will be equal to 100% of the principal amount of the bonds of 2021 Series C to be redeemed plus accrued and unpaid interest thereon to the redemption date.

Notwithstanding the foregoing, installments of interest on the 2021 Series C Bonds that are due and payable on 2021 Series C Interest Payment Dates falling on or prior to the 2021 Series C Redemption Date will be payable on the 2021 Series C Interest Payment Date to the registered holders as of the close of business on the relevant record date.

Notice of redemption shall be given to the holders of the 2021 Series C Bonds to be redeemed not more than 60 nor less than 30 days prior to the 2021 Series C Redemption Date, as provided in Section 4.05 of the Indenture. Each such notice shall specify such optional 2021 Series C Redemption Date, the aggregate principal amount of the 2021 Series C Bonds to be redeemed on such date, the principal amount of each 2021 Series C Bond held by such holder to be redeemed, and the interest to be paid on the 2021 Series C Redemption Date with respect to such principal amount being prepaid. In addition, if the 2021 Series C Redemption Date is prior to the 2021 Series C Par Call Date, each such notice shall be accompanied by a certificate of a senior financial officer of the Company as to the estimated Make-Whole Amount due in connection with such redemption (with the Reinvestment Yield calculated, solely for purposes of such estimate, using the relevant U.S. Treasury yield as of the second Business Day preceding the date of such notice), setting forth the details of such computation. The Make-Whole Amount shall be determined by the Company two Business Days prior to the applicable 2021 Series C Redemption Date and the Company shall deliver to holders of the 2021 Series C Bonds and to the Trustee a certificate of a senior financial officer specifying the calculation of such Make-Whole Amount as of the 2021 Series C Redemption Date.

Subject to the limitations of Section 4.07 of the Indenture, the notice of redemption may state that it is subject to the receipt of the redemption moneys by the Trustee on or before the 2021 Series C Redemption Date, and that such notice shall be of no effect unless such moneys are so received on or before such date.

If the 2021 Series C Bonds are only partially redeemed by the Company, the Trustee shall select which 2021 Series C Bonds are to be redeemed pro rata among all of the 2021 Series C Bonds at the time outstanding in proportion, as nearly as practicable, to the respective unpaid principal amounts thereof and otherwise in accordance with the terms of the Indenture. In the event of redemption of the 2021 Series C Bonds in part only, a new 2021 Series C Bond or 2021 Series C Bonds for the unredeemed portion will be issued in the name or names of the holders thereof upon the surrender or cancellation thereof.

If money sufficient to pay the applicable 2021 Series C Redemption Price with respect to the 2021 Series C Bonds to be redeemed on the applicable 2021 Series C Redemption Date, together with accrued interest to the 2021 Series C Redemption Date, is deposited with the Trustee on or before the related 2021 Series C Redemption Date and certain other conditions are satisfied, then the 2021 Series C Bonds to be redeemed shall no longer be secured by, or entitled to any lien or benefit of, the Indenture as provided by Section 4.04 of the Indenture.

The 2021 Series C Bonds will not be entitled to any sinking fund and will not be redeemable other than as provided in this Section 2 and the form of 2021 Series C Bond provided in Section 3.

SECTION 3

The 2021 Series C Bonds shall be registered bonds without coupons. The Trustee shall be the registrar and paying agent for the 2021 Series C Bonds, which duties it hereby accepts. The 2021 Series C Bonds may be issued in minimum denominations of $100,000 or any integral multiple of $1,000 in excess thereof.

The forms of 2021 Series C Bonds shall be substantially as follows:

[FORM OF DTE GAS COMPANY 2.07% FIRST MORTGAGE BONDS 2021 SERIES C DUE 2031]

PPN:

No. R-___ $_____

THE SECURITIES EVIDENCED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT (A) PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT AND (B) IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES. IN CONNECTION WITH ANY TRANSFER, THE HOLDER WILL DELIVER TO THE COMPANY AND THE TRUSTEE SUCH CERTIFICATES AND OTHER INFORMATION AS THE TRUSTEE MAY REASONABLY REQUIRE TO CONFIRM THAT THE TRANSFER COMPLIES WITH THE FOREGOING RESTRICTIONS.

DTE GAS COMPANY

2.07% MORTGAGE BONDS

2021 SERIES C DUE 2031

Principal Amount: $_____

Authorized Denomination: $100,000 or any integral multiple of $1,000 in excess thereof.

Regular Record Date: close of business on the 15th calendar day (whether or not a Business Day) prior to the relevant Interest Payment Date

Original Issue Date: November 16, 2021

Stated Maturity: December 1, 2031

Interest Payment Dates: June 1 and December 1 of each year, beginning June 1, 2022.

Interest Rate: 2.07% per annum

DTE GAS COMPANY (hereinafter called the "Company"), a corporation of the State of Michigan, for value received, hereby promises to pay to _____, or registered assigns, the sum of _____ Dollars ($_____) on the Stated Maturity specified above, in the coin or currency of the United States of America, and to pay interest thereon from the Original Issue Date specified above, or from the most recent Interest Payment Date to which interest has been paid or duly provided for, semi-annually in arrears on each Interest Payment Date as specified above, commencing on June 1, 2022 and on the Stated Maturity at the Interest Rate per annum specified above until the principal hereof is paid or made available for payment, and on any overdue principal and Make-Whole Amount (defined below) and, to the extent lawful, on any overdue installment of interest. The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in the Indenture, be paid to the person in whose name this bond is registered at the close of business on the Regular Record Date as specified above next preceding such Interest Payment Date; provided that any interest payable at Stated Maturity or on a Redemption Date (defined below) will be paid to the person to whom principal is payable. Except as otherwise provided in the Indenture, any such interest not so punctually paid or duly provided for will forthwith cease to be payable to the holder on such Regular Record Date and may either be paid to the person in whose name this bond is registered at the close of business on a special record date for the payment of such defaulted interest to be fixed by the Trustee, notice whereof shall be given to holders of bonds of this series not less than 10 days prior to such special record date, or be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange, if any, on which the bonds of this series shall be listed, and upon such notice as may be required by any such exchange, all as more fully provided in the Indenture.

Payments of interest on this bond will include interest accrued to but excluding the respective Interest Payment Dates. Interest payments for this bond shall be computed and paid on the basis of a 360-day year consisting of twelve 30-day months. The Company shall pay interest on overdue principal and Make-Whole Amount, if any, and, to the extent lawful, on overdue installments of interest at the rate per annum borne by this bond. In the event that any Interest Payment Date, Redemption Date or Stated Maturity is not a Business Day, then the required payment of principal, Make-Whole Amount, if any, 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). "Business Day" means any day other than a day on which banking institutions in the State of New York or the State of Michigan are authorized or obligated pursuant to law or executive order to close.

Payment of principal of, Make-Whole Amount, if any, and interest on the bonds of this series shall be made in such coin or currency of the United States of America as at the time of payment is legal tender for payment of public and private debts. Payments of principal, Make-Whole Amount, if any, and interest due at the Stated Maturity or earlier redemption of such bonds shall be made at the office of the Trustee upon surrender of such bonds to the Trustee, and

payments of interest shall be made, at the option of the Company, subject to such surrender where applicable, (A) by check mailed to the address of the person entitled thereto as such address shall appear in the bond register of the Trustee maintained for such purpose or (B) by wire transfer at such place and to such account at a banking institution in the United States as may be designated in writing to the Trustee at least fourteen (14) days prior to the date for payment by the person entitled thereto. Notwithstanding the foregoing, so long as any bond is held by an Institutional Investor (as defined in the Bond Purchase Agreement referenced below), payment of principal, Make-Whole Amount, if any, and interest on the bonds held by such holder shall be made in the manner specified in the Bond Purchase Agreement dated as of November 16, 2021 among the Company and the purchasers party thereto.

The bonds represented by this certificate, of the series hereinafter specified, are bonds of the Company (herein called the "bonds") known as its "First Mortgage Bonds," issued and to be issued in one or more series under, and all equally and ratably secured by, an Indenture of Mortgage and Deed of Trust dated as of March 1, 1944, duly executed by the Company to Citibank, N.A., successor trustee ("Trustee"), as restated in Part II of the Twenty-ninth Supplemental Indenture dated as of July 15, 1989, which became effective on April 1, 1994, to which indenture and all indentures supplemental thereto executed on and after July 15, 1989 reference is hereby made for a description of the property mortgaged and pledged, the nature and extent of the security, the terms and conditions upon which the bonds are, and are to be, issued and secured, and the rights of the holders of the bonds and of the Trustee in respect of such security (which indenture and all indentures supplemental thereto, including the Fifty-Second Supplemental Indenture dated as of November 1, 2021 referred to below, are hereinafter collectively called the "Indenture"). As provided in the Indenture, the bonds may be issued thereunder for various principal sums and are issuable in series, which may mature at different times, may bear interest at different rates and may otherwise vary as therein provided. The bonds represented by this certificate are part of a series designated "2.07% First Mortgage Bonds 2021 Series C" (herein called the "Bonds"), created by the Fifty-Second Supplemental Indenture dated as of November 1, 2021 as provided for in said Indenture.

With the consent of the Company and to the extent permitted by and as provided in the Indenture, the rights and obligations of the Company, the rights and obligations of the holders of the Bonds, and the terms and provisions of the Indenture may be modified or altered by such affirmative vote or votes of the holders of the Bonds then outstanding as are specified in the Indenture.

In case an Event of Default as defined in the Indenture shall occur, the principal of the Bonds may become or be declared due and payable in the manner, with the effect, and subject to the conditions provided in the Indenture. Upon any such declaration, the Company shall also pay to the holders of the Bonds the Make-Whole Amount on the Bonds, if any, determined as of the date the Bonds shall have been declared due and payable.

No recourse shall be had for the payment of the principal of, Make-Whole Amount, if any, or the interest on, the Bonds, or for any claim based hereon or otherwise in respect of the Bonds or the Indenture, against any incorporator, stockholder, director or officer, past, present or

future, of the Company, as such, or any predecessor or successor corporation, either directly or through the Company or any such predecessor or successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability, whether at common law, in equity, by any constitution, statute or otherwise, of incorporators, stockholders, directors or officers being waived and released by the owner hereof by the acceptance of the Bonds, and as part of the consideration for the issue thereof, and being likewise waived and released pursuant to the Indenture.

This Bond shall be subject to redemption at the option of the Company, in whole at any time or in part from time to time (any such date of optional redemption, a "Redemption Date"), at the applicable redemption price ("Redemption Price") set forth below.

At any time prior to September 1, 2031 (the "Par Call Date"), the Redemption Price will be equal to 100% of the principal amount of the Bonds to be redeemed on the Redemption Date together with the Make-Whole Amount (as defined below), if any, plus, in each case, accrued and unpaid interest thereon to the Redemption Date.

At any time on or after the Par Call Date, the Redemption Price will be equal to 100% of the principal amount of the Bonds to be redeemed on the Redemption Date plus accrued and unpaid interest thereon to the Redemption Date.

Notwithstanding the foregoing, installments of interest on the Bonds 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.

"Make-Whole Amount" means, with respect to any Bond, a premium in an amount equal to the excess, if any, of the Discounted Value of the Remaining Scheduled Payments with respect to the Called Principal of such Bond over the amount of such Called Principal, provided that the Make-Whole Amount may in no event be less than zero. If the Settlement Date is prior to the Par Call Date, the Make-Whole Amount with respect to any Called Principal of a Bond shall be determined as if the Stated Maturity of such Bond were the Par Call Date; provided that the Make-Whole Amount shall in no event be less than zero. For the purposes of determining the Make-Whole Amount, the following terms have the following meanings:

"Called Principal" means, with respect to a Bond, the principal of the Bond that is to be redeemed on a Redemption Date or has become or is declared to be immediately due and payable pursuant to Section 9.01 of the Indenture, as the context requires.

"Discounted Value" means, with respect to the Called Principal of a Bond, the amount obtained by discounting all Remaining Scheduled Payments with respect to such Called Principal from their respective scheduled due dates to the Settlement Date with respect to such Called Principal, in accordance with accepted financial practice and at a discount factor (applied on the same periodic basis as that on which interest on the Bond is payable) equal to the Reinvestment Yield with respect to such Called Principal.

"Reinvestment Yield" means, with respect to the Called Principal of a Bond, the sum of (a) 0.50% (50 basis points) plus (b) the yield to maturity implied by the "Ask Yield(s)" reported, as of 10:00 a.m. (New York City time) on the second Business Day preceding the Settlement Date with respect to such Called Principal, on the display designated as "Page PX-1" (or such other display as may replace Page PX-1), on Bloomberg Financial Markets for the most recently issued, actively traded on-the-run, benchmark U.S. Treasury securities ("Reported") having a maturity equal to the Remaining Average Life of such Called Principal as of such Settlement Date.

If there are no such U.S. Treasury securities Reported having a maturity equal to such Remaining Average Life, then such implied yield to maturity will be determined by (a) converting U.S. Treasury bill quotations to bond equivalent yields in accordance with accepted financial practice and (b) interpolating linearly between the "Ask Yields" Reported for the applicable most recently issued, actively traded on-the-run, U.S. Treasury securities with the maturities (1) closest to and greater than such Remaining Average Life and (2) closest to and less than the Remaining Average Life. The Reinvestment Yield shall be rounded to the number of decimal places as appears in the interest rate of the applicable Bond. If such yields are not Reported or the yields Reported as of such time are not ascertainable (including by way of interpolation), then "Reinvestment Yield" means, with respect to the Called Principal of any Bond, the sum of (x) 0.50% (50 basis points) plus (y) the yield to maturity implied by the U.S. Treasury constant maturity yields reported, for the latest day for which such yields have been so reported as of the second Business Day preceding the Settlement Date with respect to such Called Principal, in Federal Reserve Statistical Release H.15 (519) (or any comparable successor publication) for the U.S. Treasury constant maturity having a term equal to the Remaining Average Life of such Called Principal as of such Settlement Date. If there is no such U.S. Treasury constant maturity having a term equal to such Remaining Average Life, such implied yield to maturity will be determined by interpolating linearly between (1) the U.S. Treasury constant maturity so reported with the term closest to and greater than such Remaining Average Life and (2) the U.S. Treasury constant maturity so reported with the term closest to and less than such Remaining Average Life. The Reinvestment Yield shall be rounded to the number of decimal places as appears in the interest rate of the applicable Bond.

"Remaining Average Life" means, with respect to any Called Principal, the number of years obtained by dividing (i) such Called Principal into (ii) the sum of the products obtained by multiplying (a) the principal component of each Remaining Scheduled Payment with respect to such Called Principal by (b) the number of years, computed on the basis of a 360-day year comprised of twelve 30-day months and calculated to two decimal places, that will elapse between the Settlement Date with respect to such Called Principal and the Stated Maturity (or, if redeemed prior to the Par Call Date, the Par Call Date) of such Remaining Scheduled Payment.

"Remaining Scheduled Payments" means, with respect to the Called Principal of a Bond, all payments of such Called Principal and interest thereon that would be due after the Settlement Date with respect to such Called Principal if no payment of such Called Principal were made prior to its Stated Maturity (or, if redeemed prior to the Par Call Date, the Par Call Date), provided that if such Settlement Date is not a date on which interest payments are due to be made

under the terms of the Bond, then the amount of the next succeeding scheduled interest payment will be reduced by the amount of interest accrued to such Settlement Date and required to be paid on such Settlement Date.

"Settlement Date" means, with respect to the Called Principal of a Bond, the Redemption Date on which such Called Principal is to be redeemed or has become or is declared to be immediately due and payable pursuant to Section 9.01 of the Indenture as the context requires.

Notice of redemption shall be given to the holders of the Bonds to be redeemed not more than 60 nor less than 30 days prior to the Redemption Date, as provided in Section 4.05 of the Indenture. Each such notice shall specify such Redemption Date, the aggregate principal amount of the Bonds to be redeemed on such date, the principal amount of each Bond held by such holder to be redeemed, and the interest to be paid on the Redemption Date with respect to such principal amount being prepaid. In addition, if the Redemption Date is prior to the Par Call Date, each such notice shall be accompanied by a certificate of a senior financial officer of the Company as to the estimated Make-Whole Amount due in connection with such redemption (with the Reinvestment Yield calculated, solely for purposes of such estimate, using the relevant U.S. Treasury yield as of the second Business Day preceding the date of such notice), setting forth the details of such computation. The Make-Whole Amount shall be determined by the Company two Business Days prior to the applicable Redemption Date and the Company shall deliver to holders of the Bonds and to the Trustee a certificate of a senior financial officer specifying the calculation of such Make-Whole Amount as of the Redemption Date.

Subject to the limitations of Section 4.07 of the Indenture, the notice of redemption may state that it is subject to the receipt of the redemption moneys by the Trustee on or before the Redemption Date, and that such notice shall be of no effect unless such moneys are so received on or before such date; a notice of redemption so conditioned shall be of no force or effect if such money is not so received and, in such event, the Company shall not be required to redeem this Bond.

If the Bonds are only partially redeemed by the Company, the Trustee shall select which Bonds are to be redeemed pro rata among all of the Bonds at the time outstanding in proportion, as nearly as practicable, to the respective unpaid principal amounts thereof and otherwise in accordance with the terms of the Indenture. In the event of redemption of the Bonds in part only, a new Bond or Bonds for the unredeemed portion will be issued in the name or names of the holders thereof upon the surrender or cancellation thereof.

If money sufficient to pay the applicable Redemption Price with respect to the Bonds to be redeemed on the applicable Redemption Date, together with accrued interest to the Redemption Date, is deposited with the Trustee on or before the related Redemption Date and certain other conditions are satisfied, then the Bonds to be redeemed shall no longer be secured by, or entitled to any lien or benefit of, the Indenture as provided by Section 4.04 of the Indenture.

The Indenture contains terms, provisions and conditions relating to the consolidation or merger of the Company with or into, and the conveyance, or other transfer or lease, subject to the

lien of the Indenture, of the trust estate to, another corporation, to the assumption by such other corporation, in certain circumstances, of the obligations of the Company under the Indenture and on the Bonds and to the succession of such other corporation in certain circumstances, to the powers and rights of the Company under the Indenture.

The Indenture contains provisions for defeasance at any time of the entire indebtedness of the Bonds or certain covenants with respect thereto upon compliance by the Company with certain conditions set forth therein.

This Bond shall not be valid or become obligatory for any purpose unless and until the certificate of authentication hereon shall have been manually executed by the Trustee or its successor in trust under the Indenture.

IN WITNESS WHEREOF, DTE GAS COMPANY has caused this certificate to be executed under its name with the signature of its duly authorized Officer, under its corporate seal, which may be a facsimile, attested with the signature of its Corporate Secretary.

Dated:

DTE GAS COMPANY

By:_____

Attest:

By:_____

CERTIFICATE OF AUTHENTICATION

The bonds represented by this certificate constitute Bonds of the series designated and described in the within-mentioned Indenture.

CITIBANK, N.A., as Trustee

By:_____
Authorized Officer

Dated:

[End of 2021 Series C Bond Form]

SECTION 4

Each certificate evidencing the 2021 Series C Bonds (and all 2021 Series C Bonds issued in exchange therefor or in substitution thereof) shall bear a legend in substantially the following form (each defined term in the legend being defined as such for purposes of the legend only):

THE SECURITIES EVIDENCED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT (A) PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT AND (B) IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES. IN CONNECTION WITH ANY TRANSFER, THE HOLDER WILL DELIVER TO THE COMPANY AND THE TRUSTEE SUCH CERTIFICATES AND OTHER INFORMATION AS THE TRUSTEE MAY REASONABLY REQUIRE TO CONFIRM THAT THE TRANSFER COMPLIES WITH THE FOREGOING RESTRICTIONS.

The 2021 Series C Bonds shall be exchangeable upon surrender thereof at the corporate trust office of the Trustee in the Borough of Manhattan, the City of New York, New York, for registered bonds of the same aggregate principal amount and other terms, but of different authorized denomination or denominations, such exchanges to be made without service charge (except for any stamp tax or other governmental charge).

When 2021 Series C Bonds are presented to the Trustee with a request (i) to register the transfer of such 2021 Series C Bonds; or (ii) to exchange such 2021 Series C Bonds for 2021 Series C Bonds of the same series of any authorized denominations of the same aggregate principal amount and Stated Maturity, the Trustee shall register the transfer or make the exchange as requested if its reasonable requirements for such transaction are met; provided, however, that the 2021 Series C Bonds surrendered for transfer or exchange: (A) shall be duly endorsed or be accompanied by a written instrument of transfer in form reasonably satisfactory to the Company and the Trustee, duly executed by the holder thereof or his attorney duly authorized in writing; and (B) are accompanied by the following additional information and documents, as applicable: (x) if such 2021 Series C Bonds are being delivered to the Company by a holder for registration in the name of such holder, without transfer, a certification from such holder to that effect; or (y) if such 2021 Series C Bonds are being transferred to the Company, a certification to that effect; or (z) if such 2021 Series C Bonds are being transferred pursuant to an exemption from registration in accordance with Rule 144 under the Securities Act or in reliance upon another exemption from the registration requirements of the Securities Act, (i) a certification to that effect and (ii) if the Company so requests, other evidence reasonably satisfactory to it as to the compliance with the restrictions set forth in the legend set forth above.

Every 2021 Series C Bond so surrendered shall be accompanied by a proper transfer power duly executed by the registered owner or by a duly authorized attorney transferring such 2021 Series C Bond to the Company, and the signature to such transfer power shall be guaranteed to the satisfaction of the Trustee. All 2021 Series C Bonds so surrendered shall be forthwith canceled and delivered to or upon the order of the Company. All 2021 Series C Bonds

executed, authenticated and delivered in exchange for 2021 Series C Bonds so surrendered shall be valid obligations of the Company, evidencing the same debt as the 2021 Series C Bonds surrendered, and shall be secured by the same lien and be entitled to the same benefits and protection as the 2021 Series C Bonds in exchange for which they are executed, authenticated and delivered.

The Company shall not be required to make any such exchange or any registration of transfer after the 2021 Series C Bond so presented for exchange or registration of transfer, or any portion thereof, has been called for redemption and notice thereof given to the registered owner.

SECTION 5

Pending the preparation of definitive 2021 Series C Bonds, the Company may from time to time execute, and upon its written order, the Trustee shall authenticate and deliver, in lieu of such definitive 2021 Series C Bonds and subject to the same provisions, limitations and conditions, one or more temporary 2021 Series C Bonds, in registered form, of any denomination specified in the written order of the Company for the authentication and delivery thereof, and with such omissions, insertions and variations as may be determined by the Board of Directors of the Company. Such temporary 2021 Series C Bonds shall be substantially of the tenor of the 2021 Series C Bonds to be issued as herein before recited.

If any such temporary 2021 Series C Bonds shall at any time be so authenticated and delivered in lieu of definitive 2021 Series C Bonds, the Company shall upon request at its own expense prepare, execute and deliver to the Trustee and thereupon, upon the presentation and surrender of temporary 2021 Series C Bonds, the Trustee shall authenticate and deliver in exchange therefor, without charge to the holder, definitive Bonds of the same series and other terms, if any, and for the same principal sum in the aggregate as the temporary 2021 Series C Bonds surrendered. All temporary 2021 Series C Bonds so surrendered shall be forthwith canceled by the Trustee and delivered to or upon the order of the Company. Until exchanged for definitive 2021 Series C Bonds the temporary 2021 Series C Bonds shall in all respects be entitled to the lien and security of the Indenture and all supplemental indentures.

ARTICLE II
ESTABLISHMENT OF AN ISSUE OF
FIRST MORTGAGE BONDS, OF THE SERIES
DESIGNATED AND DISTINGUISHED AS "2021 SERIES D BONDS"

SECTION 1

There is hereby established a series of bonds to be issued under and secured by the Indenture, to be known as "First Mortgage Bonds," designated and distinguished as "2021 Series D Bonds" of the Company. The 2021 Series D Bonds shall be limited in aggregate principal amount to $95,000,000 except as provided in Article II of the Indenture and in this Supplemental Indenture with respect to transfers, exchanges and replacements of the 2021 Series D Bonds. The 2021 Series D Bonds shall be registered bonds without coupons and shall be dated as of the date of the authentication thereof by the Trustee.

The 2021 Series D Bonds shall mature on the 1st day of December, 2051 (subject to earlier redemption, as provided herein), shall bear interest at the rate of 2.85% per annum, payable semi-annually on the 1st day of June and December of each year and at maturity (each a "2021 Series D Interest Payment Date"), beginning on June 1, 2022. The principal, Make-Whole Amount (as defined below), if any, and interest on the 2021 Series D Bonds shall be payable in lawful money of the United States of America; the place where such principal and Make-Whole Amount, if any, shall be payable shall be the corporate trust office of the Trustee in the Borough of Manhattan, the City of New York, New York, and the place where such interest shall be payable shall be the office or agency of the Company in said Borough of Manhattan, the City of New York, New York. The 2021 Series D Bonds shall have such other terms as set forth in the form of 2021 Series D Bond provided in Section 3.

SECTION 2

The 2021 Series D Bonds shall be subject to redemption at the option of the Company, in whole at any time or in part from time to time (any such date of redemption, a "2021 Series D Redemption Date"), at the applicable redemption price ("2021 Series D Redemption Price") set forth below.

At any time prior to June 1, 2051 (the "2021 Series D Par Call Date"), the 2021 Series D Redemption Price will be equal to 100% of the principal amount of the 2021 Series D Bonds to be redeemed on the 2021 Series D Redemption Date together with the Make-Whole Amount (as defined in the form of 2021 Series D Bond provided in Section 3), if any, plus, in each case, accrued and unpaid interest thereon to the 2021 Series D Redemption Date.

At any time on or after the 2021 Series D Par Call Date, the 2021 Series D Redemption Price will be equal to 100% of the principal amount of the bonds of 2021 Series D to be redeemed plus accrued and unpaid interest thereon to the redemption date.

Notwithstanding the foregoing, installments of interest on the 2021 Series D Bonds that are due and payable on 2021 Series D Interest Payment Dates falling on or prior to the 2021 Series D Redemption Date will be payable on the 2021 Series D Interest Payment Date to the registered holders as of the close of business on the relevant record date.

Notice of redemption shall be given to the holders of the 2021 Series D Bonds to be redeemed not more than 60 nor less than 30 days prior to the 2021 Series D Redemption Date, as provided in Section 4.05 of the Indenture. Each such notice shall specify such optional 2021 Series D Redemption Date, the aggregate principal amount of the 2021 Series D Bonds to be redeemed on such date, the principal amount of each 2021 Series D Bond held by such holder to be redeemed, and the interest to be paid on the 2021 Series D Redemption Date with respect to such principal amount being prepaid. In addition, if the 2021 Series D Redemption Date is prior to the 2021 Series D Par Call Date, each such notice shall be accompanied by a certificate of a senior financial officer of the Company as to the estimated Make-Whole Amount due in connection with such redemption (with the Reinvestment Yield calculated, solely for purposes of such estimate, using the relevant U.S. Treasury yield as of the second Business Day preceding the date of such notice), setting forth the details of such computation. The Make-Whole Amount shall be determined by the Company two Business Days prior to the applicable 2021 Series D Redemption Date and the Company shall deliver to holders of the 2021 Series D Bonds and to the Trustee a certificate of a senior financial officer specifying the calculation of such Make-Whole Amount as of the 2021 Series D Redemption Date.

Subject to the limitations of Section 4.07 of the Indenture, the notice of redemption may state that it is subject to the receipt of the redemption moneys by the Trustee on or before the 2021 Series D Redemption Date, and that such notice shall be of no effect unless such moneys are so received on or before such date.

If the 2021 Series D Bonds are only partially redeemed by the Company, the Trustee shall select which 2021 Series D Bonds are to be redeemed pro rata among all of the 2021 Series D Bonds at the time outstanding in proportion, as nearly as practicable, to the respective unpaid principal amounts thereof and otherwise in accordance with the terms of the Indenture. In the event of redemption of the 2021 Series D Bonds in part only, a new 2021 Series D Bond or 2021 Series D Bonds for the unredeemed portion will be issued in the name or names of the holders thereof upon the surrender or cancellation thereof.

If money sufficient to pay the applicable 2021 Series D Redemption Price with respect to the 2021 Series D Bonds to be redeemed on the applicable 2021 Series D Redemption Date, together with accrued interest to the 2021 Series D Redemption Date, is deposited with the Trustee on or before the related 2021 Series D Redemption Date and certain other conditions are satisfied, then the 2021 Series D Bonds to be redeemed shall no longer be secured by, or entitled to any lien or benefit of, the Indenture as provided by Section 4.04 of the Indenture.

The 2021 Series D Bonds will not be entitled to any sinking fund and will not be redeemable other than as provided in this Section 2 and the form of 2021 Series D Bond provided in Section 3.

SECTION 3

The 2021 Series D Bonds shall be registered bonds without coupons. The Trustee shall be the registrar and paying agent for the 2021 Series D Bonds, which duties it hereby accepts. The 2021 Series D Bonds may be issued in minimum denominations of $100,000 or any integral multiple of $1,000 in excess thereof.

The forms of 2021 Series D Bonds shall be substantially as follows:

[FORM OF DTE GAS COMPANY 2.85% FIRST MORTGAGE BONDS 2021 SERIES D DUE 2051]

PPN:

No. R-___ $_____

THE SECURITIES EVIDENCED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT (A) PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT AND (B) IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES. IN CONNECTION WITH ANY TRANSFER, THE HOLDER WILL DELIVER TO THE COMPANY AND THE TRUSTEE SUCH CERTIFICATES AND OTHER INFORMATION AS THE TRUSTEE MAY REASONABLY REQUIRE TO CONFIRM THAT THE TRANSFER COMPLIES WITH THE FOREGOING RESTRICTIONS.

DTE GAS COMPANY

2.85% MORTGAGE BONDS

2021 SERIES D DUE 2051

Principal Amount: $_____

Authorized Denomination: $100,000 or any integral multiple of $1,000 in excess thereof.

Regular Record Date: close of business on the 15th calendar day (whether or not a Business Day) prior to the relevant Interest Payment Date

Original Issue Date: November 16, 2021

Stated Maturity: December 1, 2051

Interest Payment Dates: June 1 and December 1 of each year, beginning June 1, 2022.

Interest Rate: 2.85% per annum

DTE GAS COMPANY (hereinafter called the "Company"), a corporation of the State of Michigan, for value received, hereby promises to pay to _____, or registered assigns, the sum of _____ Dollars ($_____) on the Stated Maturity specified above, in the coin or currency of the United States of America, and to pay interest thereon from the Original Issue Date specified above, or from the most recent Interest Payment Date to which interest has been paid or duly provided for, semi-annually in arrears on each Interest Payment Date as specified above, commencing on June 1, 2022 and on the Stated Maturity at the Interest Rate per annum specified above until the principal hereof is paid or made available for payment, and on any overdue principal and Make-Whole Amount (defined below) and, to the extent lawful, on any overdue installment of interest. The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in the Indenture, be paid to the person in whose name this bond is registered at the close of business on the Regular Record Date as specified above next preceding such Interest Payment Date; provided that any interest payable at Stated Maturity or on a Redemption Date (defined below) will be paid to the person to whom principal is payable. Except as otherwise provided in the Indenture, any such interest not so punctually paid or duly provided for will forthwith cease to be payable to the holder on such Regular Record Date and may either be paid to the person in whose name this bond is registered at the close of business on a special record date for the payment of such defaulted interest to be fixed by the Trustee, notice whereof shall be given to holders of bonds of this series not less than 10 days prior to such special record date, or be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange, if any, on which the bonds of this series shall be listed, and upon such notice as may be required by any such exchange, all as more fully provided in the Indenture.

Payments of interest on this bond will include interest accrued to but excluding the respective Interest Payment Dates. Interest payments for this bond shall be computed and paid on the basis of a 360-day year consisting of twelve 30-day months. The Company shall pay interest on overdue principal and Make-Whole Amount, if any, and, to the extent lawful, on overdue installments of interest at the rate per annum borne by this bond. In the event that any Interest Payment Date, Redemption Date or Stated Maturity is not a Business Day, then the required payment of principal, Make-Whole Amount, if any, 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). "Business Day" means any day other than a day on which banking institutions in the State of New York or the State of Michigan are authorized or obligated pursuant to law or executive order to close.

Payment of principal of, Make-Whole Amount, if any, and interest on the bonds of this series shall be made in such coin or currency of the United States of America as at the time of payment is legal tender for payment of public and private debts. Payments of principal, Make-Whole Amount, if any, and interest due at the Stated Maturity or earlier redemption of such bonds shall be made at the office of the Trustee upon surrender of such bonds to the Trustee, and payments of interest shall be made, at the option of the Company, subject to such surrender where applicable, (A) by check mailed to the address of the person entitled thereto as such

address shall appear in the bond register of the Trustee maintained for such purpose or (B) by wire transfer at such place and to such account at a banking institution in the United States as may be designated in writing to the Trustee at least fourteen (14) days prior to the date for payment by the person entitled thereto. Notwithstanding the foregoing, so long as any bond is held by an Institutional Investor (as defined in the Bond Purchase Agreement referenced below), payment of principal, Make-Whole Amount, if any, and interest on the bonds held by such holder shall be made in the manner specified in the Bond Purchase Agreement dated as of November 16, 2021 among the Company and the purchasers party thereto.

The bonds represented by this certificate, of the series hereinafter specified, are bonds of the Company (herein called the "bonds") known as its "First Mortgage Bonds," issued and to be issued in one or more series under, and all equally and ratably secured by, an Indenture of Mortgage and Deed of Trust dated as of March 1, 1944, duly executed by the Company to Citibank, N.A., successor trustee ("Trustee"), as restated in Part II of the Twenty-ninth Supplemental Indenture dated as of July 15, 1989, which became effective on April 1, 1994, to which indenture and all indentures supplemental thereto executed on and after July 15, 1989 reference is hereby made for a description of the property mortgaged and pledged, the nature and extent of the security, the terms and conditions upon which the bonds are, and are to be, issued and secured, and the rights of the holders of the bonds and of the Trustee in respect of such security (which indenture and all indentures supplemental thereto, including the Fifty-Second Supplemental Indenture dated as of November 1, 2021 referred to below, are hereinafter collectively called the "Indenture"). As provided in the Indenture, the bonds may be issued thereunder for various principal sums and are issuable in series, which may mature at different times, may bear interest at different rates and may otherwise vary as therein provided. The bonds represented by this certificate are part of a series designated "2.85% First Mortgage Bonds 2021 Series D" (herein called the "Bonds"), created by the Fifty-Second Supplemental Indenture dated as of November 1, 2021 as provided for in said Indenture.

With the consent of the Company and to the extent permitted by and as provided in the Indenture, the rights and obligations of the Company, the rights and obligations of the holders of the Bonds, and the terms and provisions of the Indenture may be modified or altered by such affirmative vote or votes of the holders of the Bonds then outstanding as are specified in the Indenture.

In case an Event of Default as defined in the Indenture shall occur, the principal of the Bonds may become or be declared due and payable in the manner, with the effect, and subject to the conditions provided in the Indenture. Upon any such declaration, the Company shall also pay to the holders of the Bonds the Make-Whole Amount on the Bonds, if any, determined as of the date the Bonds shall have been declared due and payable.

No recourse shall be had for the payment of the principal of, Make-Whole Amount, if any, or the interest on, the Bonds, or for any claim based hereon or otherwise in respect of the Bonds or the Indenture, against any incorporator, stockholder, director or officer, past, present or future, of the Company, as such, or any predecessor or successor corporation, either directly or through the Company or any such predecessor or successor corporation, whether by virtue of any

constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability, whether at common law, in equity, by any constitution, statute or otherwise, of incorporators, stockholders, directors or officers being waived and released by the owner hereof by the acceptance of the Bonds, and as part of the consideration for the issue thereof, and being likewise waived and released pursuant to the Indenture.

This Bond shall be subject to redemption at the option of the Company, in whole at any time or in part from time to time (any such date of optional redemption, a "Redemption Date"), at the applicable redemption price ("Redemption Price") set forth below.

At any time prior to June 1, 2051 (the "Par Call Date"), the Redemption Price will be equal to 100% of the principal amount of the Bonds to be redeemed on the Redemption Date together with the Make-Whole Amount (as defined below), if any, plus, in each case, accrued and unpaid interest thereon to the Redemption Date.

At any time on or after the Par Call Date, the Redemption Price will be equal to 100% of the principal amount of the Bonds to be redeemed on the Redemption Date plus accrued and unpaid interest thereon to the Redemption Date.

Notwithstanding the foregoing, installments of interest on the Bonds 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.

"Make-Whole Amount" means, with respect to any Bond, a premium in an amount equal to the excess, if any, of the Discounted Value of the Remaining Scheduled Payments with respect to the Called Principal of such Bond over the amount of such Called Principal, provided that the Make-Whole Amount may in no event be less than zero. If the Settlement Date is prior to the Par Call Date, the Make-Whole Amount with respect to any Called Principal of a Bond shall be determined as if the Stated Maturity of such Bond were the Par Call Date; provided that the Make-Whole Amount shall in no event be less than zero. For the purposes of determining the Make-Whole Amount, the following terms have the following meanings:

"Called Principal" means, with respect to a Bond, the principal of the Bond that is to be redeemed on a Redemption Date or has become or is declared to be immediately due and payable pursuant to Section 9.01 of the Indenture, as the context requires.

"Discounted Value" means, with respect to the Called Principal of a Bond, the amount obtained by discounting all Remaining Scheduled Payments with respect to such Called Principal from their respective scheduled due dates to the Settlement Date with respect to such Called Principal, in accordance with accepted financial practice and at a discount factor (applied on the same periodic basis as that on which interest on the Bond is payable) equal to the Reinvestment Yield with respect to such Called Principal.

"Reinvestment Yield" means, with respect to the Called Principal of a Bond, the sum of (a) 0.50% (50 basis points) plus (b) the yield to maturity implied by the "Ask Yield(s)" reported,

as of 10:00 a.m. (New York City time) on the second Business Day preceding the Settlement Date with respect to such Called Principal, on the display designated as "Page PX-1" (or such other display as may replace Page PX-1), on Bloomberg Financial Markets for the most recently issued, actively traded on-the-run, benchmark U.S. Treasury securities ("Reported") having a maturity equal to the Remaining Average Life of such Called Principal as of such Settlement Date.

If there are no such U.S. Treasury securities Reported having a maturity equal to such Remaining Average Life, then such implied yield to maturity will be determined by (a) converting U.S. Treasury bill quotations to bond equivalent yields in accordance with accepted financial practice and (b) interpolating linearly between the "Ask Yields" Reported for the applicable most recently issued, actively traded on-the-run, U.S. Treasury securities with the maturities (1) closest to and greater than such Remaining Average Life and (2) closest to and less than the Remaining Average Life. The Reinvestment Yield shall be rounded to the number of decimal places as appears in the interest rate of the applicable Bond. If such yields are not Reported or the yields Reported as of such time are not ascertainable (including by way of interpolation), then "Reinvestment Yield" means, with respect to the Called Principal of any Bond, the sum of (x) 0.50% (50 basis points) plus (y) the yield to maturity implied by the U.S. Treasury constant maturity yields reported, for the latest day for which such yields have been so reported as of the second Business Day preceding the Settlement Date with respect to such Called Principal, in Federal Reserve Statistical Release H.15 (519) (or any comparable successor publication) for the U.S. Treasury constant maturity having a term equal to the Remaining Average Life of such Called Principal as of such Settlement Date. If there is no such U.S. Treasury constant maturity having a term equal to such Remaining Average Life, such implied yield to maturity will be determined by interpolating linearly between (1) the U.S. Treasury constant maturity so reported with the term closest to and greater than such Remaining Average Life and (2) the U.S. Treasury constant maturity so reported with the term closest to and less than such Remaining Average Life. The Reinvestment Yield shall be rounded to the number of decimal places as appears in the interest rate of the applicable Bond.

"Remaining Average Life" means, with respect to any Called Principal, the number of years obtained by dividing (i) such Called Principal into (ii) the sum of the products obtained by multiplying (a) the principal component of each Remaining Scheduled Payment with respect to such Called Principal by (b) the number of years, computed on the basis of a 360-day year comprised of twelve 30-day months and calculated to two decimal places, that will elapse between the Settlement Date with respect to such Called Principal and the Stated Maturity (or, if redeemed prior to the Par Call Date, the Par Call Date) of such Remaining Scheduled Payment.

"Remaining Scheduled Payments" means, with respect to the Called Principal of a Bond, all payments of such Called Principal and interest thereon that would be due after the Settlement Date with respect to such Called Principal if no payment of such Called Principal were made prior to its Stated Maturity (or, if redeemed prior to the Par Call Date, the Par Call Date), provided that if such Settlement Date is not a date on which interest payments are due to be made under the terms of the Bond, then the amount of the next succeeding scheduled interest payment

will be reduced by the amount of interest accrued to such Settlement Date and required to be paid on such Settlement Date.

"Settlement Date" means, with respect to the Called Principal of a Bond, the Redemption Date on which such Called Principal is to be redeemed or has become or is declared to be immediately due and payable pursuant to Section 9.01 of the Indenture as the context requires.

Notice of redemption shall be given to the holders of the Bonds to be redeemed not more than 60 nor less than 30 days prior to the Redemption Date, as provided in Section 4.05 of the Indenture. Each such notice shall specify such Redemption Date, the aggregate principal amount of the Bonds to be redeemed on such date, the principal amount of each Bond held by such holder to be redeemed, and the interest to be paid on the Redemption Date with respect to such principal amount being prepaid. In addition, if the Redemption Date is prior to the Par Call Date, each such notice shall be accompanied by a certificate of a senior financial officer of the Company as to the estimated Make-Whole Amount due in connection with such redemption (with the Reinvestment Yield calculated, solely for purposes of such estimate, using the relevant U.S. Treasury yield as of the second Business Day preceding the date of such notice), setting forth the details of such computation. The Make-Whole Amount shall be determined by the Company two Business Days prior to the applicable Redemption Date and the Company shall deliver to holders of the Bonds and to the Trustee a certificate of a senior financial officer specifying the calculation of such Make-Whole Amount as of the Redemption Date.

Subject to the limitations of Section 4.07 of the Indenture, the notice of redemption may state that it is subject to the receipt of the redemption moneys by the Trustee on or before the Redemption Date, and that such notice shall be of no effect unless such moneys are so received on or before such date; a notice of redemption so conditioned shall be of no force or effect if such money is not so received and, in such event, the Company shall not be required to redeem this Bond.

If the Bonds are only partially redeemed by the Company, the Trustee shall select which Bonds are to be redeemed pro rata among all of the Bonds at the time outstanding in proportion, as nearly as practicable, to the respective unpaid principal amounts thereof and otherwise in accordance with the terms of the Indenture. In the event of redemption of the Bonds in part only, a new Bond or Bonds for the unredeemed portion will be issued in the name or names of the holders thereof upon the surrender or cancellation thereof.

If money sufficient to pay the applicable Redemption Price with respect to the Bonds to be redeemed on the applicable Redemption Date, together with accrued interest to the Redemption Date, is deposited with the Trustee on or before the related Redemption Date and certain other conditions are satisfied, then the Bonds to be redeemed shall no longer be secured by, or entitled to any lien or benefit of, the Indenture as provided by Section 4.04 of the Indenture.

The Indenture contains terms, provisions and conditions relating to the consolidation or merger of the Company with or into, and the conveyance, or other transfer or lease, subject to the lien of the Indenture, of the trust estate to, another corporation, to the assumption by such other

corporation, in certain circumstances, of the obligations of the Company under the Indenture and on the Bonds and to the succession of such other corporation in certain circumstances, to the powers and rights of the Company under the Indenture.

The Indenture contains provisions for defeasance at any time of the entire indebtedness of the Bonds or certain covenants with respect thereto upon compliance by the Company with certain conditions set forth therein.

This Bond shall not be valid or become obligatory for any purpose unless and until the certificate of authentication hereon shall have been manually executed by the Trustee or its successor in trust under the Indenture.

IN WITNESS WHEREOF, DTE GAS COMPANY has caused this certificate to be executed under its name with the signature of its duly authorized Officer, under its corporate seal, which may be a facsimile, attested with the signature of its Corporate Secretary.

Dated:

DTE GAS COMPANY

By:_____

Attest:

By:_____

CERTIFICATE OF AUTHENTICATION

The bonds represented by this certificate constitute Bonds of the series designated and described in the within-mentioned Indenture.

CITIBANK, N.A., as Trustee

By:_____
Authorized Officer

Dated:

[End of 2021 Series D Bond Form]

SECTION 4

Each certificate evidencing the 2021 Series D Bonds (and all 2021 Series D Bonds issued in exchange therefor or in substitution thereof) shall bear a legend in substantially the following form (each defined term in the legend being defined as such for purposes of the legend only):

THE SECURITIES EVIDENCED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT (A) PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT AND (B) IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES. IN CONNECTION WITH ANY TRANSFER, THE HOLDER WILL DELIVER TO THE COMPANY AND THE TRUSTEE SUCH CERTIFICATES AND OTHER INFORMATION AS THE TRUSTEE MAY REASONABLY REQUIRE TO CONFIRM THAT THE TRANSFER COMPLIES WITH THE FOREGOING RESTRICTIONS.

The 2021 Series D Bonds shall be exchangeable upon surrender thereof at the corporate trust office of the Trustee in the Borough of Manhattan, the City of New York, New York, for registered bonds of the same aggregate principal amount and other terms, but of different authorized denomination or denominations, such exchanges to be made without service charge (except for any stamp tax or other governmental charge).

When 2021 Series D Bonds are presented to the Trustee with a request (i) to register the transfer of such 2021 Series D Bonds; or (ii) to exchange such 2021 Series D Bonds for 2021 Series D Bonds of the same series of any authorized denominations of the same aggregate principal amount and Stated Maturity, the Trustee shall register the transfer or make the exchange as requested if its reasonable requirements for such transaction are met; provided, however, that the 2021 Series D Bonds surrendered for transfer or exchange: (A) shall be duly endorsed or be accompanied by a written instrument of transfer in form reasonably satisfactory to the Company and the Trustee, duly executed by the holder thereof or his attorney duly authorized in writing; and (B) are accompanied by the following additional information and documents, as applicable: (x) if such 2021 Series D Bonds are being delivered to the Company by a holder for registration in the name of such holder, without transfer, a certification from such holder to that effect; or (y) if such 2021 Series D Bonds are being transferred to the Company, a certification to that effect; or (z) if such 2021 Series D Bonds are being transferred pursuant to an exemption from registration in accordance with Rule 144 under the Securities Act or in reliance upon another exemption from the registration requirements of the Securities Act, (i) a certification to that effect and (ii) if the Company so requests, other evidence reasonably satisfactory to it as to the compliance with the restrictions set forth in the legend set forth above.

Every 2021 Series D Bond so surrendered shall be accompanied by a proper transfer power duly executed by the registered owner or by a duly authorized attorney transferring such 2021 Series D Bond to the Company, and the signature to such transfer power shall be guaranteed to the satisfaction of the Trustee. All 2021 Series D Bonds so surrendered shall be forthwith canceled and delivered to or upon the order of the Company. All 2021 Series D Bonds executed, authenticated and delivered in exchange for 2021 Series D Bonds so surrendered shall

be valid obligations of the Company, evidencing the same debt as the 2021 Series D Bonds surrendered, and shall be secured by the same lien and be entitled to the same benefits and protection as the 2021 Series D Bonds in exchange for which they are executed, authenticated and delivered.

The Company shall not be required to make any such exchange or any registration of transfer after the 2021 Series D Bond so presented for exchange or registration of transfer, or any portion thereof, has been called for redemption and notice thereof given to the registered owner.

SECTION 5

Pending the preparation of definitive 2021 Series D Bonds, the Company may from time to time execute, and upon its written order, the Trustee shall authenticate and deliver, in lieu of such definitive 2021 Series D Bonds and subject to the same provisions, limitations and conditions, one or more temporary 2021 Series D Bonds, in registered form, of any denomination specified in the written order of the Company for the authentication and delivery thereof, and with such omissions, insertions and variations as may be determined by the Board of Directors of the Company. Such temporary 2021 Series D Bonds shall be substantially of the tenor of the 2021 Series D Bonds to be issued as herein before recited.

If any such temporary 2021 Series D Bonds shall at any time be so authenticated and delivered in lieu of definitive 2021 Series D Bonds, the Company shall upon request at its own expense prepare, execute and deliver to the Trustee and thereupon, upon the presentation and surrender of temporary 2021 Series D Bonds, the Trustee shall authenticate and deliver in exchange therefor, without charge to the holder, definitive Bonds of the same series and other terms, if any, and for the same principal sum in the aggregate as the temporary 2021 Series D Bonds surrendered. All temporary 2021 Series D Bonds so surrendered shall be forthwith canceled by the Trustee and delivered to or upon the order of the Company. Until exchanged for definitive 2021 Series D Bonds the temporary 2021 Series D Bonds shall in all respects be entitled to the lien and security of the Indenture and all supplemental indentures.

ARTICLE III
ISSUE OF BONDS

The 2021 Series C Bonds in the aggregate principal amount of $60,000,000 and 2021 Series D Bonds in the aggregate principal amount of $95,000,000 may be executed, authenticated and delivered from time to time as permitted by the provisions of the Indenture, including with respect to exchange and replacement of bonds.

ARTICLE IV
THE TRUSTEE

The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture 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 herein otherwise provided, no duties, responsibilities or liabilities are assumed, or shall be construed to be assumed, by the Trustee by reason of this Supplemental Indenture other than as set forth in the Indenture and this Supplemental Indenture as executed and accepted on behalf of the Trustee, subject to all the terms and conditions set forth in the Indenture, as fully to all intents as if the same were herein set forth at length.

ARTICLE V
RECORDING AND FILING OF SUPPLEMENTAL INDENTURE
DATED AS OF AUGUST 1, 2020

Pursuant to the terms and provisions of the Original Indenture, a Supplemental Indenture dated as of August 1, 2020 providing for the terms of First Mortgage Bonds to be issued thereunder designated as 2020 Series D Mortgage Bonds and 2020 Series E Mortgage Bonds has heretofore been entered into between the Company and the Trustee and has been filed in the Office of the Secretary of State of Michigan as a financing statement on September 17, 2020 (Filing No. 202009170000097) and has been recorded as a real estate mortgage in the offices of the respective Register of Deeds of certain counties in the State of Michigan, as follows:

COUNTY	**DATE Recorded**	**Liber/ Instrument no.**	**Page**
Alcona County Register of Deeds	8/27/2020	202000002688	
Alger County Register of Deeds	8/27/2020	MI 202001770	--
Alpena County Register of Deeds	8/27/2020	536	902
Antrim County Register of Deeds	8/31/2020	202000006862	--
Arenac County Register of Deeds	8/27/2020	202003263	--
Barry County Register of Deeds	8/27/2020	2020-009005	--
Benzie County Register of Deeds	8/28/2020	2020R-03782	--
Charlevoix County Register of Deeds	8/27/2020	1268	869
Cheboygan County Register of Deeds	8/31/2020	1423	43
Chippewa County Register of Deeds	8/31/2020	1327	356
Clare County Register of Deeds	8/28/2020	1455	502
Clinton County Register of Deeds	8/31/2020	5297238	--
Crawford County Register of Deeds	8/28/2020	744	998
Delta County Register of Deeds	8/31/2020	1278	613
Dickinson County Register of Deeds	9/10/2020	928	826

Emmet County Register of Deeds	8/27/2020	1224	437
Gladwin County Register of Deeds	8/27/2020	1187	184
Grand Traverse County Register of Deeds	8/27/2020	2020R-15515	--
Gratiot County Register of Deeds	8/28/2020	1065	1072
Ionia County Register of Deeds	8/27/2020	661	1034
Iosco County Register of Deeds	8/28/2020	2020004908	--
Iron County Register of Deeds	8/27/2020	761	408
Isabella County Register of Deeds	8/28/2020	1881	3417
Jackson County Register of Deeds	8/27/2020	2168	629
Kalkaska County Register of Deeds	8/28/2020	3152119	--
Kent County Register of Deeds	8/28/2020	202008280078082	--
Lake County Register of Deeds	8/28/2020	420	1287
Leelanau County Register of Deeds	8/27/2020	2020005342	--
Lenawee County Register of Deeds	8/27/2020	2603	21
Livingston County Register of Deeds	8/28/2020	2020R-029274	--
Macomb County Register of Deeds	8/27/2020	26952	456
Manistee County Register of Deeds	8/28/2020	2020R004599	--
Marquette County Register of Deeds	8/27/2020	2020R-09276	--
Mason County Register of Deeds	8/28/2020	2020R04982	--
Mecosta County Register of Deeds	9/3/2020	905	3474
Menominee County Register of Deeds	8/28/2020	858	216
Missaukee County Register of Deeds	8/28/2020	2020-02480	--
Monroe County Register of Deeds	8/28/2020	2020R17551	--
Montcalm County Register of Deeds	8/28/2020	2020R-09299	--
Montmorency County Register of Deeds	8/28/2020	386	366
Muskegon County Register of Deeds	8/27/2020	4231	387
Newaygo County Register of Deeds	8/27/2020	479	5365
Oakland County Register of Deeds	8/31/2020	54749	138
Oceana County Register of Deeds	8/27/2020	2020	17221-7254
Ogemaw County Register of Deeds	8/28/2020	3162485	--

Osceola County Register of Deeds	8/28/2020	1007	497
Oscoda County Register of Deeds	8/27/2020	220-02202	--
Otsego County Register of Deeds	8/28/2020	1534	462
Ottawa County Register of Deeds	8/27/2020	2020-0036662	--
Presque Isle County Register of Deeds	8/28/2020	637	862-895
Roscommon County Register of Deeds	8/27/2020	1173	1823
St. Clair County Register of Deeds	8/28/2020	5233	61-94
Saginaw County Register of Deeds	8/28/2020	2020021446	--
Shiawassee County Register of Deeds	8/27/2020	1272	348
Washtenaw County Register of Deeds	8/28/2020	5372	347
Wayne County Register of Deeds	8/27/2020	56008	34
Wexford County Register of Deeds	8/27/2020	688	243

ARTICLE VI
RECORDING OF AFFIDAVIT OF FACTS AFFECTING REAL PROPERTY

An Affidavit of Facts Affecting Real Property dated February 11, 2013 (the "Affidavit") has been recorded in the offices of the respective Registers of Deeds of certain counties in the State of Michigan. The Affidavit, signed by the Company's then President and Chief Operating Officer, was given pursuant to MCL 565.451a to give notice of the fact that pursuant to a joint resolution of the Company's sole shareholder and its board of directors, the Company amended its articles of incorporation effective January 1, 2013 to change its name from MICHIGAN CONSOLIDATED GAS COMPANY to DTE GAS COMPANY.

ARTICLE VII
MISCELLANEOUS PROVISIONS

Except insofar as herein otherwise expressly provided, all the provisions, terms and conditions of the Indenture shall be deemed to be incorporated in, and made a part of, this Fiftieth Supplemental Indenture, and the Twenty-ninth Supplemental Indenture dated as of July 15, 1989, as supplemented by the Thirtieth Supplemental Indenture dated as of September 1, 1991, by the Thirty-first Supplemental Indenture dated as of December 15, 1991, by the Thirty-second Supplemental Indenture dated as of January 5, 1993, by the Thirty-third Supplemental Indenture dated as of May 1, 1995, by the Thirty-fourth Supplemental Indenture dated as of November 1, 1996, by the Thirty-fifth Supplemental Indenture dated as of June 18, 1998, by the Thirty-sixth Supplemental Indenture dated as of August 15, 2001, by the Thirty-seventh Supplemental Indenture dated as of February 15, 2003, by the Thirty-eighth Supplemental Indenture dated as of October 1, 2004, by the Thirty-ninth Supplemental Indenture dated as of April 1, 2008, by the Fortieth Supplemental Indenture dated as of June 1, 2008, by the Forty-first

Supplemental Indenture dated as of August 1, 2008, by the Forty-second Supplemental Indenture dated as of December 1, 2008, by the Forty-third Supplemental Indenture dated as of December 1, 2012, by the Forty-fourth Supplemental Indenture dated as of December 1, 2013, by the Forty-fifth Supplemental Indenture dated as of December 1, 2014, by the Forty-sixth Supplemental Indenture dated as of August 1, 2015, by the Forty-seventh Supplemental Indenture dated as of December 1, 2016, by the Forty-eighth Supplemental Indenture dated as of September 1, 2017, by the Forty-ninth Supplemental Indenture dated as of August 1, 2018, by the Fiftieth Supplemental Indenture dated as of October 1, 2019, by the Fifty-First Supplemental Indenture dated as of August 1, 2020 and by this Supplemental Indenture is in all respects ratified and confirmed; and the Indenture and said Supplemental Indentures shall be read, taken and construed as one and the same instrument.

Except to the extent specifically provided therein, no provision of this Supplemental Indenture or any future supplemental indenture is intended to modify, and the parties do hereby adopt and confirm, the provisions of Section 318(c) of the Trust Indenture Act, which amend and supersede provisions of the Indenture in effect prior to November 15, 1990.

Nothing in this Supplemental Indenture is intended, or shall be construed, to give to any person or corporation, other than the parties hereto and the holders of Bonds issued and to be issued under and secured by the Indenture, any legal or equitable right, remedy or claim under or in respect of this Supplemental Indenture, or under any covenant, condition or provision herein contained, all the covenants, conditions and provisions of this Supplemental Indenture being intended to be, and being, for the sole and exclusive benefit of the parties hereto and of the holders of bonds issued and to be issued under the Indenture and secured thereby.

All covenants, promises and agreements in this Supplemental Indenture contained by or on behalf of the Company shall bind its successors and assigns whether so expressed or not.

This Supplemental Indenture may be executed in any number of counterparts, and each of such counterparts when 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, DTE GAS COMPANY has caused this Supplemental Indenture to be executed by its duly authorized Officer, and its corporate seal to be hereunto affixed, and Citibank, N.A., as Trustee as aforesaid, has caused the same to be executed by one of its authorized signatories and its corporate seal to be hereunto affixed, on the respective dates of their acknowledgments hereinafter set forth, as of the date and year first above written.

DTE GAS COMPANY
By: /s/Timothy Lepczyk
Timothy Lepczyk
Assistant Treasurer

Signed, sealed, acknowledged and
delivered by DTE GAS COMPANY in the presence of:

/s/Daniel Richards
Daniel Richards

/s/Melissa Kemmerle
Melissa Kemmerle

State of Michigan }
} ss.
County of Wayne }

The foregoing instrument was acknowledged before me this 10th day of November 2021, by Timothy Lepczyk, as Assistant Treasurer of DTE Gas Company, a Michigan corporation, on behalf of the corporation.

/s/Katie S. Glover
Katie S. Glover
Notary Public, Wayne County, MI
Acting in Wayne County, MI
My Commission Expires: May 4, 2025

Citibank, N.A., as Trustee

By: /s/William Keenan

Name: William Keenan

Its: Senior Trust Officer

Signed, sealed, acknowledged and
delivered by CITIBANK, N.A.
in the presence of:

/s/Kelvin Vargas
Name: Kelvin Vargas

/s/Patricia Gallagher
Name: Patricia Gallagher

State of New York }
} ss.
County of New York }

The foregoing instrument was acknowledged before me this 9 day of November, 2021, by William Keenan, as Senior Trust Officer of Citibank, N.A., a national banking association, on behalf of the association, as Trustee, as in said instrument described.

/s/Kate Molina
Notary Public, State of New York
No.
Qualified in
Certificate Filed in
Commission Expires:

KATE MOLINA
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 01M06387127
Qualified in Richmond County
Commission Expires February 4, 2023

This instrument was drafted by:

Daniel Richards
DTE Energy
One Energy Plaza, 1610 WCB
Detroit, MI 48226

When recorded return to:

Daniel Richards
DTE Energy
One Energy Plaza, 1610 WCB
Detroit, MI 48226

Exhibit 10.1

EXECUTION VERSION

AMENDMENT NO. 1
TO
FOURTH AMENDED AND RESTATED FIVE-YEAR CREDIT AGREEMENT

THIS AMENDMENT NO. 1 TO FOURTH AMENDED AND RESTATED FIVE-YEAR CREDIT AGREEMENT (this "Amendment") is made as of March 26, 2021, by and among DTE ENERGY COMPANY (the "Borrower"), the lenders listed on the signature pages hereof (the "Lenders"), and CITIBANK, N.A. ("Citibank"), as Administrative Agent (the "Administrative Agent"), under that certain Fourth Amended and Restated Five-Year Credit Agreement, dated as of April 15, 2019, by and among the Borrower, the lenders from time to time parties thereto and the Administrative Agent (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"). Capitalized terms used but not otherwise defined herein shall have the meaning given to them in the Credit Agreement.

WITNESSETH

WHEREAS, the Borrower, the Lenders and the Administrative Agent are parties to the Credit Agreement;

WHEREAS, the Borrower has requested that the Administrative Agent and the Lenders amend the Credit Agreement on the terms and conditions set forth herein; and

WHEREAS, the Borrower, the Administrative Agent and the Lenders have agreed to amend the Credit Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises set forth above, the terms and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto have agreed to the following:

1. Amendments to the Credit Agreement. Effective as of March 26, 2021 (the "Amendment Effective Date") and subject to the satisfaction of the conditions precedent set forth in Section 3 below, the Credit Agreement is hereby amended as follows:

1.1. The following new definitions are inserted in Section 1.01 of the Credit Agreement in the appropriate alphabetical order:

"Affected Financial Institution" means (a) any EEA Financial Institution or (b) any UK Financial Institution.

"Resolution Authority" means an EEA Resolution Authority or, with respect to any UK Financial Institution, a UK Resolution Authority.

"UK Financial Institution" means any BRRD Undertaking (as such term is defined under the PRA Rulebook (as amended from time to time) promulgated by the United Kingdom Prudential Regulation Authority) or

any person falling within IFPRU 11.6 of the FCA Handbook (as amended from time to time) promulgated by the United Kingdom Financial Conduct Authority, which includes certain credit institutions and investment firms, and certain affiliates of such credit institutions or investment firms.

"UK Resolution Authority" means the Bank of England or any other public administrative authority having responsibility for the resolution of any UK Financial Institution.

1.2. The following definitions set forth in Section 1.01 of the Credit Agreement are hereby amended and restated in their entirety as follows:

"Bail-In Action" means the exercise of any Write-Down and Conversion Powers by the applicable Resolution Authority in respect of any liability of an Affected Financial Institution.

"Bail-In Legislation" means, (a) with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law, regulation, rule or requirement for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule and (b) with respect to the United Kingdom, Part I of the United Kingdom Banking Act 2009 (as amended from time to time) and any other law, regulation or rule applicable in the United Kingdom relating to the resolution of unsound or failing banks, investment firms or other financial institutions or their affiliates (other than through liquidation, administration or other insolvency proceedings).

"EEA Financial Institution" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"Write-Down and Conversion Powers" means, (a) with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule, and (b) with respect to the United Kingdom, any powers of the applicable Resolution Authority under the Bail-In Legislation to cancel, reduce, modify or change the form of a liability of any UK Financial Institution or any contract or instrument under which that liability arises,

to convert all or part of that liability into shares, securities or obligations of that person or any other person, to provide that any such contract or instrument is to have effect as if a right had been exercised under it or to suspend any obligation in respect of that liability or any of the powers under that Bail-In Legislation that are related to or ancillary to any of those powers.

1.3. The definitions of "LIBO Successor Rate" and "LIBO Successor Rate Conforming Changes" set forth in Section 1.01 of the Credit Agreement are hereby deleted.

1.4. Section 2.07(g) of the Credit Agreement is hereby amended and restated in its entirety as follows:

(g) Benchmark Replacement.

(i) Benchmark Replacement. Notwithstanding anything to the contrary herein or in any other Loan Document, if a Benchmark Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any setting of the then-current Benchmark, then (x) if a Benchmark Replacement is determined in accordance with clause (1) or (2) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of such Benchmark setting and subsequent Benchmark settings without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document and (y) if a Benchmark Replacement is determined in accordance with clause (3) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of any Benchmark setting at or after 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Benchmark Replacement is provided to the Lenders without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document so long as the Agent has not received, by such time, written notice of objection to such Benchmark Replacement from Lenders comprising the Required Lenders.

(ii) Benchmark Replacement Conforming Changes. In connection with the implementation of a Benchmark Replacement, the Agent will have the right to make Benchmark Replacement Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Benchmark Replacement Conforming Changes will become effective

without any further action or consent of any other party to this Agreement or any other Loan Document.

(iii) Notices; Standards for Decisions and Determinations. The Agent will promptly notify the Borrower and the Lenders of (A) any Benchmark Replacement Date and the related Benchmark Replacement, (B) the effectiveness of any Benchmark Replacement Conforming Changes, (C) the removal or reinstatement of any tenor of a Benchmark pursuant to clause (iv) below and (D) the commencement of any Benchmark Unavailability Period. For the avoidance of doubt, any notice required to be delivered by the Agent as set forth in this Section 2.07(g) may be provided, at the option of the Agent (in its sole discretion), in one or more notices and may be delivered together with, or as part of any amendment which implements any Benchmark Replacement or Benchmark Conforming Changes. Any determination, decision or election that may be made by the Agent or, if applicable, any Lender (or group of Lenders) pursuant to this Section 2.07(g), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error and may be made in its or their sole discretion and without consent from any other party to this Agreement or any other Loan Document, except, in each case, as expressly required pursuant to this Section 2.07(g).

(iv) Unavailability of Tenor of Benchmark. Notwithstanding anything to the contrary herein or in any other Loan Document, at any time (including in connection with the implementation of a Benchmark Replacement), (A) if the then-current Benchmark is a term rate (including Term SOFR or USD LIBOR) and either (1) any tenor for such Benchmark is not displayed on a screen or other information service that publishes such rate from time to time as selected by the Agent in its reasonable discretion or (2) the regulatory supervisor for the administrator of such Benchmark has provided a public statement or publication of information announcing that any tenor for such Benchmark is or will be no longer representative, then the Agent may modify the definition of "Interest Period" for any Benchmark settings at or after such time to remove such unavailable or non-representative tenor and (B) if a tenor that was removed pursuant to clause (A) above either (1) is subsequently displayed on a screen or information service for a Benchmark (including a Benchmark Replacement) or (2) is not, or is no longer, subject to an announcement that it is or will no longer be representative for a Benchmark (including a Benchmark Replacement), then the Agent may modify the definition of "Interest Period" for all Benchmark settings at or after such time to reinstate such previously removed tenor.

(v) Benchmark Unavailability Period. Upon the Borrower's receipt of notice of the commencement of a Benchmark Unavailability Period, the Borrower may revoke any request for a Borrowing of, conversion to or continuation of Eurodollar Rate Advances to be made, converted or continued during any Benchmark Unavailability Period and, failing that, the Borrower will be deemed to have converted any such request into a request for a Borrowing of or conversion to Base Rate Advances. During any Benchmark Unavailability Period or at any time that a tenor for the then-current Benchmark is not an Available Tenor, the component of Base Rate based upon the then-current Benchmark or such tenor for such Benchmark, as applicable, will not be used in any determination of Base Rate.

(vi) Disclaimer. The Agent does not warrant or accept any responsibility for, and shall not have any liability with respect to (A) the administration, submission or any other matter related to the London interbank offered rate or other rates in the definition of "Eurodollar Rate" or with respect to any alternative or successor rate thereto, or replacement rate thereof (including, without limitation any Benchmark Replacement implemented hereunder), (B) the composition or characteristics of any such Benchmark Replacement, including whether it is similar to, or produces the same value or economic equivalence to USD LIBOR (or any other Benchmark) or have the same volume or liquidity as did USD LIBOR (or any other Benchmark), (C) any actions or use of its discretion or other decisions or determinations made with respect to any matters covered by this Section 2.07(g) including, without limitation, whether or not a Benchmark Transition Event has occurred, the removal or lack thereof of unavailable or non-representative tenors, the implementation or lack thereof of any Benchmark Replacement Conforming Changes, the delivery or non-delivery of any notices required by clause (iii) above or otherwise in accordance herewith, and (D) the effect of any of the foregoing provisions of this Section 2.07(g).

(vii) Certain Defined Terms.

As used in this Section 2.07(g):

"**Available Tenor**" means, as of any date of determination and with respect to the then-current Benchmark, as applicable, any tenor for such Benchmark or payment period for interest calculated with reference to such Benchmark, as applicable, that is or may be used for determining the length of an Interest Period pursuant to this Agreement as of such date and not including, for the avoidance of doubt, any tenor for such Benchmark that is then-removed from the definition of "Interest Period" pursuant to clause (iv) of this Section 2.07(g).

"**Benchmark**" means, initially, USD LIBOR; provided that if a Benchmark Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date have occurred with respect to USD LIBOR or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement to the extent that such Benchmark Replacement has replaced such prior benchmark rate pursuant to clause (i) of this Section 2.07(g).

"**Benchmark Replacement**" means, for any Available Tenor, the first alternative set forth in the order below that can be determined by the Agent for the applicable Benchmark Replacement Date:

(1) the sum of: (a) Term SOFR and (b) the related Benchmark Replacement Adjustment;

(2) the sum of: (a) Daily Simple SOFR and (b) the related Benchmark Replacement Adjustment;

(3) the sum of: (a) the alternate benchmark rate that has been selected by the Agent and the Borrower as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a replacement benchmark rate or the mechanism for determining such a rate by the Relevant Governmental Body or (ii) any evolving or then- prevailing market convention for determining a benchmark rate as a replacement for the then-current Benchmark for U.S. dollar-denominated syndicated credit facilities at such time and (b) the related Benchmark Replacement Adjustment; provided that, in the case of clause (1), such Unadjusted Benchmark Replacement is displayed on a screen or other information service that publishes such rate from time to time as selected by the Agent in its reasonable discretion.

If the Benchmark Replacement as determined pursuant to clause (1), (2) or (3) above would be less than the Floor, the Benchmark Replacement will be deemed to be the Floor for the purposes of this Agreement and the other Loan Documents.

"**Benchmark Replacement Adjustment**" means, with respect to any replacement of the then current Benchmark with an Unadjusted Benchmark Replacement for any applicable Interest Period and Available Tenor for any setting of such Unadjusted Benchmark Replacement:

(1) for purposes of clauses (1) and (2) of the definition of "Benchmark Replacement," the first alternative set forth in the order below that can be determined by the Agent: (a) the spread adjustment, or method for calculating or determining such spread adjustment, (which

may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that has been selected or recommended by the Relevant Governmental Body for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for the applicable Corresponding Tenor; (b) the spread adjustment (which may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that would apply to the fallback rate for a derivative transaction referencing the ISDA Definitions to be effective upon an index cessation event with respect to such Benchmark for the applicable Corresponding Tenor; and

(2) for purposes of clause (3) of the definition of "Benchmark Replacement," the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected by the Agent and the Borrower for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement by the Relevant Governmental Body on the applicable Benchmark Replacement Date or (ii) any evolving or then- prevailing market convention for determining a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar denominated syndicated credit facilities; provided that, in the case of clause (1) above, such adjustment is displayed on a screen or other information service that publishes such Benchmark Replacement Adjustment from time to time as selected by the Agent in its reasonable discretion.

"**Benchmark Replacement Conforming Changes**" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "ABR," the definition of "Business Day," the definition of "Interest Period," timing and frequency of determining rates and making payments of interest, timing of borrowing requests or prepayment, conversion or continuation notices, length of lookback periods, the applicability of breakage provisions, the formula for calculating any successor rates identified pursuant to the definition of "Benchmark Replacement", the formula, methodology or convention for applying the successor Floor to the successor Benchmark Replacement and other technical, administrative or operational matters) that the Agent decides may be appropriate to reflect the adoption and implementation of such Benchmark Replacement and to permit the administration thereof by the Agent in a manner substantially

consistent with market practice (or, if the Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Agent determines that no market practice for the administration of such Benchmark Replacement exists, in such other manner of administration as the Agent decides is reasonably necessary in connection with the administration of this Agreement and the other Loan Documents).

"**Benchmark Replacement Date**" means the earliest to occur of the following events with respect to the then-current Benchmark:

(1) in the case of clause (1) or (2) of the definition of "Benchmark Transition Event," the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of such Benchmark (or the published component used in the calculation thereof) permanently or indefinitely ceases to provide all Available Tenors of such Benchmark (or such component thereof);

(2) in the case of clause (3) of the definition of "Benchmark Transition Event," the date of the public statement or publication of information referenced therein; or

(3) in the case of an Early Opt-in Election, the sixth (6th) Business Day after the date notice of such Early Opt-in Election is provided to the Lenders, so long as the Agent has not received, by 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Early Opt-in Election is provided to the Lenders, written notice of objection to such Early Opt-in Election from Lenders comprising the Required Lenders.

For the avoidance of doubt, (i) if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination and (ii) the "Benchmark Replacement Date" will be deemed to have occurred in the case of clause (1) or (2) with respect to any Benchmark upon the occurrence of the applicable event or events set forth therein with respect to all then-current Available Tenors of such Benchmark (or the published component used in the calculation thereof).

"**Benchmark Transition Event**" means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of such Benchmark (or the published

component used in the calculation thereof) announcing that such administrator has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof), permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof);

(2) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof), the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of New York, an insolvency official with jurisdiction over the administrator for such Benchmark (or such component), a resolution authority with jurisdiction over the administrator for such Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark (or such component), which states that the administrator of such Benchmark (or such component) has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof) permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof); or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that all Available Tenors of such Benchmark (or such component thereof) are no longer representative.

For the avoidance of doubt, a "Benchmark Transition Event" will be deemed to have occurred with respect to any Benchmark if a public statement or publication of information set forth above has occurred with respect to each then-current Available Tenor of such Benchmark (or the published component used in the calculation thereof).

"**Benchmark Unavailability Period**" means the period (if any) (x) beginning at the time that a Benchmark Replacement Date pursuant to clauses (1) or (2) of that definition has occurred if, at such time, no Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with this Section titled "Benchmark Replacement Setting" and (y) ending at the time that a Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with this Section titled "Benchmark Replacement Setting

"**Corresponding Tenor**" with respect to any Available Tenor means, as applicable, either a tenor (including overnight) or an interest payment period having approximately the same length (disregarding business day adjustment) as such Available Tenor.

"**Daily Simple SOFR**" means, for any day, SOFR, with the conventions for this rate (which will include a lookback) being established by the Agent in accordance with the conventions for this rate selected or recommended by the Relevant Governmental Body for determining "Daily Simple SOFR" for syndicated business loans; provided, that if the Agent decides that any such convention is not administratively feasible for the Agent, then the Agent may establish another convention in its reasonable discretion.

"**Early Opt-in Election**" means, if the then-current Benchmark is USD LIBOR, the occurrence of the following on or after December 31, 2020:

(1) a notification by the Agent to (or the request by the Borrower to the Agent to notify) each of the other parties hereto that at least five currently outstanding U.S. dollar- denominated syndicated credit facilities in the U.S. syndicated loan market at such time contain (as a result of amendment or as originally executed) a SOFR-based rate (including SOFR, a term SOFR or any other rate based upon SOFR) as a benchmark rate (and such syndicated credit facilities are identified in such notice and are publicly available for review), and

(2) the joint election by the Agent and the Borrower to trigger a fallback from USD LIBOR and the provision by the Agent of written notice of such election to the Lenders.

"**Floor**" means the benchmark rate floor, if any, provided in this Agreement initially (as of the execution of this Agreement, the modification, amendment or renewal of this Agreement or otherwise) with respect to USD LIBOR.

"**ISDA Definitions**" means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time by the International Swaps and Derivatives Association, Inc. or such successor thereto.

"**Reference Time**" with respect to any setting of the then-current Benchmark means (1) if such Benchmark is USD LIBOR, 11:00 a.m. (London time) on the day that is two London banking days preceding the

date of such setting, and (2) if such Benchmark is not USD LIBOR, the time determined by the Agent in its reasonable discretion.

"**Relevant Governmental Body**" means the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, or any successor thereto.

"**SOFR**" means, with respect to any Business Day, a rate per annum equal to the secured overnight financing rate for such Business Day published by the SOFR Administrator on the SOFR Administrator's Website on the immediately succeeding Business Day.

"**SOFR Administrator**" means the Federal Reserve Bank of New York (or a successor administrator of the secured overnight financing rate).

"**SOFR Administrator's Website**" means the website of the Federal Reserve Bank of New York, currently at http://www.newyorkfed.org, or any successor source for the secured overnight financing rate identified as such by the SOFR Administrator from time to time.

"**Term SOFR**" means, for the applicable Corresponding Tenor as of the applicable Reference Time, the forward-looking term rate based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"**Unadjusted Benchmark Replacement**" means the applicable Benchmark Replacement excluding the related Benchmark Replacement Adjustment.

"**USD LIBOR**" means the London interbank offered rate for U.S. dollars.

1.5. Section 4.01(q) of the Credit Agreement is hereby amended and restated in its entirety as follows:

(q) The Borrower is not an Affected Financial Institution.

1.6. Section 7.02 of the Credit Agreement is amended to add the following language at the end of such Section:

If a payment is made by the Agent (or its Affiliates) in error or if a Lender or another recipient of funds is not otherwise entitled to receive such funds, then such Lender or recipient shall forthwith on demand repay

to the Agent the portion of such payment that was made in error (or otherwise not intended to be received) in same day funds, together with interest thereon in respect of each day from and including the date such amount was made available by the Agent (or its Affiliate) to such Lender or recipient to the date such amount is repaid to the Agent in same day funds at the Federal Funds Rate from time to time in effect. Each Lender and other party hereto waives the discharge for value defense in respect of any such payment.

1.7. Section 8.16 of the Credit Agreement is hereby amended and restated in its entirety as follows:

SECTION 8.16 Acknowledgment and Consent to Bail-In of Affected Financial Institutions. Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any Affected Financial Institution arising under any Loan Document may be subject to the Write-Down and Conversion Powers of the applicable Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by the applicable Resolution Authority to any such liabilities arising hereunder which may be payable to it by any party hereto that is an Affected Financial Institution; and

(b) the effects of any Bail-In Action on any such liability, including, if applicable:

(i) a reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such Affected Financial Institution, its parent entity, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the Write-Down and Conversion Powers of the applicable Resolution Authority.

2. Termination Date Extension. Pursuant to Section 2.19(a) of the Credit Agreement the Borrower is hereby deemed to have requested that, effective as of the Amendment Effective Date, the Termination Date be extended for a period of one year to April 15,

2025. Effective as of the Amendment Effective Date and subject to the satisfaction of the conditions precedent set forth in Section 3 below, pursuant to Section 2.19(b) of the Credit Agreement, each Lender that is not identified on the signature pages hereof as a "Non-Extending Lender" agrees to extend its Termination Date for a period of one year to April 15, 2025. Each Lender that is identified on the signature pages hereof as a "Non-Extending Lender" does not agree to extend its Termination Date and shall be considered a Non-Extending Lender under the Credit Agreement. The parties hereto hereby agree that the foregoing shall constitute the exercise by the Borrower of one of the extensions permitted pursuant to Section 2.19(f) of the Credit Agreement.

3. Conditions of Effectiveness. This Amendment shall become effective as of the Amendment Effective Date upon the Administrative Agent's receipt of (a) duly executed counterparts of the signature pages hereof by each of the Borrower, each Lender and the Administrative Agent, (b) evidence satisfactory to the Administrative Agent that the conditions precedent to the extension set forth in Section 2 above shall have been satisfied in accordance with the requirements of Section 2.19(f) of the Credit Agreement, and (c) such other documents, instruments and agreements as the Administrative Agent shall reasonably request.

4. Representations and Warranties and Reaffirmations of the Borrower.

4.1. The Borrower hereby represents and warrants that (i) this Amendment and the Credit Agreement as previously executed and as modified hereby constitute legal, valid and binding obligations of the Borrower and are enforceable against the Borrower in accordance with their terms (except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally), and (ii) no Default or Event of Default has occurred and is continuing.

4.2. Upon the effectiveness of this Amendment and after giving effect hereto, the Borrower hereby reaffirms all covenants, representations and warranties made in the Credit Agreement as modified hereby, and agrees that all such covenants, representations and warranties shall be deemed to have been remade as of the Amendment Effective Date, except that any such covenant, representation, or warranty that was made as of a specific date shall be considered reaffirmed only as of such date.

5. Reference to the Effect on the Credit Agreement.

5.1. Upon the effectiveness of Section 1 hereof, on and after the date hereof, each reference in the Credit Agreement (including any reference therein to "this Credit Agreement," "this Agreement," "hereunder," "hereof," "herein" or words of like import referring thereto) or in any other Loan Document shall mean and be a reference to the Credit Agreement as modified hereby.

5.2. Except as specifically modified above, the Credit Agreement and all other documents, instruments and agreements executed and/or delivered in connection therewith shall remain in full force and effect, and are hereby ratified and confirmed.

5.3. The execution, delivery and effectiveness of this Amendment shall not operate as a waiver of any right, power or remedy of the Administrative Agent or any Lender, nor constitute a waiver of any provision of the Credit Agreement or any other documents, instruments and agreements executed and/or delivered in connection therewith.

5.4. Upon satisfaction of the conditions set forth in Section 3 hereof and the execution hereof by the Borrower, each Lender and the Administrative Agent, this Amendment shall be binding upon all parties to the Credit Agreement.

5.5. This Amendment shall constitute a Loan Document.

6. GOVERNING LAW. THIS AMENDMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

7. Headings. Section headings in this Amendment are included herein for convenience of reference only and shall not constitute a part of this Amendment for any other purpose.

8. Counterparts. This Amendment may be executed by one or more of the parties to this Amendment on any number of separate counterparts and all of said counterparts taken together shall be deemed to constitute one and the same instrument. Delivery of an executed counterpart of a signature page to this Agreement by telecopy, e-mailed .pdf or any other electronic means that reproduces an image of the actual executed signature page shall be effective as delivery of a manually executed counterpart of this Amendment. The words "execution," "signed," "signature," "delivery," and words of like import in or relating to any document to be signed in connection with this Amendment and the transactions contemplated hereby shall be deemed to include Electronic Signatures, deliveries or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

9. Sections 8.11 and 8.12 of the Credit Agreement are hereby incorporated by reference into this Amendment and shall apply hereto mutatis mutandis.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, this Amendment has been duly executed as of the day and year first above written.

DTE ENERGY COMPANY, as the
Borrower

By:
Name:
Title:

CITIBANK, N.A., as Administrative Agent
and as a Lender

By:
Name:
Title:

_____, as a Lender

By:
Name:
Title:

BNP PARIBAS, as a Non-Extending Lender

By:
Name:
Title:

Exhibit 10.2

EXECUTION VERSION

AMENDMENT NO. 1
TO
FOURTH AMENDED AND RESTATED FIVE-YEAR CREDIT AGREEMENT

THIS AMENDMENT NO. 1 TO FOURTH AMENDED AND RESTATED FIVE-YEAR CREDIT AGREEMENT (this "Amendment") is made as of March 26, 2021, by and among DTE ELECTRIC COMPANY (the "Borrower"), the lenders listed on the signature pages hereof (the "Lenders"), and CITIBANK, N.A. ("Citibank"), as Administrative Agent (the "Administrative Agent"), under that certain Fourth Amended and Restated Five-Year Credit Agreement, dated as of April 15, 2019, by and among the Borrower, the lenders from time to time parties thereto and the Administrative Agent (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"). Capitalized terms used but not otherwise defined herein shall have the meaning given to them in the Credit Agreement.

WITNESSETH

WHEREAS, the Borrower, the Lenders and the Administrative Agent are parties to the Credit Agreement;

WHEREAS, the Borrower has requested that the Administrative Agent and the Lenders amend the Credit Agreement on the terms and conditions set forth herein; and

WHEREAS, the Borrower, the Administrative Agent and the Lenders have agreed to amend the Credit Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises set forth above, the terms and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto have agreed to the following:

1. Amendments to the Credit Agreement. Effective as of March 26, 2021 (the "Amendment Effective Date") and subject to the satisfaction of the conditions precedent set forth in Section 3 below, the Credit Agreement is hereby amended as follows:

1.1. The following new definitions are inserted in Section 1.01 of the Credit Agreement in the appropriate alphabetical order:

"Affected Financial Institution" means (a) any EEA Financial Institution or (b) any UK Financial Institution.

"Resolution Authority" means an EEA Resolution Authority or, with respect to any UK Financial Institution, a UK Resolution Authority.

"UK Financial Institution" means any BRRD Undertaking (as such term is defined under the PRA Rulebook (as amended from time to time) promulgated by the United Kingdom Prudential Regulation Authority) or

any person falling within IFPRU 11.6 of the FCA Handbook (as amended from time to time) promulgated by the United Kingdom Financial Conduct Authority, which includes certain credit institutions and investment firms, and certain affiliates of such credit institutions or investment firms.

"UK Resolution Authority" means the Bank of England or any other public administrative authority having responsibility for the resolution of any UK Financial Institution.

1.2. The following definitions set forth in Section 1.01 of the Credit Agreement are hereby amended and restated in their entirety as follows:

"Bail-In Action" means the exercise of any Write-Down and Conversion Powers by the applicable Resolution Authority in respect of any liability of an Affected Financial Institution.

"Bail-In Legislation" means, (a) with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law, regulation, rule or requirement for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule and (b) with respect to the United Kingdom, Part I of the United Kingdom Banking Act 2009 (as amended from time to time) and any other law, regulation or rule applicable in the United Kingdom relating to the resolution of unsound or failing banks, investment firms or other financial institutions or their affiliates (other than through liquidation, administration or other insolvency proceedings).

"EEA Financial Institution" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"Write-Down and Conversion Powers" means, (a) with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule, and (b) with respect to the United Kingdom, any powers of the applicable Resolution Authority under the Bail-In Legislation to cancel, reduce, modify or change the form of a liability of any UK Financial Institution or any contract or instrument under which that liability arises,

to convert all or part of that liability into shares, securities or obligations of that person or any other person, to provide that any such contract or instrument is to have effect as if a right had been exercised under it or to suspend any obligation in respect of that liability or any of the powers under that Bail-In Legislation that are related to or ancillary to any of those powers.

1.3. The definitions of "LIBO Successor Rate" and "LIBO Successor Rate Conforming Changes" set forth in Section 1.01 of the Credit Agreement are hereby deleted.

1.4. Section 2.07(g) of the Credit Agreement is hereby amended and restated in its entirety as follows:

(g) Benchmark Replacement.

(i) Benchmark Replacement. Notwithstanding anything to the contrary herein or in any other Loan Document, if a Benchmark Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any setting of the then-current Benchmark, then (x) if a Benchmark Replacement is determined in accordance with clause (1) or (2) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of such Benchmark setting and subsequent Benchmark settings without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document and (y) if a Benchmark Replacement is determined in accordance with clause (3) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of any Benchmark setting at or after 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Benchmark Replacement is provided to the Lenders without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document so long as the Agent has not received, by such time, written notice of objection to such Benchmark Replacement from Lenders comprising the Required Lenders.

(ii) Benchmark Replacement Conforming Changes. In connection with the implementation of a Benchmark Replacement, the Agent will have the right to make Benchmark Replacement Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Benchmark Replacement Conforming Changes will become effective

without any further action or consent of any other party to this Agreement or any other Loan Document.

(iii) Notices; Standards for Decisions and Determinations. The Agent will promptly notify the Borrower and the Lenders of (A) any Benchmark Replacement Date and the related Benchmark Replacement, (B) the effectiveness of any Benchmark Replacement Conforming Changes, (C) the removal or reinstatement of any tenor of a Benchmark pursuant to clause (iv) below and (D) the commencement of any Benchmark Unavailability Period. For the avoidance of doubt, any notice required to be delivered by the Agent as set forth in this Section 2.07(g) may be provided, at the option of the Agent (in its sole discretion), in one or more notices and may be delivered together with, or as part of any amendment which implements any Benchmark Replacement or Benchmark Conforming Changes. Any determination, decision or election that may be made by the Agent or, if applicable, any Lender (or group of Lenders) pursuant to this Section 2.07(g), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error and may be made in its or their sole discretion and without consent from any other party to this Agreement or any other Loan Document, except, in each case, as expressly required pursuant to this Section 2.07(g).

(iv) Unavailability of Tenor of Benchmark. Notwithstanding anything to the contrary herein or in any other Loan Document, at any time (including in connection with the implementation of a Benchmark Replacement), (A) if the then-current Benchmark is a term rate (including Term SOFR or USD LIBOR) and either (1) any tenor for such Benchmark is not displayed on a screen or other information service that publishes such rate from time to time as selected by the Agent in its reasonable discretion or (2) the regulatory supervisor for the administrator of such Benchmark has provided a public statement or publication of information announcing that any tenor for such Benchmark is or will be no longer representative, then the Agent may modify the definition of "Interest Period" for any Benchmark settings at or after such time to remove such unavailable or non-representative tenor and (B) if a tenor that was removed pursuant to clause (A) above either (1) is subsequently displayed on a screen or information service for a Benchmark (including a Benchmark Replacement) or (2) is not, or is no longer, subject to an announcement that it is or will no longer be representative for a Benchmark (including a Benchmark Replacement), then the Agent may modify the definition of "Interest Period" for all Benchmark settings at or after such time to reinstate such previously removed tenor.

(v) Benchmark Unavailability Period. Upon the Borrower's receipt of notice of the commencement of a Benchmark Unavailability Period, the Borrower may revoke any request for a Borrowing of, conversion to or continuation of Eurodollar Rate Advances to be made, converted or continued during any Benchmark Unavailability Period and, failing that, the Borrower will be deemed to have converted any such request into a request for a Borrowing of or conversion to Base Rate Advances. During any Benchmark Unavailability Period or at any time that a tenor for the then-current Benchmark is not an Available Tenor, the component of Base Rate based upon the then-current Benchmark or such tenor for such Benchmark, as applicable, will not be used in any determination of Base Rate.

(vi) Disclaimer. The Agent does not warrant or accept any responsibility for, and shall not have any liability with respect to (A) the administration, submission or any other matter related to the London interbank offered rate or other rates in the definition of "Eurodollar Rate" or with respect to any alternative or successor rate thereto, or replacement rate thereof (including, without limitation any Benchmark Replacement implemented hereunder), (B) the composition or characteristics of any such Benchmark Replacement, including whether it is similar to, or produces the same value or economic equivalence to USD LIBOR (or any other Benchmark) or have the same volume or liquidity as did USD LIBOR (or any other Benchmark), (C) any actions or use of its discretion or other decisions or determinations made with respect to any matters covered by this Section 2.07(g) including, without limitation, whether or not a Benchmark Transition Event has occurred, the removal or lack thereof of unavailable or non-representative tenors, the implementation or lack thereof of any Benchmark Replacement Conforming Changes, the delivery or non-delivery of any notices required by clause (iii) above or otherwise in accordance herewith, and (D) the effect of any of the foregoing provisions of this Section 2.07(g).

(vii) Certain Defined Terms.

As used in this Section 2.07(g):

"**Available Tenor**" means, as of any date of determination and with respect to the then-current Benchmark, as applicable, any tenor for such Benchmark or payment period for interest calculated with reference to such Benchmark, as applicable, that is or may be used for determining the length of an Interest Period pursuant to this Agreement as of such date and not including, for the avoidance of doubt, any tenor for such Benchmark that is then-removed from the definition of "Interest Period" pursuant to clause (iv) of this Section 2.07(g).

"**Benchmark**" means, initially, USD LIBOR; provided that if a Benchmark Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date have occurred with respect to USD LIBOR or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement to the extent that such Benchmark Replacement has replaced such prior benchmark rate pursuant to clause (i) of this Section 2.07(g).

"**Benchmark Replacement**" means, for any Available Tenor, the first alternative set forth in the order below that can be determined by the Agent for the applicable Benchmark Replacement Date:

(1) the sum of: (a) Term SOFR and (b) the related Benchmark Replacement Adjustment;

(2) the sum of: (a) Daily Simple SOFR and (b) the related Benchmark Replacement Adjustment;

(3) the sum of: (a) the alternate benchmark rate that has been selected by the Agent and the Borrower as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a replacement benchmark rate or the mechanism for determining such a rate by the Relevant Governmental Body or (ii) any evolving or then- prevailing market convention for determining a benchmark rate as a replacement for the then-current Benchmark for U.S. dollar-denominated syndicated credit facilities at such time and (b) the related Benchmark Replacement Adjustment; provided that, in the case of clause (1), such Unadjusted Benchmark Replacement is displayed on a screen or other information service that publishes such rate from time to time as selected by the Agent in its reasonable discretion.

If the Benchmark Replacement as determined pursuant to clause (1), (2) or (3) above would be less than the Floor, the Benchmark Replacement will be deemed to be the Floor for the purposes of this Agreement and the other Loan Documents.

"**Benchmark Replacement Adjustment**" means, with respect to any replacement of the then current Benchmark with an Unadjusted Benchmark Replacement for any applicable Interest Period and Available Tenor for any setting of such Unadjusted Benchmark Replacement:

(1) for purposes of clauses (1) and (2) of the definition of "Benchmark Replacement," the first alternative set forth in the order below that can be determined by the Agent: (a) the spread adjustment, or method for calculating or determining such spread adjustment, (which

may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that has been selected or recommended by the Relevant Governmental Body for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for the applicable Corresponding Tenor; (b) the spread adjustment (which may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that would apply to the fallback rate for a derivative transaction referencing the ISDA Definitions to be effective upon an index cessation event with respect to such Benchmark for the applicable Corresponding Tenor; and

(2) for purposes of clause (3) of the definition of "Benchmark Replacement," the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected by the Agent and the Borrower for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement by the Relevant Governmental Body on the applicable Benchmark Replacement Date or (ii) any evolving or then- prevailing market convention for determining a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar denominated syndicated credit facilities; provided that, in the case of clause (1) above, such adjustment is displayed on a screen or other information service that publishes such Benchmark Replacement Adjustment from time to time as selected by the Agent in its reasonable discretion.

"**Benchmark Replacement Conforming Changes**" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "ABR," the definition of "Business Day," the definition of "Interest Period," timing and frequency of determining rates and making payments of interest, timing of borrowing requests or prepayment, conversion or continuation notices, length of lookback periods, the applicability of breakage provisions, the formula for calculating any successor rates identified pursuant to the definition of "Benchmark Replacement", the formula, methodology or convention for applying the successor Floor to the successor Benchmark Replacement and other technical, administrative or operational matters) that the Agent decides may be appropriate to reflect the adoption and implementation of such Benchmark Replacement and to permit the administration thereof by the Agent in a manner substantially

consistent with market practice (or, if the Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Agent determines that no market practice for the administration of such Benchmark Replacement exists, in such other manner of administration as the Agent decides is reasonably necessary in connection with the administration of this Agreement and the other Loan Documents).

"**Benchmark Replacement Date**" means the earliest to occur of the following events with respect to the then-current Benchmark:

(1) in the case of clause (1) or (2) of the definition of "Benchmark Transition Event," the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of such Benchmark (or the published component used in the calculation thereof) permanently or indefinitely ceases to provide all Available Tenors of such Benchmark (or such component thereof);

(2) in the case of clause (3) of the definition of "Benchmark Transition Event," the date of the public statement or publication of information referenced therein; or

(3) in the case of an Early Opt-in Election, the sixth (6th) Business Day after the date notice of such Early Opt-in Election is provided to the Lenders, so long as the Agent has not received, by 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Early Opt-in Election is provided to the Lenders, written notice of objection to such Early Opt-in Election from Lenders comprising the Required Lenders.

For the avoidance of doubt, (i) if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination and (ii) the "Benchmark Replacement Date" will be deemed to have occurred in the case of clause (1) or (2) with respect to any Benchmark upon the occurrence of the applicable event or events set forth therein with respect to all then-current Available Tenors of such Benchmark (or the published component used in the calculation thereof).

"**Benchmark Transition Event**" means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of such Benchmark (or the published

component used in the calculation thereof) announcing that such administrator has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof), permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof);

(2) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof), the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of New York, an insolvency official with jurisdiction over the administrator for such Benchmark (or such component), a resolution authority with jurisdiction over the administrator for such Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark (or such component), which states that the administrator of such Benchmark (or such component) has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof) permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof); or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that all Available Tenors of such Benchmark (or such component thereof) are no longer representative.

For the avoidance of doubt, a "Benchmark Transition Event" will be deemed to have occurred with respect to any Benchmark if a public statement or publication of information set forth above has occurred with respect to each then-current Available Tenor of such Benchmark (or the published component used in the calculation thereof).

"**Benchmark Unavailability Period**" means the period (if any) (x) beginning at the time that a Benchmark Replacement Date pursuant to clauses (1) or (2) of that definition has occurred if, at such time, no Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with this Section titled "Benchmark Replacement Setting" and (y) ending at the time that a Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with this Section titled "Benchmark Replacement Setting

"**Corresponding Tenor**" with respect to any Available Tenor means, as applicable, either a tenor (including overnight) or an interest payment period having approximately the same length (disregarding business day adjustment) as such Available Tenor.

"**Daily Simple SOFR**" means, for any day, SOFR, with the conventions for this rate (which will include a lookback) being established by the Agent in accordance with the conventions for this rate selected or recommended by the Relevant Governmental Body for determining "Daily Simple SOFR" for syndicated business loans; provided, that if the Agent decides that any such convention is not administratively feasible for the Agent, then the Agent may establish another convention in its reasonable discretion.

"**Early Opt-in Election**" means, if the then-current Benchmark is USD LIBOR, the occurrence of the following on or after December 31, 2020:

(1) a notification by the Agent to (or the request by the Borrower to the Agent to notify) each of the other parties hereto that at least five currently outstanding U.S. dollar- denominated syndicated credit facilities in the U.S. syndicated loan market at such time contain (as a result of amendment or as originally executed) a SOFR-based rate (including SOFR, a term SOFR or any other rate based upon SOFR) as a benchmark rate (and such syndicated credit facilities are identified in such notice and are publicly available for review), and

(2) the joint election by the Agent and the Borrower to trigger a fallback from USD LIBOR and the provision by the Agent of written notice of such election to the Lenders.

"**Floor**" means the benchmark rate floor, if any, provided in this Agreement initially (as of the execution of this Agreement, the modification, amendment or renewal of this Agreement or otherwise) with respect to USD LIBOR.

"**ISDA Definitions**" means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time by the International Swaps and Derivatives Association, Inc. or such successor thereto.

"**Reference Time**" with respect to any setting of the then-current Benchmark means (1) if such Benchmark is USD LIBOR, 11:00 a.m. (London time) on the day that is two London banking days preceding the

date of such setting, and (2) if such Benchmark is not USD LIBOR, the time determined by the Agent in its reasonable discretion.

"**Relevant Governmental Body**" means the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, or any successor thereto.

"**SOFR**" means, with respect to any Business Day, a rate per annum equal to the secured overnight financing rate for such Business Day published by the SOFR Administrator on the SOFR Administrator's Website on the immediately succeeding Business Day.

"**SOFR Administrator**" means the Federal Reserve Bank of New York (or a successor administrator of the secured overnight financing rate).

"**SOFR Administrator's Website**" means the website of the Federal Reserve Bank of New York, currently at http://www.newyorkfed.org, or any successor source for the secured overnight financing rate identified as such by the SOFR Administrator from time to time.

"**Term SOFR**" means, for the applicable Corresponding Tenor as of the applicable Reference Time, the forward-looking term rate based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"**Unadjusted Benchmark Replacement**" means the applicable Benchmark Replacement excluding the related Benchmark Replacement Adjustment.

"**USD LIBOR**" means the London interbank offered rate for U.S. dollars.

1.5. Section 4.01(q) of the Credit Agreement is hereby amended and restated in its entirety as follows:

(q) The Borrower is not an Affected Financial Institution.

1.6. Section 7.02 of the Credit Agreement is amended to add the following language at the end of such Section:

If a payment is made by the Agent (or its Affiliates) in error or if a Lender or another recipient of funds is not otherwise entitled to receive such funds, then such Lender or recipient shall forthwith on demand repay to

the Agent the portion of such payment that was made in error (or otherwise not intended to be received) in same day funds, together with interest thereon in respect of each day from and including the date such amount was made available by the Agent (or its Affiliate) to such Lender or recipient to the date such amount is repaid to the Agent in same day funds at the Federal Funds Rate from time to time in effect. Each Lender and other party hereto waives the discharge for value defense in respect of any such payment.

1.7. Section 8.16 of the Credit Agreement is hereby amended and restated in its entirety as follows:

SECTION 8.16 Acknowledgment and Consent to Bail-In of Affected Financial Institutions. Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any Affected Financial Institution arising under any Loan Document may be subject to the Write-Down and Conversion Powers of the applicable Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by the applicable Resolution Authority to any such liabilities arising hereunder which may be payable to it by any party hereto that is an Affected Financial Institution; and

(b) the effects of any Bail-In Action on any such liability, including, if applicable:

(i) a reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such Affected Financial Institution, its parent entity, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the Write-Down and Conversion Powers of the applicable Resolution Authority.

1. Termination Date Extension. Pursuant to Section 2.18(a) of the Credit Agreement the Borrower is hereby deemed to have requested that, effective as of the Amendment Effective Date, the Termination Date be extended for a period of one year to April 15, 2025. Effective as of the Amendment Effective Date and subject to the satisfaction of the conditions precedent set forth in Section 3 below, pursuant to Section 2.18(b) of the Credit Agreement, each Lender that is not identified on the signature pages hereof as a "Non-Extending Lender" agrees to extend its Termination Date for a period of one year to April 15, 2025. Each Lender that is identified on the signature pages hereof as a "Non-Extending Lender" does not agree to extend its Termination Date and shall be considered a Non-Extending Lender under the Credit Agreement. The parties hereto hereby agree that the foregoing shall constitute the exercise by the Borrower of one of the extensions permitted pursuant to Section 2.18(f) of the Credit Agreement.

2. Conditions of Effectiveness. This Amendment shall become effective as of the Amendment Effective Date upon the Administrative Agent's receipt of (a) duly executed counterparts of the signature pages hereof by each of the Borrower, each Lender and the Administrative Agent, (b) evidence satisfactory to the Administrative Agent that the conditions precedent to the extension set forth in Section 2 above shall have been satisfied in accordance with the requirements of Section 2.18(f) of the Credit Agreement, and (c) such other documents, instruments and agreements as the Administrative Agent shall reasonably request.

4. Representations and Warranties and Reaffirmations of the Borrower.

4.1. The Borrower hereby represents and warrants that (i) this Amendment and the Credit Agreement as previously executed and as modified hereby constitute legal, valid and binding obligations of the Borrower and are enforceable against the Borrower in accordance with their terms (except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally), and (ii) no Default or Event of Default has occurred and is continuing.

4.2. Upon the effectiveness of this Amendment and after giving effect hereto, the Borrower hereby reaffirms all covenants, representations and warranties made in the Credit Agreement as modified hereby, and agrees that all such covenants, representations and warranties shall be deemed to have been remade as of the Amendment Effective Date, except that any such covenant, representation, or warranty that was made as of a specific date shall be considered reaffirmed only as of such date.

5. Reference to the Effect on the Credit Agreement.

5.1. Upon the effectiveness of Section 1 hereof, on and after the date hereof, each reference in the Credit Agreement (including any reference therein to "this Credit Agreement," "this Agreement," "hereunder," "hereof," "herein" or words of like

import referring thereto) or in any other Loan Document shall mean and be a reference to the Credit Agreement as modified hereby.

5.2. Except as specifically modified above, the Credit Agreement and all other documents, instruments and agreements executed and/or delivered in connection therewith shall remain in full force and effect, and are hereby ratified and confirmed.

5.3. The execution, delivery and effectiveness of this Amendment shall not operate as a waiver of any right, power or remedy of the Administrative Agent or any Lender, nor constitute a waiver of any provision of the Credit Agreement or any other documents, instruments and agreements executed and/or delivered in connection therewith.

5.4. Upon satisfaction of the conditions set forth in Section 3 hereof and the execution hereof by the Borrower, each Lender and the Administrative Agent, this Amendment shall be binding upon all parties to the Credit Agreement.

5.5. This Amendment shall constitute a Loan Document.

6. GOVERNING LAW. THIS AMENDMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

7. Headings. Section headings in this Amendment are included herein for convenience of reference only and shall not constitute a part of this Amendment for any other purpose.

8. Counterparts. This Amendment may be executed by one or more of the parties to this Amendment on any number of separate counterparts and all of said counterparts taken together shall be deemed to constitute one and the same instrument. Delivery of an executed counterpart of a signature page to this Agreement by telecopy, e-mailed .pdf or any other electronic means that reproduces an image of the actual executed signature page shall be effective as delivery of a manually executed counterpart of this Amendment. The words "execution," "signed," "signature," "delivery," and words of like import in or relating to any document to be signed in connection with this Amendment and the transactions contemplated hereby shall be deemed to include Electronic Signatures, deliveries or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

9. Sections 8.11 and 8.12 of the Credit Agreement are hereby incorporated by reference into this Amendment and shall apply hereto mutatis mutandis.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, this Amendment has been duly executed as of the day and year first above written.

DTE ELECTRIC COMPANY, as the
Borrower

By:
Name:
Title:

CITIBANK, N.A., as Administrative Agent
and as a Lender

By:
Name:
Title:

_____, as a Lender

By:
Name:
Title:

BNP PARIBAS, as a Non-Extending Lender

By:
Name:
Title:

Exhibit 10.3

EXECUTION VERSION

AMENDMENT NO. 1
TO
FOURTH AMENDED AND RESTATED FIVE-YEAR CREDIT AGREEMENT

THIS AMENDMENT NO. 1 TO FOURTH AMENDED AND RESTATED FIVE-YEAR CREDIT AGREEMENT (this "Amendment") is made as of March 26, 2021, by and among DTE GAS COMPANY (the "Borrower"), the lenders listed on the signature pages hereof (the "Lenders"), and CITIBANK, N.A. ("Citibank"), as Administrative Agent (the "Administrative Agent"), under that certain Fourth Amended and Restated Five-Year Credit Agreement, dated as of April 15, 2019, by and among the Borrower, the lenders from time to time parties thereto and the Administrative Agent (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"). Capitalized terms used but not otherwise defined herein shall have the meaning given to them in the Credit Agreement.

WITNESSETH

WHEREAS, the Borrower, the Lenders and the Administrative Agent are parties to the Credit Agreement;

WHEREAS, the Borrower has requested that the Administrative Agent and the Lenders amend the Credit Agreement on the terms and conditions set forth herein; and

WHEREAS, the Borrower, the Administrative Agent and the Lenders have agreed to amend the Credit Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises set forth above, the terms and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto have agreed to the following:

1. Amendments to the Credit Agreement. Effective as of March 26, 2021 (the "Amendment Effective Date") and subject to the satisfaction of the conditions precedent set forth in Section 3 below, the Credit Agreement is hereby amended as follows:

1.1. The following new definitions are inserted in Section 1.01 of the Credit Agreement in the appropriate alphabetical order:

"Affected Financial Institution" means (a) any EEA Financial Institution or (b) any UK Financial Institution.

"Resolution Authority" means an EEA Resolution Authority or, with respect to any UK Financial Institution, a UK Resolution Authority.

"UK Financial Institution" means any BRRD Undertaking (as such term is defined under the PRA Rulebook (as amended from time to time) promulgated by the United Kingdom Prudential Regulation Authority) or any person falling within IFPRU 11.6 of the FCA Handbook (as amended

from time to time) promulgated by the United Kingdom Financial Conduct Authority, which includes certain credit institutions and investment firms, and certain affiliates of such credit institutions or investment firms.

"UK Resolution Authority" means the Bank of England or any other public administrative authority having responsibility for the resolution of any UK Financial Institution.

1.2. The following definitions set forth in Section 1.01 of the Credit Agreement are hereby amended and restated in their entirety as follows:

"Bail-In Action" means the exercise of any Write-Down and Conversion Powers by the applicable Resolution Authority in respect of any liability of an Affected Financial Institution.

"Bail-In Legislation" means, (a) with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law, regulation, rule or requirement for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule and (b) with respect to the United Kingdom, Part I of the United Kingdom Banking Act 2009 (as amended from time to time) and any other law, regulation or rule applicable in the United Kingdom relating to the resolution of unsound or failing banks, investment firms or other financial institutions or their affiliates (other than through liquidation, administration or other insolvency proceedings).

"EEA Financial Institution" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"Write-Down and Conversion Powers" means, (a) with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule, and (b) with respect to the United Kingdom, any powers of the applicable Resolution Authority under the Bail-In Legislation to cancel, reduce, modify or change the form of a liability of any UK Financial Institution or any contract or instrument under which that liability arises, to convert all or part of that liability into shares, securities or obligations

of that person or any other person, to provide that any such contract or instrument is to have effect as if a right had been exercised under it or to suspend any obligation in respect of that liability or any of the powers under that Bail-In Legislation that are related to or ancillary to any of those powers.

1.3. The definitions of "LIBO Successor Rate" and "LIBO Successor Rate Conforming Changes" set forth in Section 1.01 of the Credit Agreement are hereby deleted.

1.4. Section 2.07(g) of the Credit Agreement is hereby amended and restated in its entirety as follows:

(g) Benchmark Replacement.

(i) Benchmark Replacement. Notwithstanding anything to the contrary herein or in any other Loan Document, if a Benchmark Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any setting of the then-current Benchmark, then (x) if a Benchmark Replacement is determined in accordance with clause (1) or (2) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of such Benchmark setting and subsequent Benchmark settings without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document and (y) if a Benchmark Replacement is determined in accordance with clause (3) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of any Benchmark setting at or after 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Benchmark Replacement is provided to the Lenders without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document so long as the Agent has not received, by such time, written notice of objection to such Benchmark Replacement from Lenders comprising the Required Lenders.

(ii) Benchmark Replacement Conforming Changes. In connection with the implementation of a Benchmark Replacement, the Agent will have the right to make Benchmark Replacement Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Benchmark Replacement Conforming Changes will become effective

without any further action or consent of any other party to this Agreement or any other Loan Document.

(iii) Notices; Standards for Decisions and Determinations. The Agent will promptly notify the Borrower and the Lenders of (A) any Benchmark Replacement Date and the related Benchmark Replacement, (B) the effectiveness of any Benchmark Replacement Conforming Changes, (C) the removal or reinstatement of any tenor of a Benchmark pursuant to clause (iv) below and (D) the commencement of any Benchmark Unavailability Period. For the avoidance of doubt, any notice required to be delivered by the Agent as set forth in this Section 2.07(g) may be provided, at the option of the Agent (in its sole discretion), in one or more notices and may be delivered together with, or as part of any amendment which implements any Benchmark Replacement or Benchmark Conforming Changes. Any determination, decision or election that may be made by the Agent or, if applicable, any Lender (or group of Lenders) pursuant to this Section 2.07(g), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error and may be made in its or their sole discretion and without consent from any other party to this Agreement or any other Loan Document, except, in each case, as expressly required pursuant to this Section 2.07(g).

(iv) Unavailability of Tenor of Benchmark. Notwithstanding anything to the contrary herein or in any other Loan Document, at any time (including in connection with the implementation of a Benchmark Replacement), (A) if the then-current Benchmark is a term rate (including Term SOFR or USD LIBOR) and either (1) any tenor for such Benchmark is not displayed on a screen or other information service that publishes such rate from time to time as selected by the Agent in its reasonable discretion or (2) the regulatory supervisor for the administrator of such Benchmark has provided a public statement or publication of information announcing that any tenor for such Benchmark is or will be no longer representative, then the Agent may modify the definition of "Interest Period" for any Benchmark settings at or after such time to remove such unavailable or non-representative tenor and (B) if a tenor that was removed pursuant to clause (A) above either (1) is subsequently displayed on a screen or information service for a Benchmark (including a Benchmark Replacement) or (2) is not, or is no longer, subject to an announcement that it is or will no longer be representative for a Benchmark (including a Benchmark Replacement), then the Agent may modify the definition of "Interest Period" for all Benchmark settings at or after such time to reinstate such previously removed tenor.

(v) Benchmark Unavailability Period. Upon the Borrower's receipt of notice of the commencement of a Benchmark Unavailability Period, the Borrower may revoke any request for a Borrowing of, conversion to or continuation of Eurodollar Rate Advances to be made, converted or continued during any Benchmark Unavailability Period and, failing that, the Borrower will be deemed to have converted any such request into a request for a Borrowing of or conversion to Base Rate Advances. During any Benchmark Unavailability Period or at any time that a tenor for the then-current Benchmark is not an Available Tenor, the component of Base Rate based upon the then-current Benchmark or such tenor for such Benchmark, as applicable, will not be used in any determination of Base Rate.

(vi) Disclaimer. The Agent does not warrant or accept any responsibility for, and shall not have any liability with respect to (A) the administration, submission or any other matter related to the London interbank offered rate or other rates in the definition of "Eurodollar Rate" or with respect to any alternative or successor rate thereto, or replacement rate thereof (including, without limitation any Benchmark Replacement implemented hereunder), (B) the composition or characteristics of any such Benchmark Replacement, including whether it is similar to, or produces the same value or economic equivalence to USD LIBOR (or any other Benchmark) or have the same volume or liquidity as did USD LIBOR (or any other Benchmark), (C) any actions or use of its discretion or other decisions or determinations made with respect to any matters covered by this Section 2.07(g) including, without limitation, whether or not a Benchmark Transition Event has occurred, the removal or lack thereof of unavailable or non-representative tenors, the implementation or lack thereof of any Benchmark Replacement Conforming Changes, the delivery or non-delivery of any notices required by clause (iii) above or otherwise in accordance herewith, and (D) the effect of any of the foregoing provisions of this Section 2.07(g).

(vii) Certain Defined Terms.

As used in this Section 2.07(g):

"**Available Tenor**" means, as of any date of determination and with respect to the then-current Benchmark, as applicable, any tenor for such Benchmark or payment period for interest calculated with reference to such Benchmark, as applicable, that is or may be used for determining the length of an Interest Period pursuant to this Agreement as of such date and not including, for the avoidance of doubt, any tenor for such Benchmark that is then-removed from the definition of "Interest Period" pursuant to clause (iv) of this Section 2.07(g).

"**Benchmark**" means, initially, USD LIBOR; provided that if a Benchmark Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date have occurred with respect to USD LIBOR or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement to the extent that such Benchmark Replacement has replaced such prior benchmark rate pursuant to clause (i) of this Section 2.07(g).

"**Benchmark Replacement**" means, for any Available Tenor, the first alternative set forth in the order below that can be determined by the Agent for the applicable Benchmark Replacement Date:

(1) the sum of: (a) Term SOFR and (b) the related Benchmark Replacement Adjustment;

(2) the sum of: (a) Daily Simple SOFR and (b) the related Benchmark Replacement Adjustment;

(3) the sum of: (a) the alternate benchmark rate that has been selected by the Agent and the Borrower as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a replacement benchmark rate or the mechanism for determining such a rate by the Relevant Governmental Body or (ii) any evolving or then- prevailing market convention for determining a benchmark rate as a replacement for the then-current Benchmark for U.S. dollar-denominated syndicated credit facilities at such time and (b) the related Benchmark Replacement Adjustment; provided that, in the case of clause (1), such Unadjusted Benchmark Replacement is displayed on a screen or other information service that publishes such rate from time to time as selected by the Agent in its reasonable discretion.

If the Benchmark Replacement as determined pursuant to clause (1), (2) or (3) above would be less than the Floor, the Benchmark Replacement will be deemed to be the Floor for the purposes of this Agreement and the other Loan Documents.

"**Benchmark Replacement Adjustment**" means, with respect to any replacement of the then current Benchmark with an Unadjusted Benchmark Replacement for any applicable Interest Period and Available Tenor for any setting of such Unadjusted Benchmark Replacement:

(1) for purposes of clauses (1) and (2) of the definition of "Benchmark Replacement," the first alternative set forth in the order below that can be determined by the Agent: (a) the spread adjustment, or method for calculating or determining such spread adjustment, (which

may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that has been selected or recommended by the Relevant Governmental Body for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for the applicable Corresponding Tenor; (b) the spread adjustment (which may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that would apply to the fallback rate for a derivative transaction referencing the ISDA Definitions to be effective upon an index cessation event with respect to such Benchmark for the applicable Corresponding Tenor; and

(2) for purposes of clause (3) of the definition of "Benchmark Replacement," the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected by the Agent and the Borrower for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement by the Relevant Governmental Body on the applicable Benchmark Replacement Date or (ii) any evolving or then- prevailing market convention for determining a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar denominated syndicated credit facilities; provided that, in the case of clause (1) above, such adjustment is displayed on a screen or other information service that publishes such Benchmark Replacement Adjustment from time to time as selected by the Agent in its reasonable discretion.

Benchmark Replacement Conforming Changes" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "ABR," the definition of "Business Day," the definition of "Interest Period," timing and frequency of determining rates and making payments of interest, timing of borrowing requests or prepayment, conversion or continuation notices, length of lookback periods, the applicability of breakage provisions, the formula for calculating any successor rates identified pursuant to the definition of "Benchmark Replacement", the formula, methodology or convention for applying the successor Floor to the successor Benchmark Replacement and other technical, administrative or operational matters) that the Agent decides may be appropriate to reflect the adoption and implementation of such Benchmark Replacement and to permit the administration thereof by the Agent in a manner substantially

consistent with market practice (or, if the Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Agent determines that no market practice for the administration of such Benchmark Replacement exists, in such other manner of administration as the Agent decides is reasonably necessary in connection with the administration of this Agreement and the other Loan Documents).

"**Benchmark Replacement Date**" means the earliest to occur of the following events with respect to the then-current Benchmark:

(1) in the case of clause (1) or (2) of the definition of "Benchmark Transition Event," the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of such Benchmark (or the published component used in the calculation thereof) permanently or indefinitely ceases to provide all Available Tenors of such Benchmark (or such component thereof);

(2) in the case of clause (3) of the definition of "Benchmark Transition Event," the date of the public statement or publication of information referenced therein; or

(3) in the case of an Early Opt-in Election, the sixth (6th) Business Day after the date notice of such Early Opt-in Election is provided to the Lenders, so long as the Agent has not received, by 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Early Opt-in Election is provided to the Lenders, written notice of objection to such Early Opt-in Election from Lenders comprising the Required Lenders.

For the avoidance of doubt, (i) if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination and (ii) the "Benchmark Replacement Date" will be deemed to have occurred in the case of clause (1) or (2) with respect to any Benchmark upon the occurrence of the applicable event or events set forth therein with respect to all then-current Available Tenors of such Benchmark (or the published component used in the calculation thereof).

"**Benchmark Transition Event**" means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of such Benchmark (or the published

component used in the calculation thereof) announcing that such administrator has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof), permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof);

(2) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof), the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of New York, an insolvency official with jurisdiction over the administrator for such Benchmark (or such component), a resolution authority with jurisdiction over the administrator for such Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark (or such component), which states that the administrator of such Benchmark (or such component) has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof) permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof); or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that all Available Tenors of such Benchmark (or such component thereof) are no longer representative.

For the avoidance of doubt, a "Benchmark Transition Event" will be deemed to have occurred with respect to any Benchmark if a public statement or publication of information set forth above has occurred with respect to each then-current Available Tenor of such Benchmark (or the published component used in the calculation thereof).

"**Benchmark Unavailability Period**" means the period (if any) (x) beginning at the time that a Benchmark Replacement Date pursuant to clauses (1) or (2) of that definition has occurred if, at such time, no Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with this Section titled "Benchmark Replacement Setting" and (y) ending at the time that a Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with this Section titled "Benchmark Replacement Setting

"**Corresponding Tenor**" with respect to any Available Tenor means, as applicable, either a tenor (including overnight) or an interest payment period having approximately the same length (disregarding business day adjustment) as such Available Tenor.

"**Daily Simple SOFR**" means, for any day, SOFR, with the conventions for this rate (which will include a lookback) being established by the Agent in accordance with the conventions for this rate selected or recommended by the Relevant Governmental Body for determining "Daily Simple SOFR" for syndicated business loans; provided, that if the Agent decides that any such convention is not administratively feasible for the Agent, then the Agent may establish another convention in its reasonable discretion.

"**Early Opt-in Election**" means, if the then-current Benchmark is USD LIBOR, the occurrence of the following on or after December 31, 2020:

(1) a notification by the Agent to (or the request by the Borrower to the Agent to notify) each of the other parties hereto that at least five currently outstanding U.S. dollar- denominated syndicated credit facilities in the U.S. syndicated loan market at such time contain (as a result of amendment or as originally executed) a SOFR-based rate (including SOFR, a term SOFR or any other rate based upon SOFR) as a benchmark rate (and such syndicated credit facilities are identified in such notice and are publicly available for review), and

(2) the joint election by the Agent and the Borrower to trigger a fallback from USD LIBOR and the provision by the Agent of written notice of such election to the Lenders.

"**Floor**" means the benchmark rate floor, if any, provided in this Agreement initially (as of the execution of this Agreement, the modification, amendment or renewal of this Agreement or otherwise) with respect to USD LIBOR.

"**ISDA Definitions**" means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time by the International Swaps and Derivatives Association, Inc. or such successor thereto.

"**Reference Time**" with respect to any setting of the then-current Benchmark means (1) if such Benchmark is USD LIBOR, 11:00 a.m. (London time) on the day that is two London banking days preceding the

date of such setting, and (2) if such Benchmark is not USD LIBOR, the time determined by the Agent in its reasonable discretion.

"**Relevant Governmental Body**" means the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, or any successor thereto.

"**SOFR**" means, with respect to any Business Day, a rate per annum equal to the secured overnight financing rate for such Business Day published by the SOFR Administrator on the SOFR Administrator's Website on the immediately succeeding Business Day.

"**SOFR Administrator**" means the Federal Reserve Bank of New York (or a successor administrator of the secured overnight financing rate).

"**SOFR Administrator's Website**" means the website of the Federal Reserve Bank of New York, currently at http://www.newyorkfed.org, or any successor source for the secured overnight financing rate identified as such by the SOFR Administrator from time to time.

"**Term SOFR**" means, for the applicable Corresponding Tenor as of the applicable Reference Time, the forward-looking term rate based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"**Unadjusted Benchmark Replacement**" means the applicable Benchmark Replacement excluding the related Benchmark Replacement Adjustment.

"**USD LIBOR**" means the London interbank offered rate for U.S. dollars.

1.5. Section 4.01(q) of the Credit Agreement is hereby amended and restated in its entirety as follows:

(q) The Borrower is not an Affected Financial Institution.

1.6. Section 7.02 of the Credit Agreement is amended to add the following language at the end of such Section:

If a payment is made by the Agent (or its Affiliates) in error or if a Lender or another recipient of funds is not otherwise entitled to receive such funds, then such Lender or recipient shall forthwith on demand repay to

the Agent the portion of such payment that was made in error (or otherwise not intended to be received) in same day funds, together with interest thereon in respect of each day from and including the date such amount was made available by the Agent (or its Affiliate) to such Lender or recipient to the date such amount is repaid to the Agent in same day funds at the Federal Funds Rate from time to time in effect. Each Lender and other party hereto waives the discharge for value defense in respect of any such payment.

1.7. Section 8.16 of the Credit Agreement is hereby amended and restated in its entirety as follows:

SECTION 8.16 Acknowledgment and Consent to Bail-In of Affected Financial Institutions. Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any Affected Financial Institution arising under any Loan Document may be subject to the Write-Down and Conversion Powers of the applicable Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by the applicable Resolution Authority to any such liabilities arising hereunder which may be payable to it by any party hereto that is an Affected Financial Institution; and

(b) the effects of any Bail-In Action on any such liability, including, if applicable:

(i) a reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such Affected Financial Institution, its parent entity, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the Write-Down and Conversion Powers of the applicable Resolution Authority.

2. Termination Date Extension. Pursuant to Section 2.18(a) of the Credit Agreement the Borrower is hereby deemed to have requested that, effective as of the Amendment Effective Date, the Termination Date be extended for a period of one year to April 15,

2025. Effective as of the Amendment Effective Date and subject to the satisfaction of the conditions precedent set forth in Section 3 below, pursuant to Section 2.18(b) of the Credit Agreement, each Lender that is not identified on the signature pages hereof as a "Non-Extending Lender" agrees to extend its Termination Date for a period of one year to April 15, 2025. Each Lender that is identified on the signature pages hereof as a "Non-Extending Lender" does not agree to extend its Termination Date and shall be considered a Non-Extending Lender under the Credit Agreement. The parties hereto hereby agree that the foregoing shall constitute the exercise by the Borrower of one of the extensions permitted pursuant to Section 2.18(f) of the Credit Agreement.

3. Conditions of Effectiveness. This Amendment shall become effective as of the Amendment Effective Date upon the Administrative Agent's receipt of (a) duly executed counterparts of the signature pages hereof by each of the Borrower, each Lender and the Administrative Agent, (b) evidence satisfactory to the Administrative Agent that the conditions precedent to the extension set forth in Section 2 above shall have been satisfied in accordance with the requirements of Section 2.18(f) of the Credit Agreement, and (c) such other documents, instruments and agreements as the Administrative Agent shall reasonably request.

4. Representations and Warranties and Reaffirmations of the Borrower.

4.1. The Borrower hereby represents and warrants that (i) this Amendment and the Credit Agreement as previously executed and as modified hereby constitute legal, valid and binding obligations of the Borrower and are enforceable against the Borrower in accordance with their terms (except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally), and (ii) no Default or Event of Default has occurred and is continuing.

4.2. Upon the effectiveness of this Amendment and after giving effect hereto, the Borrower hereby reaffirms all covenants, representations and warranties made in the Credit Agreement as modified hereby, and agrees that all such covenants, representations and warranties shall be deemed to have been remade as of the Amendment Effective Date, except that any such covenant, representation, or warranty that was made as of a specific date shall be considered reaffirmed only as of such date.

5. Reference to the Effect on the Credit Agreement.

5.1. Upon the effectiveness of Section 1 hereof, on and after the date hereof, each reference in the Credit Agreement (including any reference therein to "this Credit Agreement," "this Agreement," "hereunder," "hereof," "herein" or words of like import referring thereto) or in any other Loan Document shall mean and be a reference to the Credit Agreement as modified hereby.

5.2. Except as specifically modified above, the Credit Agreement and all other documents, instruments and agreements executed and/or delivered in connection therewith shall remain in full force and effect, and are hereby ratified and confirmed.

5.3. The execution, delivery and effectiveness of this Amendment shall not operate as a waiver of any right, power or remedy of the Administrative Agent or any Lender, nor constitute a waiver of any provision of the Credit Agreement or any other documents, instruments and agreements executed and/or delivered in connection therewith.

5.4. Upon satisfaction of the conditions set forth in Section 3 hereof and the execution hereof by the Borrower, each Lender and the Administrative Agent, this Amendment shall be binding upon all parties to the Credit Agreement.

5.5. This Amendment shall constitute a Loan Document.

6. GOVERNING LAW. THIS AMENDMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

7. Headings. Section headings in this Amendment are included herein for convenience of reference only and shall not constitute a part of this Amendment for any other purpose.

8. Counterparts. This Amendment may be executed by one or more of the parties to this Amendment on any number of separate counterparts and all of said counterparts taken together shall be deemed to constitute one and the same instrument. Delivery of an executed counterpart of a signature page to this Agreement by telecopy, e-mailed .pdf or any other electronic means that reproduces an image of the actual executed signature page shall be effective as delivery of a manually executed counterpart of this Amendment. The words "execution," "signed," "signature," "delivery," and words of like import in or relating to any document to be signed in connection with this Amendment and the transactions contemplated hereby shall be deemed to include Electronic Signatures, deliveries or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

9. Sections 8.11 and 8.12 of the Credit Agreement are hereby incorporated by reference into this Amendment and shall apply hereto mutatis mutandis.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, this Amendment has been duly executed as of the day and year first above written.

DTE GAS COMPANY, as the
Borrower

By:
Name:
Title:

CITIBANK, N.A., as Administrative Agent
and as a Lender

By:
Name:
Title:

_____, as a Lender

By:
Name:
Title:

BNP PARIBAS, as a Non-Extending Lender

By:
Name:
Title:

Exhibit 10.4

EXECUTION VERSION

AMENDMENT NO. 2
TO
FOURTH AMENDED AND RESTATED FIVE-YEAR CREDIT AGREEMENT

THIS AMENDMENT NO. 2 TO FOURTH AMENDED AND RESTATED FIVE-YEAR CREDIT AGREEMENT (this "Amendment") is made as of June 3, 2021, by and among DTE ENERGY COMPANY (the "Borrower"), the lenders listed on the signature pages hereof (the "Lenders"), and CITIBANK, N.A. ("Citibank"), as Administrative Agent (the "Administrative Agent"), under that certain Fourth Amended and Restated Five-Year Credit Agreement, dated as of April 15, 2019, by and among the Borrower, the lenders from time to time parties thereto and the Administrative Agent (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"). Capitalized terms used but not otherwise defined herein shall have the meaning given to them in the Credit Agreement.

WITNESSETH

WHEREAS, the Borrower, the Lenders and the Administrative Agent are parties to the Credit Agreement;

WHEREAS, the Borrower has requested that the Administrative Agent and the Lenders amend the Credit Agreement on the terms and conditions set forth herein; and

WHEREAS, the Borrower, the Administrative Agent and the Lenders have agreed to amend the Credit Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises set forth above, the terms and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto have agreed to the following:

1. Amendments to the Credit Agreement. Effective as of June 3, 2021 (the "Amendment Effective Date") and subject to the satisfaction of the conditions precedent set forth in Section 2 below, the Credit Agreement is hereby amended as follows:

1.1. Section 1.01 of the Credit Agreement is hereby amended to insert the following new definition alphabetically therein:

> "Midstream Business Spin-Off" means the spin-off of the Borrower's non-utility natural gas pipeline, storage and gathering business as announced by the Borrower on October 27, 2020, including the approval thereof by the Borrower's board of directors and Form 10 registration statement in respect thereof being declared effective by the Securities and Exchange Commission.

1.2. Section 6.01(i) of the Credit Agreement is hereby amended and restated in its entirety as follows:

> (i) The Borrower and its Subsidiaries, on a Consolidated basis, shall, as of the last day of any fiscal quarter of the Borrower, have a ratio

of (a) Total Funded Debt to (b) Capitalization in excess of (i) solely to the extent the Midstream Business Spin-Off shall have been consummated prior to the last day of such fiscal quarter, as of the last day of any fiscal quarter of the Borrower ending during the period commencing on September 30, 2021 to and including December 31, 2022, 0.70:1 or (ii) as of the last day of any other fiscal quarter of the Borrower, 0.65:1; provided that for purposes of calculating the foregoing ratio as of the last day of any fiscal quarter other than any fiscal quarter ending on June 30, "Total Funded Debt" for purposes of clauses (a) and (b) above shall be calculated exclusive of all Excluded Short-Term Debt outstanding as of such date;

2. Conditions of Effectiveness. This Amendment shall become effective as of the Amendment Effective Date upon the Administrative Agent's receipt of (a) duly executed counterparts of the signature pages hereof by each of the Borrower, the Required Lender and the Administrative Agent, (b) an amendment fee equal to $10,000 for the account of each Lender that delivers its executed signature page hereto by 5:00 p.m. (New York City time) on June 2, 2021 (or such later time as the Administrative Agent and the Borrower shall agree), and (c) such other documents, instruments and agreements as the Administrative Agent shall reasonably request.

3. Representations and Warranties and Reaffirmations of the Borrower.

3.1. The Borrower hereby represents and warrants that (i) this Amendment and the Credit Agreement as previously executed and as modified hereby constitute legal, valid and binding obligations of the Borrower and are enforceable against the Borrower in accordance with their terms (except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally), and (ii) no Default or Event of Default has occurred and is continuing.

3.2. Upon the effectiveness of this Amendment and after giving effect hereto, the Borrower hereby reaffirms all covenants, representations and warranties made in the Credit Agreement as modified hereby, and agrees that all such covenants, representations and warranties shall be deemed to have been remade as of the Amendment Effective Date, except that any such covenant, representation, or warranty that was made as of a specific date shall be considered reaffirmed only as of such date.

4. Reference to the Effect on the Credit Agreement.

4.1. Upon the effectiveness of Section 1 hereof, on and after the date hereof, each reference in the Credit Agreement (including any reference therein to "this Credit Agreement," "this Agreement," "hereunder," "hereof," "herein" or words of like import referring thereto) or in any other Loan Document shall mean and be a reference to the Credit Agreement as modified hereby.

4.2. Except as specifically modified above, the Credit Agreement and all other documents, instruments and agreements executed and/or delivered in connection therewith shall remain in full force and effect, and are hereby ratified and confirmed.

4.3. The execution, delivery and effectiveness of this Amendment shall not operate as a waiver of any right, power or remedy of the Administrative Agent or any Lender, nor constitute a waiver of any provision of the Credit Agreement or any other documents, instruments and agreements executed and/or delivered in connection therewith.

4.4. Upon satisfaction of the conditions set forth in Section 2 hereof and the execution hereof by the Borrower, each Lender and the Administrative Agent, this Amendment shall be binding upon all parties to the Credit Agreement.

4.5. This Amendment shall constitute a Loan Document.

5. GOVERNING LAW. THIS AMENDMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

6. Headings. Section headings in this Amendment are included herein for convenience of reference only and shall not constitute a part of this Amendment for any other purpose.

7. Counterparts. This Amendment may be executed by one or more of the parties to this Amendment on any number of separate counterparts and all of said counterparts taken together shall be deemed to constitute one and the same instrument. Delivery of an executed counterpart of a signature page to this Agreement by telecopy, e-mailed .pdf or any other electronic means that reproduces an image of the actual executed signature page shall be effective as delivery of a manually executed counterpart of this Amendment. The words "execution," "signed," "signature," "delivery," and words of like import in or relating to any document to be signed in connection with this Amendment and the transactions contemplated hereby shall be deemed to include Electronic Signatures, deliveries or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

8. Sections 8.11 and 8.12 of the Credit Agreement are hereby incorporated by reference into this Amendment and shall apply hereto mutatis mutandis.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, this Amendment has been duly executed as of the day and year first above written.

DTE ENERGY COMPANY, as the
Borrower

By:
Name:
Title:

CITIBANK, N.A., as Administrative Agent
and as a Lender

By:
Name:
Title:

_____, as a Lender

By:
Name:
Title:

Exhibit 10.5

EXECUTION COPY

CREDIT AGREEMENT

Dated as of December 22, 2021

Among

DTE ENERGY COMPANY,

as Borrower

and

THE INITIAL LENDERS NAMED HEREIN,

as Initial Lenders

and

JPMORGAN CHASE BANK, N.A.,

as Administrative Agent

JPMORGAN CHASE BANK, N.A.

as Co-Lead Arranger and Sole Book Runner
and
THE BANK OF NOVA SCOTIA
As Co-Lead Arranger

and

THE BANK OF NOVA SCOTIA

As Co-Lead Arranger

TABLE OF CONTENTS

SCHEDULES AND EXHIBITS

Schedules

Exhibits

This CREDIT AGREEMENT (this "Agreement") dated as of December 22, 2021 is entered into among DTE ENERGY COMPANY, a Michigan corporation (the "Borrower"), the banks, financial institutions and other institutional lenders (the "Initial Lenders") listed on the signature pages hereof, and JPMORGAN CHASE BANK, N.A. ("JPMorgan"), as Administrative Agent (including its branches and Affiliates as may be required to administer its duties, the "Agent") for the Lenders (as hereinafter defined).

PRELIMINARY STATEMENT

WHEREAS, the Borrower, the Lenders and the Agent have agreed to enter into this Agreement in order to set forth the terms and conditions under which the Lenders will, from time to time, make loans to or for the benefit of the Borrower.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained herein, the parties hereto hereby agree, subject to the satisfaction of the conditions set forth in Article III, as follows:

ARTICLE I: DEFINITIONS AND ACCOUNTING TERMS

SECTION 1.01 Certain Defined Terms. As used in this Agreement, the following terms shall have the following meanings (such meanings to be equally applicable to both the singular and plural forms of the terms defined):

"Affected Financial Institution" means (a) any EEA Financial Institution or (b) any UK Financial Institution.

"Affiliate" means, as to any Person, any other Person that, directly or indirectly, controls, is controlled by or is under common control with such Person or is a director or officer of such Person. For purposes of this definition, the term "control" (including the terms "controlling", "controlled by" and "under common control with") of a Person means the possession, direct or indirect, of the power to vote 25% or more of the Voting Stock of such Person or to direct or cause the direction of the management and policies of such Person, whether through the ownership of Voting Stock, by contract or otherwise.

"Agent" has the meaning specified in the recital of parties to this Agreement.

"Agent's Account" means the account of the Agent maintained by the Agent at JPMorgan with its office at JPMorgan Chase Bank, N.A., 10 S. Dearborn St., Floor L2, Chicago, Illinois, 60603, Account No. Reference: DTE Energy Co., Attention: Agency Operations.

"Agent Parties" has the meaning specified in Section 8.02(b).

"Aggregate Outstanding Credit Exposures" means, at any time, the aggregate of the Outstanding Credit Exposures of the Lenders.

"Anti-Corruption Laws" means all laws, rules, and regulations of any jurisdiction applicable to any Borrower or its Subsidiaries from time to time concerning or relating to bribery or corruption.

"Anti-Money Laundering Laws" has the meaning specified in Section 4.01(p).

"Applicable LC Fee Rate" means, as of any date, the Applicable Margin as determined pursuant to clause (ii) of the definition thereof.

"Applicable Lending Office" means, with respect to each Lender or any LC Issuer, such Lender's or LC Issuer's Domestic Lending Office in the case of a Base Rate Advance or the issuance of any Facility LC and such Lender's Eurodollar Lending Office in the case of a Eurodollar Rate Advance.

"Applicable Margin" means, as of any date, (i) with respect to all Base Rate Advances, a rate per annum equal to 0.325%, which is applicable at all times with respect to Base Rate Advances, and (ii) with respect to all Eurodollar Rate Advances, a rate per annum equal to 1.325%, which is applicable at all times with respect to Eurodollar Rate Advances.

"Applicable Percentage" means, as of any date, a rate per annum equal to 0.175% at which Facility Fees are accruing on each Lender's Commitment (without regard to usage) at all times.

"Approved Fund" means any Person (other than a natural person) that (a) is engaged in making, purchasing, holding or investing in bank loans and similar extensions of credit in the ordinary course of its business, (b) has a combined capital and surplus of at least $500,000,000, and (c) is administered or managed by (x) a Lender, (y) an Affiliate of a Lender or (z) an entity or an Affiliate of an entity that administers or manages a Lender.

"Arrangers" means JPMorgan in its capacity as co-lead arranger and book runner and The Bank of Nova Scotia as co-lead arranger for the credit facility evidenced by this Agreement.

"Assignment and Assumption" means an assignment and assumption entered into by a Lender and an Eligible Assignee, and accepted by the Agent, in substantially the form of Exhibit C hereto or any other form approved by the Agent.

"Audited Statements" means the Consolidated balance sheets of the Borrower, DTE Electric and DTE Gas as at December 31, 2020, and the related Consolidated statements of income and cash flows of the Borrower, DTE Electric and DTE Gas for the fiscal year then ended, accompanied by the opinion thereon of the Borrower's, DTE Electric's and DTE Gas' independent public accountants.

"Bail-In Action" means the exercise of any Write-Down and Conversion Powers by the applicable Resolution Authority in respect of any liability of an Affected Financial Institution.

"Bail-In Legislation" means, (a) with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law, regulation, rule or requirement for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule and (b) with respect to the United Kingdom, Part I of the United Kingdom Banking Act 2009 (as amended from time to time) and any other law, regulation or rule applicable in the United Kingdom relating to the resolution of unsound or failing banks, investment firms or other financial institutions or their affiliates (other than through liquidation, administration or other insolvency proceedings).

"Bankruptcy Event" means, with respect to any Person, such Person (a) becomes the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee, administrator, custodian, assignee for the benefit of creditors or similar Person charged with the reorganization or liquidation of its business appointed for it, or, in the good faith determination of the Agent, has taken any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any such proceeding or appointment or (b) has a parent company that has become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee, custodian, administrator, assignee for the benefit of creditors or similar Person charged with reorganization or liquidation of its business, appointed for it, or has taken any action in furtherance of, or indicating its consent to, approval of or acquiescence in any such proceeding or appointment; provided that, a Bankruptcy Event shall not result solely by virtue of any ownership interest, or the acquisition of any ownership interest, in such Person by a Governmental Authority or instrumentality thereof; provided, further, that such ownership interest does not result in or provide such Person with immunity from the jurisdiction of courts within the United States or from the enforcement of judgments or writs of attachment on its assets or permit such Person (or such Governmental Authority or instrumentality) to reject, repudiate, disavow or disaffirm any contracts or agreements made by such Person.

"Base Rate" means, for any day, a rate per annum equal to the greatest of (a) the Prime Rate in effect on such day, (b) the NYFRB Rate in effect on such day plus ½ of 1% and (c) the Eurodollar Rate for a one month Interest Period on such day (or if such day is not a Business Day, the immediately preceding Business Day) plus 1%, provided that for the purpose of this definition, the Eurodollar Rate for any day shall be based on the LIBOR Screen Rate (or if the LIBOR Screen Rate is not available for such one month Interest Period, the Interpolated Rate) at approximately 11:00 a.m. London time on such day. Any change in the Base Rate due to a change in the Prime Rate, the NYFRB Rate or the Eurodollar Rate shall be effective from and including the effective date of such change in the Prime Rate, the NYFRB Rate or the Eurodollar Rate, respectively. If the Base Rate is being used as an alternate rate of interest pursuant to Section 2.07 (for the avoidance of doubt, only until the Benchmark Replacement has been determined pursuant to Section 2.07(g)), then the Base Rate shall be the greater of clause (a) and (b) above and shall be determined without reference to clause (c) above. For the avoidance of doubt, if the Base Rate shall be less than 1.0%, such rate shall be deemed to be 1.0% for purposes of this Agreement.

"Base Rate Advance" means a Revolving Credit Advance that bears interest as provided in Section 2.06(a)(i).

"Beneficial Ownership Certification" means a certification regarding beneficial ownership or control as required by the Beneficial Ownership Regulation.

"Beneficial Ownership Regulation" means 31 C.F.R. § 1010.230.

"Benefit Plan" means any of (a) an "employee benefit plan" (as defined in Section 3(3) of ERISA) that is subject to Title I of ERISA, (b) a "plan" as defined in Section 4975 of the Internal Revenue Code to which Section 4975 of the Internal Revenue Code applies, and (c) any Person whose assets include (for purposes of the Plan Asset Regulations or otherwise for purposes of Title I of ERISA or Section 4975 of the Internal Revenue Code) the assets of any such "employee benefit plan" or "plan".

"Borrower" has the meaning specified in the recital of parties to this Agreement.

"Borrowing" means a borrowing consisting of simultaneous Revolving Credit Advances of the same Type and (in the case of Eurodollar Rate Advances) having the same Interest Period, made by each of the Lenders pursuant to Section 2.01.

"Business Day" means a day of the year on which banks are not required or authorized by law to close in New York City or Chicago, Illinois and, if the applicable Business Day relates to any Eurodollar Rate Advances, on which dealings are carried on in the London interbank market.

"Capitalization" means the sum of (a) Total Funded Debt plus (b) Consolidated Net Worth.

"Collateral Shortfall Amount" means, as of any date of determination, an amount in immediately available funds, which funds shall be held in the Facility LC Collateral Account, equal to the difference of (x) the amount of LC Obligations at such time, less (y) the amount on deposit in the Facility LC Collateral Account at such time which is free and clear of all rights and claims of third parties and has not been applied against the Obligations.

"Commitment" means, for each Lender, the obligation of such Lender to make Revolving Credit Advances to, and participate in Facility LCs issued upon the application of, the Borrower in an aggregate amount not exceeding the amount set forth opposite such Lender's name on Schedule I hereto or if such Lender has entered into any Assignment and Assumption, set forth for such Lender in the Register maintained by the Agent pursuant to Section 8.07(d), as such amount may be modified from time to time pursuant to the terms hereof (including, without limitation, pursuant to Section 2.04).

"Communications" has the meaning specified in Section 8.02(b).

"Confidential Information" means information that the Borrower furnishes to the Agent or any Lender designated as confidential, but does not include any such information that is

or becomes generally available to the public or that is or becomes available to the Agent or such Lender from a source other than the Borrower.

"Consolidated" refers to the consolidation of accounts in accordance with GAAP.

"Consolidated Net Worth" means, as of any date of determination, the consolidated total stockholders' equity, including capital stock (but excluding treasury stock and capital stock subscribed and unissued), additional paid-in capital and retained earnings (but excluding the Excluded Pension Effects) of the Borrower and its Subsidiaries determined in accordance with GAAP.

"Convert", "Conversion" and "Converted" each refers to a conversion of Revolving Credit Advances of one Type into Revolving Credit Advances of the other Type pursuant to Section 2.07 or 2.08.

"Credit Extension" means the making of a Revolving Credit Advance or the issuance, renewal, extension or increase of a Facility LC hereunder.

"Debt" of any Person means, without duplication, (a) all indebtedness of such Person for borrowed money, (b) all obligations of such Person 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 such Person's business), (c) all obligations of such Person evidenced by notes, bonds, debentures or other similar instruments, (d) all obligations of such Person created or arising under any conditional sale or other title retention agreement with respect to property acquired by such Person (even though the rights and remedies of the seller or lender under such agreement in the event of default are limited to repossession or sale of such property), (e) all obligations of such Person as lessee under leases that have been or should be, in accordance with GAAP, recorded as capital leases, (f) all obligations, contingent or otherwise, of such Person in respect of acceptances, letters of credit or similar extensions of credit, (g) all obligations of such Person in respect of Hedge Agreements, (h) all Debt of others referred to in clauses (a) through (g) above or clause (i) below guaranteed directly or indirectly in any manner by such Person, or in effect guaranteed directly or indirectly by such Person through an agreement (1) to pay or purchase such Debt or to advance or supply funds for the payment or purchase of such Debt, (2) to purchase, sell or lease (as lessee or lessor) property, or to purchase or sell services, primarily for the purpose of enabling the debtor to make payment of such Debt or to assure the holder of such Debt against loss, (3) to supply funds to or in any other manner invest in the debtor (including any agreement to pay for property or services irrespective of whether such property is received or such services are rendered) or (4) otherwise to assure a creditor against loss (all such obligations under this clause (h) being "Guaranteed Obligations"), and (i) all Debt referred to in clauses (a) through (h) above secured by (or for which the holder of such Debt has an existing right, contingent or otherwise, to be secured by) any Lien on property (including, without limitation, accounts and contract rights) owned by such Person, even though such Person has not assumed or become liable for the payment of such Debt. See the definition of "Nonrecourse Debt" below.

"Default" means any Event of Default or any event that would constitute an Event of Default but for the requirement that notice be given or time elapse or both.

"Defaulting Lender" means any Lender that (a) has failed, within two Business Days of the date required to be funded or paid, to (i) fund any portion of its Revolving Credit Advances, (ii) fund any portion of its participations in Facility LCs or (iii) pay over to the Agent, any LC Issuer or any other Lender any other amount required to be paid by it hereunder, unless, in the case of clause (i) above, such failure is the result of such Lender's good faith determination that a condition precedent to funding (specifically identified and including the particular default, if any) has not been satisfied, (b) has notified the Borrower, the Agent, any LC Issuer or any other Lender in writing, or has made a public statement to the effect, that it does not intend or expect to comply with any of its funding obligations under this Agreement (unless, in the good faith determination of the Agent, such position is based on such Lender's good faith determination that a condition precedent to funding a loan under this Agreement cannot be satisfied) or generally under other agreements in which it commits to extend credit, (c) has failed, within three Business Days after request by the Agent, any LC Issuer or any other Lender, acting in good faith, to provide a certification in writing from an authorized officer of such Lender that it will comply with its obligations to fund prospective Revolving Credit Advances and participations in then outstanding Facility LCs under this Agreement, provided that such Lender shall cease to be a Defaulting Lender pursuant to this clause (c) upon the Agent's and Borrower's receipt of such certification, or (d) has become the subject of (i) a Bankruptcy Event; provided that, if a Bankruptcy Event shall have occurred with respect to a Lender solely by reason of events relating to a parent company of such Lender, the Agent may, in its discretion, determine that such Lender is not a "Defaulting Lender" if and for so long as the Agent is satisfied that such Lender will continue to perform its funding obligations hereunder or (ii) a Bail-In Action.

"Designating Lender" has the meaning specified in Section 8.07(h).

"Disclosed Litigation" has the meaning specified in Section 4.01(f).

"Dividing Person" has the meaning assigned to it in the definition of "Division".

"Division" means the division of the assets, liabilities and/or obligations of a Person (the "Dividing Person") among two or more Persons (whether pursuant to a "plan of division" or similar arrangement), which may or may not include the Dividing Person and pursuant to which the Dividing Person may or may not survive.

"Domestic Lending Office" means, with respect to any Lender or LC Issuer, the office of such Lender or LC Issuer as such Lender or LC Issuer may from time to time specify to the Borrower and the Agent.

"DTE Electric" means DTE Electric Company, a Michigan corporation wholly owned (indirectly) by the Borrower.

"DTE Gas" means DTE Gas Company, a Michigan corporation, wholly owned (indirectly) by the Borrower.

"EEA Financial Institution" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"EEA Member Country" means any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

"EEA Resolution Authority" means any public administrative authority or any Person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

"Effective Date" has the meaning specified in Section 3.01.

"Electronic Signature" means an electronic sound, symbol or process attached to, or associated with, a contract or other record and adopted by a Person with the intent to sign, authenticate or accept such contract or record.

"Electronic System" means any electronic system, including (i) e mail, (ii) e-fax, (iii) Intralinks®, Syndtrak®, ClearPar®, DebtDomain® and (iv) any other Internet or extranet-based site, whether such electronic system is owned, operated or hosted by the Agent and any of its Related Parties or any other Person, providing for access to data protected by passcodes or other security system.

"Eligible Assignee" means (i) a Lender; (ii) an Affiliate of a Lender; (iii) a commercial bank organized under the laws of the United States, or any State thereof, and having a combined capital and surplus of at least $500,000,000; (iv) a savings and loan association or savings bank organized under the laws of the United States, or any State thereof, and having a combined capital and surplus of at least $500,000,000; (v) a commercial bank organized under the laws of any other country that is a member of the Organization for Economic Cooperation and Development or has concluded special lending arrangements with the International Monetary Fund associated with its General Arrangements to Borrow, or a political subdivision of any such country, and having a combined capital and surplus of at least $500,000,000, so long as such bank is acting through a branch or agency located in the United States; (vi) the central bank of any country that is a member of the Organization for Economic Cooperation and Development; (vii) a finance company, insurance company or other financial institution or fund (whether a corporation, partnership, trust or other entity) that is engaged in making, purchasing or otherwise investing in commercial loans in the ordinary course of its business and having a combined capital and surplus of at least $500,000,000; (viii) an Approved Fund; and (ix) any other Person approved by the Agent and, so long as no Event of Default shall be continuing, the Borrower, such approval not to be unreasonably withheld or delayed by either party; provided, however, that no Ineligible Institution shall qualify as an Eligible Assignee.

"Enterprises" means DTE Enterprises, Inc., a Michigan corporation wholly-owned by the Borrower.

"Environmental Action" means any action, suit, demand, demand letter, claim, notice of non-compliance or violation, notice of liability or potential liability, investigation, proceeding, consent order or consent agreement relating in any way to any Environmental Law, Environmental Permit or Hazardous Materials or arising from alleged injury or threat of injury to the environment, including, without limitation, (a) by any governmental or regulatory authority for enforcement, cleanup, removal, response, remedial or other actions or damages and (b) by any governmental or regulatory authority or any third party for damages, contribution, indemnification, cost recovery, compensation or injunctive relief.

"Environmental Law" means any federal, state, local or foreign statute, law, ordinance, rule, regulation, code, order, judgment, decree or judicial or agency interpretation, policy or guidance relating to pollution or protection of the environment or natural resources, including, without limitation, those relating to the use, handling, transportation, treatment, storage, disposal, release or discharge of Hazardous Materials.

"Environmental Permit" means any permit, approval, identification number, license or other authorization required under any Environmental Law.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended from time to time, and the regulations promulgated and rulings issued thereunder.

"ERISA Affiliate" means any Person that for purposes of Title IV of ERISA is a member of the Borrower's controlled group, or under common control with the Borrower, within the meaning of Section 414 of the Internal Revenue Code.

"ERISA Event" means (a) (i) the occurrence of a reportable event, within the meaning of Section 4043 of ERISA, with respect to any Plan unless the 30-day notice requirement with respect to such event has been waived by the PBGC, or (ii) the requirements of subsection (1) of Section 4043(b) of ERISA (without regard to subsection (2) of such Section) are met with respect to a contributing sponsor, as defined in Section 4001(a)(13) of ERISA, of a Plan, and an event described in paragraph (9), (10), (11), (12) or (13) of Section 4043(c) of ERISA is reasonably expected to occur with respect to such Plan within the following 30 days; (b) the application for a minimum funding waiver with respect to a Plan; (c) the provision by the administrator of any Plan of a notice of intent to terminate such Plan pursuant to Section 4041(a)(2) of ERISA (including any such notice with respect to a plan amendment referred to in Section 4041(e) of ERISA); (d) the cessation of operations at a facility of the Borrower or any ERISA Affiliate in the circumstances described in Section 4062(e) of ERISA; (e) the withdrawal by the Borrower or any ERISA Affiliate from a Multiple Employer Plan during a plan year for which it was a substantial employer, as defined in Section 4001(a)(2) of ERISA; (f) the conditions for the imposition of a lien under Section 302(f) of ERISA shall have been met with respect to any Plan; (g) the adoption of an amendment to a Plan requiring the provision of security to such Plan pursuant to Section 307 of ERISA; or (h) the institution by the PBGC of proceedings to terminate a Plan pursuant to Section 4042 of ERISA, or the occurrence of any

event or condition described in Section 4042 of ERISA that constitutes grounds for the termination of, or the appointment of a trustee to administer, a Plan.

"EU Bail-In Legislation Schedule" means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor Person), as in effect from time to time.

"Eurocurrency Liabilities" has the meaning assigned to that term in Regulation D of the Board of Governors of the Federal Reserve System, as in effect from time to time.

"Eurodollar Lending Office" means, with respect to any Lender, the office of such Lender as such Lender may from time to time specify to the Borrower and the Agent.

"Eurodollar Rate" means, for any Interest Period for each Eurodollar Rate Advance comprising part of the same Borrowing, an interest rate per annum equal to the rate per annum obtained by dividing (a) the LIBO Rate by (b) a percentage equal to 100% minus the Eurodollar Rate Reserve Percentage.

"Eurodollar Rate Advance" means a Revolving Credit Advance that bears interest as provided in Section 2.06(a)(ii).

"Eurodollar Rate Reserve Percentage" means a fraction (expressed as a decimal), the numerator of which is the number one and the denominator of which is the number one minus the aggregate of the maximum reserve percentages (including any marginal, special, emergency or supplemental reserves) expressed as a decimal established by the Board of Governors of the Federal Reserve System of the United States (together with any successor thereto, the "Board") to which the Agent is subject for eurocurrency funding (currently referred to as "Eurocurrency Liabilities" in Regulation D of the Board). Such reserve percentages shall include those imposed pursuant to such Regulation D of the Board. Revolving Credit Advances bearing interest based on the Eurodollar Rate shall be deemed to constitute eurocurrency funding and to be subject to such reserve requirements without benefit of or credit for proration, exemptions or offsets that may be available from time to time to any Lender under such Regulation D of the Board or any comparable regulation. The Eurodollar Rate Reserve Percentage shall be adjusted automatically on and as of the effective date of any change in any reserve percentage.

"Events of Default" has the meaning specified in Section 6.01.

"Excluded Pension Effects" means the non-cash effects on Consolidated Net Worth resulting from the implementation of FASB Statement of Financial Accounting Standards No. 158, Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans, an amendment of FASB Statements No. 87, 88, 106, and 132(R), dated September 2006.

"Excluded Short-Term Debt" means Debt of DTE Gas or any of its Subsidiaries having an original maturity of not more than 365 days in an aggregate amount of not more than $450,000,000.

"Facility Fee" has the meaning specified in Section 2.03(a).

"Facility LC" has the meaning specified in Section 2.16(a).

"Facility LC Application" has the meaning specified in Section 2.16(c).

"Facility LC Collateral Account" has the meaning specified in Section 2.16(i).

"FATCA" means Sections 1471 through 1474 of the Internal Revenue Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof and any agreement entered into pursuant to Section 1471(b)(1) of the Internal Revenue Code.

"Federal Funds Rate" means, for any day, the rate calculated by the NYFRB based on such day's federal funds transactions by depositary institutions, as determined in such manner as shall be set forth on the NYFRB's Website from time to time, and published on the next succeeding Business Day by the NYFRB as the effective federal funds rate, provided that, if the Federal Funds Rate as so determined would be less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

"Financial Officer" of any Person means the chief executive officer, president, chief financial officer, any vice president, controller, assistant controller, treasurer or any assistant treasurer of such Person.

"Funded Debt" means, as to any Person, without duplication: (a) all Debt of such Person for borrowed money or which has been incurred in connection with the acquisition of assets (excluding (i) contingent reimbursement obligations in respect of letters of credit and bankers' acceptances, (ii) Nonrecourse Debt, (iii) Junior Subordinated Debt, (iv) Mandatorily Convertible Securities, and (v) Hybrid Equity Securities), (b) all capital lease obligations of such Person and (c) all Guaranteed Obligations of Funded Debt of other Persons.

"GAAP" means generally accepted accounting principles in the United States of America.

"Governmental Authority" means the government of the United States of America or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra-national bodies such as the European Union or the European Central Bank) and any group or body charged with setting financial accounting or regulatory capital rules or standards (including, without limitation, the Financial Accounting Standards Board, the Bank for International Settlements or the Basel Committee on Banking Supervision or any successor or similar authority to any of the foregoing).

"Guaranteed Obligations" has the meaning specified in clause (h) of the definition of "Debt".

"Hazardous Materials" means (a) petroleum and petroleum products, by-products or breakdown products, radioactive materials, asbestos-containing materials, polychlorinated biphenyls and radon gas and (b) any other chemicals, materials or substances designated, classified or regulated as hazardous or toxic or as a pollutant or contaminant under any Environmental Law.

"Hedge Agreements" means 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.

"Hybrid Equity Securities" means any securities issued by the Borrower or its Subsidiary or a financing vehicle of the Borrower or its Subsidiary that (i) are classified as possessing a minimum of "intermediate equity content" by S&P, Basket C equity credit by Moody's, and 50% equity credit by Fitch and (ii) require no repayments or prepayments and no mandatory redemptions or repurchases, in each case, prior to at least 91 days after the later of the termination of the Commitments and the repayment in full of the Revolving Credit Advances and all other amounts due under this Agreement.

"Identified Reports on Form 8 K" means those certain reports of the Borrower and DTE Electric on Form 8 K filed or furnished with the Securities and Exchange Commission on (a) January 14, February 1, February 19, February 24, March 2, March 8, March 12, March 22, April 27, May 4, May 7, May 14, May 20, May 26, June 4 (two filings), June 7, June 8, June 15, July 1, July 7 (three filings), July 27, August 3, September 17, September 28, October 27, November 3, November 5, November 24 and November 29 with respect to Borrower and (b) January 14, February 19, March 2, March 12, March 22, April 27, May 7, May 14, May 20, June 8, July 7, July 27, September 17, September 28, October 27, November 5, and November 29 with respect to DTE Electric.

"Impacted Interest Period" has the meaning specified in the definition of "LIBO Rate".

"Ineligible Institution" means (a) a natural person, (b) a Defaulting Lender, (c) the Borrower, any of its Subsidiaries or any of its Affiliates, or (d) a company, investment vehicle or trust for, or owned and operated for the primary benefit of, a natural person or relative(s) thereof.

"Initial Lenders" has the meaning specified in the recital of parties to this Agreement.

"Interest Period" means, for each Eurodollar Rate Advance comprising part of the same Borrowing, the period commencing on the date of such Eurodollar Rate Advance or the date of the Conversion of any Base Rate Advance into such Eurodollar Rate Advance and ending on the last day of the period selected by the Borrower pursuant to the provisions below and, thereafter, with respect to Eurodollar Rate Advances, each subsequent period commencing on the last day of the immediately preceding Interest Period and ending on the last day of the period selected by the Borrower pursuant to the provisions below. The duration of each such Interest Period shall be one month, three months or six months, as the Borrower may, upon notice

received by the Agent not later than 11:00 A.M. (New York City time) on the third Business Day prior to the first day of such Interest Period, select; provided, however, that:

(i) the Borrower may not select any Interest Period that ends after the Termination Date then in effect;

(ii) Interest Periods commencing on the same date for Eurodollar Rate Advances comprising part of the same Borrowing shall be of the same duration;

(iii) whenever the last day of any Interest Period would otherwise occur on a day other than a Business Day, the last day of such Interest Period shall be extended to occur on the next succeeding Business Day, provided, however, that, if such extension would cause the last day of such Interest Period to occur in the next following calendar month, the last day of such Interest Period shall occur on the next preceding Business Day;

(iv) whenever the first day of any Interest Period occurs on a day of an initial calendar month for which there is no numerically corresponding day in the calendar month that succeeds such initial calendar month by the number of months equal to the number of months in such Interest Period, such Interest Period shall end on the last Business Day of such succeeding calendar month; and

(v) no tenor that has been removed from this definition pursuant to Section 2.07(g) shall be available for specification in the applicable Notice of Borrowing or for any Conversion.

"Internal Revenue Code" means the Internal Revenue Code of 1986, as amended from time to time, and the regulations promulgated and rulings issued thereunder.

"Interpolated Rate" means, at any time, for any Interest Period, the rate per annum determined by the Agent (which determination shall be conclusive and binding absent manifest error) to be equal to the rate that results from interpolating on a linear basis between: (a) the LIBOR Screen Rate for the longest period (for which the LIBOR Screen Rate is available for the applicable currency) that is shorter than the Impacted Interest Period and (b) the LIBOR Screen Rate for the shortest period (for which the LIBOR Screen Rate is available for the applicable currency) that exceeds the Impacted Interest Period, in each case, at such time.

"JPMorgan" has the meaning specified in the recital of parties to this Agreement.

"Junior Subordinated Debt" means (a) subordinated junior deferrable interest debentures of the Borrower, DTE Electric, Enterprises or DTE Gas, (b) the related preferred securities, if applicable, of Subsidiaries of the Borrower and (c) the related subordinated guarantees, if applicable, of the Borrower, DTE Electric, Enterprises or DTE Gas, in each case, from time to time outstanding.

"LC Commitment" has the meaning specified in Section 2.16(a).

"LC Fee" has the meaning specified in Section 2.03(c).

"LC Issuer" means each Lender designated by the Borrower as an "LC Issuer" hereunder that has agreed to such designation (and is reasonably acceptable to the Agent) (or, in each case, any subsidiary or Affiliate thereof designated thereby), in each case, in its capacity as issuer of Facility LCs hereunder.

"LC Obligations" means, at any time, the sum, without duplication, of (i) the aggregate undrawn stated amount under all Facility LCs outstanding at such time; provided that, with respect to any Facility LC that, by its terms or the terms of any Facility LC Application related thereto, provides for one or more automatic increases in the stated amount thereof, the stated amount of such Facility LC shall be deemed to be the maximum stated amount of such Facility LC after giving effect to all such increases, whether or not such maximum stated amount is in effect at such time, plus (ii) the aggregate unpaid amount at such time of all Reimbursement Obligations.

"LC Payment Date" has the meaning specified in Section 2.16(d).

"Lenders" means the Initial Lenders and each Person that shall become a party hereto pursuant to Section 8.07(a), (b) and (c).

"LIBO Rate" means, for any Interest Period for each Eurodollar Rate Advance comprising part of the same Borrowing, the London interbank offered rate as administered by ICE Benchmark Administration (or any other Person that takes over the administration of such rate) for Dollars for a period equal in length to such Interest Period as displayed on pages LIBOR01 or LIBOR02 of the Bloomberg screen or, in the event such rate does not appear on either of such Bloomberg pages, on any successor or substitute page on such screen that displays such rate, or on the appropriate page of such other information service that publishes such rate as shall be selected by the Agent from time to time in its reasonable discretion (in each case the "LIBOR Screen Rate"; and such information service being the "Service") at approximately 11:00 a.m., London time, two (2) Business Days prior to the commencement of such Interest Period; provided that, if the LIBOR Screen Rate shall be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement; provided, further, that if a LIBOR Screen Rate shall not be available at such time for such Interest Period (the "Impacted Interest Period"), then the LIBO Rate for such Interest Period shall be the Interpolated Rate; provided, that, if any Interpolated Rate shall be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.

"LIBOR Screen Rate" has the meaning specified in the definition of LIBO Rate.

"Lien" means any lien, security interest or other charge or encumbrance of any kind, or any other type of preferential arrangement, including, without limitation, the lien or retained security title of a conditional vendor and any easement, right of way or other encumbrance on title to real property.

"Loan Documents" means this Agreement, the Facility LC Applications and the Notes.

"Mandatorily Convertible Securities" means any mandatorily convertible equity-linked securities issued by the Borrower or its Subsidiary, so long as the terms of such securities require no repayments or prepayments and no mandatory redemptions or repurchases, in each case prior to at least 91 days after the later of the termination of the Commitments and the repayment in full of the Revolving Credit Advances and all other amounts due under this Agreement.

"Material Adverse Change" means any material adverse change in the business, condition (financial or otherwise), operations, performance or properties of the Borrower and its Subsidiaries taken as a whole.

"Material Adverse Effect" means a material adverse effect on (a) the business, condition (financial or otherwise), operations, performance or properties of the Borrower and its Subsidiaries taken as a whole, or (b) the ability of the Borrower to perform its obligations under any Loan Document to which it is a party.

"Midstream Business Spin-Off" means the spin-off of the Borrower's non-utility natural gas pipeline, storage and gathering business as announced by the Borrower on October 27, 2020, including the approval thereof by the Borrower's board of directors and Form 10 registration statement in respect thereof being declared effective by the Securities and Exchange Commission.

"Modify" and "Modification" have the respective meanings specified in Section 2.16(a).

"Moody's" means Moody's Investors Service, Inc.

"Moody's Rating" means, at any time, the rating issued by Moody's and then in effect with respect to the Borrower's senior unsecured long-term debt securities without third-party credit enhancement.

"Multiemployer Plan" means a multiemployer plan, as defined in Section 4001(a)(3) of ERISA, to which the Borrower or any ERISA Affiliate is making or accruing an obligation to make contributions, or has within any of the preceding five plan years made or accrued an obligation to make contributions.

"Multiple Employer Plan" means a single employer plan, as defined in Section 4001(a)(15) of ERISA, that (a) is maintained for employees of the Borrower or any ERISA Affiliate and at least one Person other than the Borrower and the ERISA Affiliates or (b) was so maintained and in respect of which the Borrower or any ERISA Affiliate could have liability under Section 4064 or 4069 of ERISA in the event such plan has been or were to be terminated.

"Nonrecourse Debt" means Debt of the Borrower or any of its Subsidiaries in respect of which no recourse may be had by the creditors under such Debt against the Borrower or such Subsidiary in its individual capacity or against the assets of the Borrower or such Subsidiary, other than (a) to assets which were purchased or refinanced by the Borrower or such Subsidiary with the proceeds of such Debt, (b) to the proceeds of such assets, or (c) if such assets

are held by a Subsidiary formed solely for such purpose, to such Subsidiary or the equity interests in such Subsidiary; provided that, for purposes of clarity, it is understood that Securitization Bonds shall constitute Nonrecourse Debt for all purposes of the Loan Documents, except to the extent (and only to the extent) of any claims made against DTE Electric in respect of its indemnification obligations relating to such Securitization Bonds.

"Note" has the meaning specified in Section 2.17.

"Notice of Borrowing" has the meaning specified in Section 2.02(a).

"NYFRB" means the Federal Reserve Bank of New York.

"NYFRB Rate" means, for any day, the greater of (a) the Federal Funds Rate in effect on such day and (b) the Overnight Bank Funding Rate in effect on such day (or for any day that is not a Business Day, the immediately preceding Business Day); provided that if none of such rates are published for any day that is a Business Day, the term "NYFRB Rate" means the rate for a federal funds transaction quoted at 11:00 a.m. (New York City time) on such day received by the Agent from a Federal funds broker of recognized standing selected by it; provided, further, that if any of the aforesaid rates shall be less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

"NYFRB's Website" means the website of the NYFRB at http://www.newyorkfed.org or any successor source.

"Obligations" means all unpaid principal of and accrued and unpaid interest on Revolving Credit Advances, all Reimbursement Obligations, all accrued and unpaid fees and all expenses, reimbursements, indemnities and other obligations of the Borrower to the Lenders or to any Lender, the Agent, any LC Issuer or any indemnified party arising under the Loan Documents.

"Other Taxes" has the meaning specified in Section 2.13(b).

"Outstanding Credit Exposure" means, as to any Lender at any time, the sum of (i) the aggregate principal amount of its Revolving Credit Advances outstanding at such time, plus (ii) an amount equal to its Pro Rata Share of the LC Obligations at such time.

"Overnight Bank Funding Rate" means, for any day, the rate comprised of both overnight federal funds and overnight Eurodollar borrowings by U.S.-managed banking offices of depository institutions, as such composite rate shall be determined by the NYFRB as set forth on the NYFRB's Website from time to time, and published on the next succeeding Business Day by the NYFRB as an overnight bank funding rate. "Participant" has the meaning assigned to such term in Section 9.04

"Participant Register" has the meaning specified in Section 8.07(e).

"PATRIOT Act" has the meaning specified in Section 3.01(f).

"PBGC" means the Pension Benefit Guaranty Corporation (or any successor).

"Person" means an individual, partnership, corporation (including a business trust), joint stock company, trust, unincorporated association, joint venture, limited liability company or other entity, or a government or any political subdivision or agency thereof.

"Plan" means a Single Employer Plan or a Multiple Employer Plan.

"Plan Asset Regulations" means 29 CFR § 2510.3-101 et seq., as modified by Section 3(42) of ERISA.

"Platform" has the meaning specified in Section 8.02(b).

"Prime Rate" means the rate of interest last quoted by The Wall Street Journal as the "Prime Rate" in the U.S. or, if The Wall Street Journal ceases to quote such rate, the highest per annum interest rate published by the Board in Federal Reserve Statistical Release H.15 (519) (Selected Interest Rates) as the "bank prime loan" rate or, if such rate is no longer quoted therein, any similar rate quoted therein (as determined by the Agent) or any similar release by the Board (as determined by the Agent). Each change in the Prime Rate shall be effective from and including the date such change is publicly announced or quoted as being effective.

"Pro Rata Share" means, with respect to a Lender, a portion equal to a fraction the numerator of which is such Lender's Commitment and the denominator of which is the aggregate of all the Lenders' Commitments; provided that, in the case of Section 2.18 when a Defaulting Lender shall exist (other than, for purposes of clarity, a Lender that is attempting to cure its "Defaulting Lender" status pursuant to the last sentence of Section 2.18), "Pro Rata Share" shall mean a portion equal to a fraction the numerator of which is such Lender's Commitment and the denominator of which is the aggregate of all the Lender's Commitments (disregarding any such Defaulting Lender's Commitment). If the Commitment has terminated or expired, the Pro Rata Shares shall be determined based upon the Commitments most recently in effect, giving effect to any assignments and to any Lender's status as a Defaulting Lender at the time of determination.

"PTE" means a prohibited transaction class exemption issued by the U.S. Department of Labor, as any such exemption may be amended from time to time.

"Register" has the meaning specified in Section 8.07(d).

"Related Parties" means, with respect to any specified Person, such Person's Affiliates and the respective directors, officers, employees, agents, advisors and representatives of such Person and such Person's Affiliates.

"Reimbursement Obligations" means, at any time, the aggregate of all obligations of the Borrower then outstanding under Section 2.16 to reimburse the applicable LC Issuer for amounts paid by such LC Issuer in respect of any one or more drawings under Facility LCs issued by such LC Issuer.

"Required Lenders" means, subject to Section 2.18, at any time, Lenders owed more than fifty percent (50%) of the Aggregate Outstanding Credit Exposures at such time, or, if the Aggregate Outstanding Credit Exposures is zero, Lenders having more than fifty percent

(50%) of the Commitments; provided that at all times when two or more Lenders (excluding Defaulting Lenders) are party to this Agreement, the term "Required Lenders" shall in no event mean less than two Lenders.

"Resolution Authority" means an EEA Resolution Authority or, with respect to any UK Financial Institution, a UK Resolution Authority.

"Revolving Credit Advance" means an advance by a Lender to the Borrower as part of a Borrowing, and refers to a Base Rate Advance or a Eurodollar Rate Advance (each of which shall be a "Type" of Revolving Credit Advance).

"S&P" means Standard & Poor's Ratings, a subsidiary of S&P Global Inc., or any successor thereof.

"S&P Rating" means, at any time, the rating issued by S&P and then in effect with respect to the Borrower's senior unsecured long-term debt securities without third-party credit enhancement.

"Sanctions" means economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the U.S. government, including those administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury or the U.S. Department of State, or (b) the United Nations Security Council, the European Union, Her Majesty's Treasury of the United Kingdom or other relevant sanctions authority.

"Sanctioned Country" means, at any time, a country or territory which is, or whose government is, the subject or target of any Sanctions (at the date of this Agreement, Crimea, Cuba, Iran, North Korea and Syria).

"Sanctioned Person" means, at any time, (a) any Person listed in any Sanctions-related list of designated Persons maintained by the Office of Foreign Assets Control of the U.S. Department of the Treasury or by the European Union or any EU member state, Her Majesty's Treasury of the United Kingdom or other relevant sanctions authority, (b) any Person operating, organized or resident in a Sanctioned Country, (c) any Person owned or controlled by any such Person or Persons described in the foregoing clauses (a) and (b) or (d) any Person otherwise subject to any Sanctions.

"SEC Reports" means the following reports and financial statements:

(i) the Borrower's and DTE Electric's Annual Reports on Form 10 K for the year ended December 31, 2020, as filed with or sent to the Securities and Exchange Commission, including the Audited Statements of the Borrower and DTE Electric, respectively; and

(ii) the Identified Reports on Form 8 K, including therein the Audited Statements of DTE Gas.

"Service" has the meaning specified in the definition of "LIBO Rate".

"Securitization Bonds" means Debt of one or more Securitization SPEs, issued pursuant to The Customer Choice and Electricity Reliability Act, Act No. 142, Public Acts of Michigan, 2000, as the same may be amended from time to time.

"Securitization SPE" means an entity established or to be established directly or indirectly by the Borrower for the purpose of issuing Securitization Bonds and includes The Detroit Edison Securitization Funding LLC, a limited liability company organized under the laws of the State of Michigan.

"Significant Subsidiary" means (i) DTE Electric, Enterprises and DTE Gas, and (ii) any other Subsidiary of the Borrower (A) the total assets (after intercompany eliminations) of which exceed 30% of the total assets of the Borrower and its Subsidiaries or (B) the net worth of which exceeds 30% of the Consolidated Net Worth, in each case as shown on the audited Consolidated financial statements of the Borrower as of the end of the fiscal year immediately preceding the date of determination.

"Single Employer Plan" means a single employer plan, as defined in Section 4001(a)(15) of ERISA, that (a) is maintained for employees of the Borrower or any ERISA Affiliate and no Person other than the Borrower and the ERISA Affiliates or (b) was so maintained and in respect of which the Borrower or any ERISA Affiliate could have liability under Section 4069 of ERISA in the event such plan has been or were to be terminated.

"SPV" has the meaning specified in Section 8.07(h).

"Subsidiary" of any Person means any corporation, partnership, joint venture, limited liability company, trust or estate of which (or in which) more than 50% of (a) the issued and outstanding capital stock having ordinary voting power to elect a majority of the Board of Directors of such corporation (irrespective of whether at the time capital stock of any other class or classes of such corporation shall or might have voting power upon the occurrence of any contingency), (b) the interest in the capital or profits of such limited liability company, partnership or joint venture or (c) the beneficial interest in such trust or estate is at the time directly owned or controlled by such Person, by such Person and one or more of its other Subsidiaries or by one or more of such Person's other Subsidiaries.

"Taxes" has the meaning specified in Section 2.13(a).

"Termination Date" means the earlier of (a) June 22, 2022, and (b) the date of termination in whole of the Commitments pursuant to Section 2.04 or 6.01.

"Total Funded Debt" means all Funded Debt of the Borrower and its Consolidated Subsidiaries, on a consolidated basis, as determined in accordance with GAAP.

"UK Financial Institution" means any BRRD Undertaking (as such term is defined under the PRA Rulebook (as amended from time to time) promulgated by the United Kingdom Prudential Regulation Authority) or any person falling within IFPRU 11.6 of the FCA Handbook (as amended from time to time) promulgated by the United Kingdom Financial

Conduct Authority, which includes certain credit institutions and investment firms, and certain affiliates of such credit institutions or investment firms.

"UK Resolution Authority" means the Bank of England or any other public administrative authority having responsibility for the resolution of any UK Financial Institution.

"Voting Stock" means capital stock issued by a corporation, or equivalent interests in any other Person, the holders of which are ordinarily, in the absence of contingencies, entitled to vote for the election of directors (or persons performing similar functions) of such Person, even if the right so to vote has been suspended by the happening of such a contingency.

"Withdrawal Liability" has the meaning specified in Part I of Subtitle E of Title IV of ERISA.

"Write-Down and Conversion Powers" means, (a) with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule, and (b) with respect to the United Kingdom, any powers of the applicable Resolution Authority under the Bail-In Legislation to cancel, reduce, modify or change the form of a liability of any UK Financial Institution or any contract or instrument under which that liability arises, to convert all or part of that liability into shares, securities or obligations of that person or any other person, to provide that any such contract or instrument is to have effect as if a right had been exercised under it or to suspend any obligation in respect of that liability or any of the powers under that Bail-In Legislation that are related to or ancillary to any of those powers.

SECTION 1.02 Computation of Time Periods. In this Agreement in the computation of periods of time from a specified date to a later specified date, the word "from" means "from and including" and the words "to" and "until" each mean "to but excluding".

SECTION 1.03 Accounting Terms. Except as otherwise expressly provided herein, all terms of an accounting or financial nature shall be construed in accordance with GAAP, as in effect from time to time; provided that, if the Borrower notifies the Agent that the Borrower requests an amendment to any provision hereof to eliminate the effect of any change occurring after the date hereof in GAAP or in the application thereof on the operation of such provision (or if the Agent notifies the Borrower that the Required Lenders request an amendment to any provision hereof for such purpose), regardless of whether any such notice is given before or after such change in GAAP or in the application thereof, then such provision shall be interpreted on the basis of GAAP as in effect and applied immediately before such change shall have become effective until such notice shall have been withdrawn or such provision amended in accordance herewith. Notwithstanding any other provision contained herein, all terms of an accounting or financial nature used herein shall be construed, and all computations of amounts and ratios referred to herein shall be made (i) without giving effect to any election under Accounting Standards Codification 825-10-25 (formerly referred to as Statement of Financial Accounting Standards 159) (or any other Financial Accounting Standard having a similar result or effect) to value any Debt or other liabilities of the Borrower or any of its Subsidiaries at "fair value", as defined therein and (ii) without giving effect to any treatment

of Debt in respect of convertible debt instruments under Accounting Standards Codification 470-20 (or any other Accounting Standards Codification or Financial Accounting Standard having a similar result or effect) to value any such Debt in a reduced or bifurcated manner as described therein, and such Debt shall at all times be valued at the full stated principal amount thereof.

SECTION 1.04 Interest Rates; LIBOR Notification. The interest rate on Eurodollar Rate Advances is determined by reference to the LIBO Rate, which is derived from the London interbank offered rate ("***LIBOR***"). LIBOR is intended to represent the rate at which contributing banks may obtain short-term borrowings from each other in the London interbank market. On March 5, 2021, the U.K. Financial Conduct Authority ("***FCA***") publicly announced that: (a) immediately after December 31, 2021, publication of all seven euro LIBOR settings, all seven Swiss Franc LIBOR settings, the spot next, 1-week, 2-month and 12-month Japanese Yen LIBOR settings, the overnight, 1-week, 2-month and 12-month British Pound Sterling LIBOR settings, and the 1-week and 2-month U.S. Dollar LIBOR settings will permanently cease; immediately after June 30, 2023, publication of the overnight and 12-month U.S. Dollar LIBOR settings will permanently cease; immediately after December 31, 2021, the 1-month, 3-month and 6-month Japanese Yen LIBOR settings and the 1-month, 3-month and 6-month British Pound Sterling LIBOR settings will cease to be provided or, subject to consultation by the FCA, be provided on a changed methodology (or "synthetic") basis and no longer be representative of the underlying market and economic reality they are intended to measure and that representativeness will not be restored; and immediately after June 30, 2023, the 1-month, 3-month and 6-month U.S. Dollar LIBOR settings will cease to be provided or, subject to the FCA's consideration of the case, be provided on a synthetic basis and no longer be representative of the underlying market and economic reality they are intended to measure and that representativeness will not be restored. There is no assurance that dates announced by the FCA will not change or that the administrator of LIBOR and/or regulators will not take further action that could impact the availability, composition, or characteristics of LIBOR or the currencies and/or tenors for which LIBOR is published. Each party to this agreement should consult its own advisors to stay informed of any such developments. Public and private sector industry initiatives are currently underway to identify new or alternative reference rates to be used in place of LIBOR. Upon the occurrence of a Benchmark Transition Event, a Term SOFR Transition Event, an Early Opt-in Election or an Other Benchmark Rate Election, Section 2.07(g) provides a mechanism for determining an alternative rate of interest. The Agent will promptly notify the Borrower, pursuant to Section 2.07(g), of any change to the reference rate upon which the interest rate on Eurodollar Rate Advances is based. However, the Agent does not warrant or accept any responsibility for, and shall not have any liability with respect to, the administration, submission, performance or any other matter related to LIBOR or other rates in the definition of "LIBO Rate" or with respect to any alternative or successor rate thereto, or replacement rate thereof (including, without limitation, (i) any such alternative, successor or replacement rate implemented pursuant to Section 2.07(g), whether upon the occurrence of a Benchmark Transition Event, a Term SOFR Transition Event, an Early Opt-in Election or an Other Benchmark Rate Election, and (ii) the implementation of any Benchmark Replacement Conforming Changes pursuant to Section 2.07(g)), including without limitation, whether the composition or characteristics of any such alternative, successor or replacement reference rate will be similar to, or produce the same value or economic equivalence of, the LIBO Rate or have the same volume or liquidity as did the London interbank offered rate prior to its discontinuance or unavailability. The Agent may select information sources or services in its reasonable

discretion to ascertain the LIBO Rate, any component thereof, or rates referenced in the definition thereof, in each case pursuant to the terms of this Agreement, and shall have no liability to the Borrower, any Lender or any other person or entity for damages of any kind, including direct or indirect, special, punitive, incidental or consequential damages, costs, losses or expenses (whether in tort, contract or otherwise and whether at law or in equity), for any error or calculation of any such rate (or component thereof) provided by any such information source or service.

ARTICLE II: AMOUNTS AND TERMS OF THE REVOLVING CREDIT ADVANCES AND THE FACILITY LCs

SECTION 2.01 Commitment. Each Lender severally agrees, on the terms and conditions hereinafter set forth, (i) to make Revolving Credit Advances in U.S. dollars to the Borrower from time to time on any Business Day during the period from the Effective Date until the Termination Date and (ii) to participate in Facility LCs issued upon the request of the Borrower from time to time; provided that, after giving effect to the making of each such Revolving Credit Advance and the issuance of each such Facility LC, such Lender's Outstanding Credit Exposure shall not exceed its Commitment. Each Borrowing shall be in an aggregate amount of $5,000,000 or an integral multiple of $1,000,000 in excess thereof, or the remaining balance of Commitments available for a Borrowing, if such balance is less than $5,000,000, and shall consist of Revolving Credit Advances of the same Type made on the same day by the Lenders ratably according to their respective Commitments. Within the limits of each Lender's Commitment, the Borrower may borrow under this Section 2.01, prepay pursuant to Section 2.09 and reborrow under this Section 2.01. Each LC Issuer will issue Facility LCs hereunder on the terms and conditions set forth in Section 2.16.

SECTION 2.02 Making the Revolving Credit Advances. (a) Each Borrowing shall be made on notice, given not later than 11:00 A.M. (New York City time) on the third Business Day prior to the date of the proposed Borrowing in the case of a Borrowing consisting of Eurodollar Rate Advances, or 1:00 P.M. (New York City time) on the Business Day of the proposed Borrowing in the case of a Borrowing consisting of Base Rate Advances, by the Borrower to the Agent, which shall give to each Lender prompt notice thereof by telecopier or telex. Each such notice of a Borrowing (a "Notice of Borrowing") shall be by telephone, confirmed immediately in writing signed by a Financial Officer in substantially the form of Exhibit B hereto, specifying therein the requested (i) date of such Borrowing, (ii) Type of Revolving Credit Advances comprising such Borrowing, (iii) aggregate amount of such Borrowing, (iv) in the case of a Borrowing consisting of Eurodollar Rate Advances, initial Interest Period for each such Revolving Credit Advance and (v) wire transfer instructions. Each Lender shall, before 12:00 noon (New York City time) on the date of such Borrowing (or, in the case of any Notice of Borrowing with respect to a Base Rate Advance given on or after 10:00 A.M. (New York City time) but on or before 1:00 P.M. (New York City time) on the date of such Borrowing, before 3:00 P.M. (New York City time) on the date of such Borrowing), make available for the account of its Applicable Lending Office to the Agent at the Agent's Account, in same day funds, such Lender's ratable portion of such Borrowing. After the Agent's receipt of such funds and upon fulfillment of the applicable conditions set forth in Article III, the Agent will make such funds available to the Borrower as specified in the Notice of Borrowing.

(b) Anything in subsection (a) above to the contrary notwithstanding, (i) the Borrower may not select Eurodollar Rate Advances for any Borrowing if the aggregate amount of such Borrowing is less than $5,000,000 or if the obligation of the Lenders to make Eurodollar Rate Advances shall then be suspended pursuant to Section 2.07 or 2.11(a) and (ii) at no time shall the aggregate number of all Borrowings comprising Eurodollar Rate Advances outstanding hereunder be greater than ten.

(c) Each Notice of Borrowing shall be irrevocable and binding on the Borrower. In the case of any Borrowing that the related Notice of Borrowing specifies is to be comprised of Eurodollar Rate Advances, the Borrower shall indemnify each Lender against any loss, cost or expense incurred by such Lender as a result of any failure to fulfill on or before the date specified in such Notice of Borrowing for such Borrowing the applicable conditions set forth in Article III, including, without limitation, any loss (excluding loss of anticipated profits), cost or expense incurred by reason of the liquidation or reemployment of deposits or other funds acquired by such Lender to fund the Revolving Credit Advance to be made by such Lender as part of such Borrowing when such Revolving Credit Advance, as a result of such failure, is not made on such date.

(d) Unless the Agent shall have received notice from a Lender prior to the time of any Borrowing that such Lender will not make available to the Agent such Lender's ratable portion of such Borrowing, the Agent may assume that such Lender has made such portion available to the Agent on the date of such Borrowing in accordance with subsection (a) of this Section 2.02 and the Agent may, in reliance upon such assumption, make available to the Borrower on such date a corresponding amount. If and to the extent that such Lender shall not have so made such ratable portion available to the Agent, such Lender and the Borrower severally agree to repay to the Agent forthwith on demand such corresponding amount together with interest thereon, for each day from the date such amount is made available to the Borrower until the date such amount is repaid to the Agent, at (i) in the case of the Borrower, the interest rate applicable at the time to Revolving Credit Advances comprising such Borrowing and (ii) in the case of such Lender, the NYFRB Rate. If such Lender shall repay to the Agent such corresponding amount, such amount so repaid shall constitute such Lender's Revolving Credit Advance as part of such Borrowing for purposes of this Agreement.

(e) The failure of any Lender to make the Revolving Credit Advance to be made by it as part of any Borrowing shall not relieve any other Lender of its obligation, if any, hereunder to make its Revolving Credit Advance on the date of such Borrowing, but no Lender shall be responsible for the failure of any other Lender to make the Revolving Credit Advance to be made by such other Lender on the date of any Borrowing.

SECTION 2.03 Fees.

(a) Facility Fee. The Borrower agrees to pay to the Agent for the account of each Lender a facility fee (the "Facility Fee") on the aggregate amount of such Lender's Commitment (whether used or unused) from the date hereof in the case of each Initial Lender and from the effective date specified in the Assignment and Assumption pursuant to which it became a Lender in the case of each other Lender until all of the Obligations have been paid in full and the Commitments under this Agreement have been terminated at a rate per annum equal to the Applicable Percentage, payable in arrears quarterly on the last Business Day of each March,

June, September and December (commencing with the last Business Day of March 2022 and to include fees accrued from Effective Date), and on the Termination Date; provided that, if such Lender continues to have any outstanding Revolving Credit Advances after its Commitment terminates, then such Facility Fee shall continue to accrue on the daily amount of such Lender's outstanding Revolving Credit Advances from and including the date on which such Lender's Commitment terminates to but excluding the date on which such Lender ceases to have any outstanding Revolving Credit Advances.

(b) Agent's Fees. The Borrower shall pay to the Agent for its own account such fees as may from time to time be agreed between the Borrower and the Agent.

(c) LC Fees. The Borrower shall pay to the Agent, for the account of the Lenders ratably in accordance with their respective Pro Rata Shares, a per annum letter of credit fee equal to the Applicable LC Fee Rate multiplied by the average daily undrawn stated amounts under the Facility LCs, such fee to be payable in arrears quarterly on the last Business Day of each March, June, September and December, and on the Termination Date (each such fee described in this sentence an "LC Fee"). The Borrower shall also pay to the applicable LC Issuer for its own account (x) a fronting fee in an amount and payable at such times as is agreed upon between such LC Issuer and the Borrower, and (y) documentary and processing charges in connection with the issuance or Modification of and draws under Facility LCs in accordance with such LC Issuer's standard schedule for such charges as in effect from time to time.

SECTION 2.04 Termination or Reduction of the Commitments.

(a) The Commitments shall be automatically terminated on the Termination Date.

(b) The Borrower shall have the right, upon at least three Business Days' notice to the Agent, to terminate in whole or reduce ratably in part the unused portions of the respective Commitments of the Lenders, provided that each partial reduction shall be in the aggregate amount of $5,000,000 or an integral multiple of $1,000,000 in excess thereof, or the remaining balance, if less than $5,000,000. Once terminated, a Commitment or portion thereof may not be reinstated.

SECTION 2.05 Repayment of Credit Extensions. The Borrower shall repay to the Agent for the ratable account of the Lenders on the Termination Date the Aggregate Outstanding Credit Exposures and all other unpaid Obligations.

SECTION 2.06 Interest on Revolving Credit Advances. (a) Scheduled Interest. The Borrower shall pay interest on the unpaid principal amount of each Revolving Credit Advance owing to each Lender from the date of such Revolving Credit Advance until such principal amount shall be paid in full, at the following rates per annum:

(i) Base Rate Advances. During such periods as such Revolving Credit Advance is a Base Rate Advance, a rate per annum equal at all times to the sum of (x) the Base Rate in effect from time to time plus (y) the Applicable Margin, payable in arrears

quarterly on the last Business Day of each March, June, September and December during such periods and on the date such Base Rate Advance shall be Converted or paid in full.

(ii) Eurodollar Rate Advances. During such periods as such Revolving Credit Advance is a Eurodollar Rate Advance, a rate per annum equal at all times during each Interest Period for such Revolving Credit Advance to the sum of (x) the Eurodollar Rate for such Interest Period for such Revolving Credit Advance plus (y) the Applicable Margin, payable in arrears on the last day of such Interest Period and, if such Interest Period has a duration of more than three months, on each day that occurs during such Interest Period every three months from the first day of such Interest Period and on the date such Eurodollar Rate Advance shall be Converted or paid in full.

(b) Default Interest. (i) Upon the occurrence and during the continuance of an Event of Default, (x) the Borrower shall pay interest on the unpaid principal amount of each Revolving Credit Advance owing to each Lender, payable in arrears on the dates referred to in clause (a)(i) or (a)(ii) above, at a rate per annum equal at all times to 2% per annum above the rate per annum required to be paid on such Revolving Credit Advance pursuant to clause (a)(i) or (a)(ii) above and (y) the LC Fee shall be increased by 2% per annum, and (ii) the Borrower shall pay, to the fullest extent permitted by law, interest on the amount of any interest, fee or other amount payable hereunder that is not paid when due, from the date such amount shall be due until such amount shall be paid in full, payable in arrears on the date such amount shall be paid in full and on demand, at a rate per annum equal at all times to 2% per annum above the rate per annum required to be paid on Base Rate Advances pursuant to clause (a)(i) above.

SECTION 2.07 Interest Rate Determination. (a) Subject to clause (g) below, if prior to the commencement of any Interest Period for any Eurodollar Rate Advance the Agent determines (which determination shall be conclusive and binding absent manifest error) that adequate and reasonable means do not exist for ascertaining the Eurodollar Rate or the LIBO Rate, as applicable for such Interest Period, the Agent shall forthwith so notify the Borrower and the Lenders, whereupon (i) each Eurodollar Rate Advance will automatically, on the last day of the then existing Interest Period therefor, Convert into a Base Rate Advance, and (ii) the obligation of the Lenders to make, or to Convert Revolving Credit Advances into, Eurodollar Rate Advances shall be suspended until the Agent shall notify the Borrower and the Lenders that the circumstances causing such suspension no longer exist.

(b) Subject to clause (g) below, if with respect to any Eurodollar Rate Advances, the Required Lenders notify the Agent that the Eurodollar Rate for any Interest Period for such Eurodollar Rate Advances will not adequately reflect the cost to such Required Lenders of making, funding or maintaining their respective Eurodollar Rate Advances for such Interest Period, the Agent shall forthwith so notify the Borrower and the Lenders, whereupon (i) each Eurodollar Rate Advance will automatically, on the last day of the then existing Interest Period therefor, Convert into a Base Rate Advance, and (ii) the obligation of the Lenders to make, or to Convert Revolving Credit Advances into, Eurodollar Rate Advances shall be suspended until the Agent shall notify the Borrower and the Lenders that the circumstances causing such suspension no longer exist.

(c) If the Borrower shall fail to select the duration of any Interest Period for any Eurodollar Rate Advances in accordance with the provisions contained in the definition of "Interest Period" in Section 1.01, the Agent will forthwith so notify the Borrower and the Lenders and such Eurodollar Rate Advances will automatically, on the last day of the then existing Interest Period therefor, Convert into Base Rate Advances.

(d) On the date on which the aggregate unpaid principal amount of Eurodollar Rate Advances comprising any Borrowing shall be reduced, by payment or prepayment or otherwise, to less than $5,000,000, such Eurodollar Rate Advances shall automatically Convert into Base Rate Advances.

(e) Upon the occurrence and during the continuance of any Event of Default, (i) each Eurodollar Rate Advance will automatically, on the last day of the then existing Interest Period therefor, Convert into a Base Rate Advance and (ii) the obligation of the Lenders to make, or to Convert Revolving Credit Advances into, Eurodollar Rate Advances shall be suspended.

(f) Subject to clause (g) below, if the Service is not available or a rate does not timely appear on the Service:

(i) the Agent shall forthwith notify the Borrower and the Lenders that the interest rate cannot be determined for such Eurodollar Rate Advances,

(ii) with respect to Eurodollar Rate Advances, each such Eurodollar Rate Advance will automatically, on the last day of the then existing Interest Period therefor, Convert into a Base Rate Advance (or if such Advance is then a Base Rate Advance, will continue as a Base Rate Advance), and

(iii) the obligation of the Lenders to make Eurodollar Rate Advances or to Convert Revolving Credit Advances into Eurodollar Rate Advances shall be suspended until the Agent shall notify the Borrower and the Lenders that the circumstances causing such suspension no longer exist.

(g) Benchmark Replacement.

(i) Benchmark Replacement. Notwithstanding anything to the contrary herein or in any other Loan Document, if a Benchmark Transition Event, an Early Opt-in Election, or an Other Benchmark Rate Election as applicable, and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any setting of the then-current Benchmark, then (x) if a Benchmark Replacement is determined in accordance with clause (1) or (2) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of such Benchmark setting and subsequent Benchmark settings without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document and (y) if a Benchmark Replacement is determined in accordance with clause (3) of the definition of "Benchmark Replacement" for such Benchmark Replacement

Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of any Benchmark setting at or after 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Benchmark Replacement is provided to the Lenders without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document so long as the Agent has not received, by such time, written notice of objection to such Benchmark Replacement from Lenders comprising the Required Lenders.

(ii) Term SOFR Transition Event. Notwithstanding anything to the contrary herein or in any other Loan Document and subject to the proviso below in this clause (ii), if a Term SOFR Transition Event and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any setting of the then-current Benchmark, then the applicable Benchmark Replacement will replace the then-current Benchmark for all purposes hereunder or under any Loan Document in respect of such Benchmark setting and subsequent Benchmark settings, without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document; provided that, this clause (ii) shall not be effective unless the Agent has delivered to the Lenders and the Borrower a Term SOFR Notice. For the avoidance of doubt, the Agent shall not be required to deliver a Term SOFR Notice after the occurrence of a Term SOFR Transition Event and may do so in its sole discretion.

(iii) Benchmark Replacement Conforming Changes. In connection with the implementation of a Benchmark Replacement, the Agent will have the right to make Benchmark Replacement Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Benchmark Replacement Conforming Changes will become effective without any further action or consent of any other party to this Agreement or any other Loan Document.

(iv) Notices; Standards for Decisions and Determinations. The Agent will promptly notify the Borrower and the Lenders of (A) any occurrence of a Benchmark Transition Event, an Early Opt-in Election, or an Other Benchmark Rate Election, as applicable, (B) the implementation of any Benchmark Replacement, (C) the effectiveness of any Benchmark Replacement Conforming Changes, (D) the removal or reinstatement of any tenor of a Benchmark pursuant to clause (v) below and (E) the commencement or conclusion of any Benchmark Unavailability Period. Any determination, decision or election that may be made by the Agent or, if applicable, any Lender (or group of Lenders) pursuant to this Section 2.07(g), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error and may be made in its or their sole discretion and without consent from any other party to this Agreement or any other Loan Document, except, in each case, as expressly required pursuant to this Section 2.07(g).

(v) Unavailability of Tenor of Benchmark. Notwithstanding anything to the contrary herein or in any other Loan Document, at any time (including in connection with the implementation of a Benchmark Replacement), (A) if the then-current Benchmark is a term rate (including Term SOFR or USD LIBOR) and either (1) any tenor for such Benchmark is not displayed on a screen or other information service that publishes such rate from time to time as selected by the Agent in its reasonable discretion or (2) the regulatory supervisor for the administrator of such Benchmark has provided a public statement or publication of information announcing that any tenor for such Benchmark is or will be no longer representative, then the Agent may modify the definition of "Interest Period" for any Benchmark settings at or after such time to remove such unavailable or non-representative tenor and (B) if a tenor that was removed pursuant to clause (A) above either (1) is subsequently displayed on a screen or information service for a Benchmark (including a Benchmark Replacement) or (2) is not, or is no longer, subject to an announcement that it is or will no longer be representative for a Benchmark (including a Benchmark Replacement), then the Agent may modify the definition of "Interest Period" for all Benchmark settings at or after such time to reinstate such previously removed tenor.

(vi) Benchmark Unavailability Period. Upon the Borrower's receipt of notice of the commencement of a Benchmark Unavailability Period, the Borrower may revoke any request for a Borrowing of, conversion to or continuation of Eurodollar Rate Advances to be made, converted or continued during any Benchmark Unavailability Period and, failing that, the Borrower will be deemed to have converted any such request into a request for a Borrowing of or conversion to a Base Rate Advance. During any Benchmark Unavailability Period or at any time that a tenor for the then-current Benchmark is not an Available Tenor, the component of Base Rate based upon the then-current Benchmark or such tenor for such Benchmark, as applicable, will not be used in any determination of Base Rate.

(vii) Certain Defined Terms.

As used in this Section 2.07(g):

"**Available Tenor**" means, as of any date of determination and with respect to the then-current Benchmark, as applicable, any tenor for such Benchmark or payment period for interest calculated with reference to such Benchmark, as applicable, that is or may be used for determining the length of an Interest Period pursuant to this Agreement as of such date and not including, for the avoidance of doubt, any tenor for such Benchmark that is then-removed from the definition of "Interest Period" pursuant to clause (v) of this Section 2.07(g).

"**Benchmark**" means, initially, USD LIBOR; provided that if a Benchmark Transition Event, a Term SOFR Transition Event, an Early Opt-in Election, or an Other Benchmark Rate Election, as applicable, and its related Benchmark Replacement Date have occurred with respect to USD LIBOR or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement to the extent that such Benchmark Replacement has replaced such prior benchmark rate pursuant to clause (i) or clause (ii) of this Section 2.07(g).

"**Benchmark Replacement**" means, for any Available Tenor, the first alternative set forth in the order below that can be determined by the Agent for the applicable Benchmark Replacement Date; provided that, in the case of an Other Benchmark Rate Election, "Benchmark Replacement" shall mean the alternative set forth in (3) below:

(1) the sum of: (a) Term SOFR and (b) the related Benchmark Replacement Adjustment,

(2) the sum of (a) Daily Simple SOFR and (b) the related Benchmark Replacement Adjustment,

(3) the sum of: (a) the alternate benchmark rate that has been selected by the Agent and the Borrower as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a replacement benchmark rate or the mechanism for determining such a rate by the Relevant Governmental Body or (ii) any evolving or then-prevailing market convention for determining a benchmark rate as a replacement for the then-current Benchmark for dollar-denominated syndicated credit facilities at such time in the United States and (b) the related Benchmark Replacement Adjustment;

provided that, in the case of clause (1) such Unadjusted Benchmark Replacement is displayed on a screen or other information service that publishes such rate from time to time as selected by the Agent in its reasonable discretion; provided further that, in the case of clause (3), when such clause is used to determine the Benchmark Replacement in connection with the occurrence of an Other Benchmark Rate Election, the alternate benchmark rate selected by the Agent and the Borrower shall be the term benchmark rate that is used in lieu of a LIBOR-based rate in the relevant other dollar-denominated syndicated credit facilities; provided further that, notwithstanding anything to the contrary in this Agreement or in any other Loan Document, upon the occurrence of a Term SOFR Transition Event, and the delivery of a Term SOFR Notice, on the applicable Benchmark Replacement Date the "Benchmark Replacement" shall revert to and shall be deemed to be the sum of (a) Term SOFR and (b) the related Benchmark Replacement Adjustment, as set forth in clause (1) of this definition (subject to the first proviso above).

If the Benchmark Replacement as determined pursuant to clause (1), (2) or (3) above would be less than the Floor, the Benchmark Replacement will be deemed to be the Floor for the purposes of this Agreement and the other Loan Documents.

"**Benchmark Replacement Adjustment**" means, with respect to any replacement of the then-current Benchmark with an Unadjusted Benchmark Replacement for any applicable Interest Period and Available Tenor for any setting of such Unadjusted Benchmark Replacement:

(1) for purposes of clauses (1) and (2) of the definition of "Benchmark Replacement," the first alternative set forth in the order below that can be determined by the Agent:

(a) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that has been selected or recommended by the Relevant Governmental Body for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for the applicable Corresponding Tenor;

(b) the spread adjustment (which may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that would apply to the fallback rate for a derivative transaction referencing the ISDA Definitions to be effective upon an index cessation event with respect to such Benchmark for the applicable Corresponding Tenor; and

(2) for purposes of clause (3) of the definition of "Benchmark Replacement," the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected by the Agent and the Borrower for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement by the Relevant Governmental Body on the applicable Benchmark Replacement Date and/or (ii) any evolving or then-prevailing market convention for determining a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for dollar-denominated syndicated credit facilities;

provided that, in the case of clause (1) above, such adjustment is displayed on a screen or other information service that publishes such Benchmark Replacement Adjustment from time to time as selected by the Agent in its reasonable discretion.

"**Benchmark Replacement Conforming Changes**" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "Base Rate," the definition of "Business Day", the definition of "Interest Period," timing and frequency of determining rates and making payments of interest, timing of borrowing requests or prepayment, conversion or continuation notices, length of lookback periods, the applicability of breakage provisions, the formula for calculating any successor rates identified pursuant to the definition of "Benchmark Replacement", the formula, methodology and convention for applying the successor Floor to the successor Benchmark Replacement, and other technical, administrative or operational matters) that the Agent decides may be appropriate to reflect the adoption and implementation of such Benchmark Replacement and to permit the administration thereof by the Agent in a manner substantially consistent with market practice (or, if the Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Agent determines that no market practice for the administration of such Benchmark Replacement exists, in such other manner of administration as

the Agent decides is reasonably necessary in connection with the administration of this Agreement and the other Loan Documents).

"**Benchmark Replacement Date**" means the earliest to occur of the following events with respect to the then-current Benchmark:

(1) in the case of clause (1) or (2) of the definition of "Benchmark Transition Event," the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of such Benchmark (or the published component used in the calculation thereof) permanently or indefinitely ceases to provide all Available Tenors of such Benchmark (or such component thereof);

(2) in the case of clause (3) of the definition of "Benchmark Transition Event," the first date on which such Benchmark (or the published component used in the calculation thereof) has been determined and announced by the regulatory supervisor for the administrator of such Benchmark (or such component thereof) to be no longer representative; provided, that such non-representativeness will be determined by reference to the most recent statement or publication referenced in such clause (3) and even if any Available Tenor of such Benchmark (or such component thereof) continues to be provided on such date;

(3) in the case of a Term SOFR Transition Event, the date that is thirty (30) days after the date a Term SOFR Notice is provided to the Lenders and the Borrower pursuant to this Section 2.07(g); or

(4) in the case of an Early Opt-in Election or an Other Benchmark Rate Election, the sixth (6th) Business Day after the date notice of such Early Opt-in Election or Other Benchmark Rate Election, as applicable, is provided to the Lenders, so long as the Agent has not received, by 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Early Opt-in Election or Other Benchmark Rate Election, as applicable, is provided to the Lenders, written notice of objection to such Early Opt-in Election or Other Benchmark Rate Election, as applicable, from Lenders comprising the Required Lenders.

For the avoidance of doubt, (i) if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination and (ii) the "Benchmark Replacement Date" will be deemed to have occurred in the case of clause (1) or (2) with respect to any Benchmark upon the occurrence of the applicable event or events set forth therein with respect to all then-current Available Tenors of such Benchmark (or the published component used in the calculation thereof).

"**Benchmark Transition Event**" means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that such administrator has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof), permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof);

(2) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof), the Board, the NYFRB, an insolvency official with jurisdiction over the administrator for such Benchmark (or such component), a resolution authority with jurisdiction over the administrator for such Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark (or such component), in each case which states that the administrator of such Benchmark (or such component) has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof) permanently or indefinitely; provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof); or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that all Available Tenors of such Benchmark (or such component thereof) are no longer, or as of a specified future date will no longer be, representative.

For the avoidance of doubt, a "Benchmark Transition Event" will be deemed to have occurred with respect to any Benchmark if a public statement or publication of information set forth above has occurred with respect to each then-current Available Tenor of such Benchmark (or the published component used in the calculation thereof).

"**Benchmark Unavailability Period**" means the period (if any) (x) beginning at the time that a Benchmark Replacement Date pursuant to clauses (1) or (2) of that definition has occurred if, at such time, no Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with this Section 2.07(g) and (y) ending at the time that a Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with this Section 2.07(g).

"**Corresponding Tenor**" with respect to any Available Tenor means, as applicable, either a tenor (including overnight) or an interest payment period having approximately the same length (disregarding business day adjustment) as such Available Tenor.

"**Daily Simple SOFR**" means, for any day, SOFR, with the conventions for this rate (which will include a lookback) being established by the Agent in accordance with the

conventions for this rate selected or recommended by the Relevant Governmental Body for determining "Daily Simple SOFR" for syndicated business loans; provided, that if the Agent decides that any such convention is not administratively feasible for the Agent, then the Agent may establish another convention in its reasonable discretion.

"**Early Opt-in Election**" means, if the then-current Benchmark is USD LIBOR, the occurrence of:

(1) a notification by the Agent to (or the request by the Borrower to the Agent to notify) each of the other parties hereto that at least five currently outstanding dollar-denominated syndicated credit facilities in the U.S. syndicated loan market at such time contain (as a result of amendment or as originally executed) a SOFR-based rate (including SOFR, a term SOFR or any other rate based upon SOFR) as a benchmark rate (and such syndicated credit facilities are identified in such notice and are publicly available for review), and

(2) the joint election by the Agent and the Borrower to trigger a fallback from USD LIBOR and the provision, as applicable, by the Agent of written notice of such election to the Borrower and the Lenders.

"**Floor**" means the benchmark rate floor, if any, provided in this Agreement initially (as of the execution of this Agreement, the modification, amendment or renewal of this Agreement or otherwise) with respect to USD LIBOR.

"**ISDA Definitions**" means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time by the International Swaps and Derivatives Association, Inc. or such successor thereto.

"**Other Benchmark Rate Election**" means, with respect to any Loan, if the then-current Benchmark is USD LIBOR, the occurrence of:

(a) a request by the Borrower to the Agent to notify each of the other parties hereto that, at the determination of the Borrower, dollar-denominated syndicated credit facilities at such time contain (as a result of amendment or as originally executed), in lieu of a LIBOR-based rate, a term benchmark rate as a benchmark rate, and

(b) the Agent, in its sole discretion, and the Borrower jointly elect to trigger a fallback from USD LIBOR and the provision, as applicable, by the Agent of written notice of such election to the Borrower and the Lenders.

"**Reference Time**" with respect to any setting of the then-current Benchmark means (1) if such Benchmark is USD LIBOR, 11:00 a.m. (London time) on the day that is two London banking days preceding the date of such setting, and (2) if such Benchmark is not USD LIBOR, the time determined by the Agent in its reasonable discretion.

"**Relevant Governmental Body**" means the Board of Governors of the Federal Reserve System or the NYFRB, or a committee officially endorsed or convened by the Board of Governors of the Federal Reserve System or the NYFRB, or any successor thereto.

"**SOFR**" means, with respect to any Business Day, a rate per annum equal to the secured overnight financing rate for such Business Day published by the SOFR Administrator on the SOFR Administrator's Website on the immediately succeeding Business Day.

"**SOFR Administrator**" means the NYFRB (or a successor administrator of the secured overnight financing rate).

"**SOFR Administrator's Website**" means the NYFRB's Website, currently at http://www.newyorkfed.org, or any successor source for the secured overnight financing rate identified as such by the SOFR Administrator from time to time.

"**Term SOFR**" means, for the applicable Corresponding Tenor as of the applicable Reference Time, the forward-looking term rate based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"**Term SOFR Notice**" means a notification by the Agent to the Lenders and the Borrower of the occurrence of a Term SOFR Transition Event.

"**Term SOFR Transition Event**" means the determination by the Agent that (a) Term SOFR has been recommended for use by the Relevant Governmental Body, (b) the administration of Term SOFR is administratively feasible for the Agent and (c) a Benchmark Transition Event or an Early Opt-in Election, as applicable (and, for the avoidance of doubt, not in the case of an Other Benchmark Rate Election), has previously occurred resulting in a Benchmark Replacement in accordance with this Section 2.07(g) that is not Term SOFR.

"**Unadjusted Benchmark Replacement**" means the applicable Benchmark Replacement excluding the related Benchmark Replacement Adjustment.

"**USD LIBOR**" means the London interbank offered rate for U.S. dollars.

SECTION 2.08 Optional Conversion of Revolving Credit Advances. The Borrower may on any Business Day, upon notice given to the Agent not later than 11:00 A.M. (New York City time) on the third Business Day prior to the date of the proposed Conversion and subject to the provisions of Sections 2.07 and 2.11(a), Convert all Revolving Credit Advances of one Type comprising the same Borrowing into Revolving Credit Advances of the other Type (it being understood that such Conversion of a Revolving Credit Advance or of its Interest Period does not constitute a repayment or prepayment of such Revolving Credit Advance); provided, however, that any Conversion of Eurodollar Rate Advances into Base Rate Advances shall be made only on the last day of an Interest Period for such Eurodollar Rate Advances, any Conversion of Base Rate Advances into Eurodollar Rate Advances shall be in an amount not less than the minimum amount specified in Section 2.02(b) and no Conversion of any

Revolving Credit Advances shall result in more separate Borrowings than permitted under Section 2.02(b). Each such notice of a Conversion shall be substantially in the form of Exhibit H hereto, and shall, within the restrictions specified above, specify (i) the date of such Conversion, (ii) the Revolving Credit Advances to be Converted, and (iii) if such Conversion is into Eurodollar Rate Advances, the duration of the initial Interest Period for each such Eurodollar Rate Advance. Each notice of Conversion shall be irrevocable and binding on the Borrower.

SECTION 2.09 Prepayments of Revolving Credit Advances. Optional Prepayment. The Borrower may on any Business Day, upon notice given to the Agent substantially in the form of Exhibit I hereto, not later than 11:00 A.M. (New York City time), (i) on the same day for Base Rate Advances and (ii) on the third Business Day prior to the prepayment in the case of Eurodollar Rate Advances stating the proposed date and aggregate principal amount of the prepayment (and if such notice is given the Borrower shall) prepay the outstanding principal amount of the Revolving Credit Advances comprising part of the same Borrowing in whole or ratably in part, together with accrued interest to the date of such prepayment on the principal amount prepaid; provided, however, that (x) each partial prepayment shall be in an aggregate principal amount of $5,000,000 or an integral multiple of $1,000,000 in excess thereof, or the remaining balance, if less than $5,000,000, and (y) in the event of any such prepayment of a Eurodollar Rate Advance, the Borrower shall be obligated to reimburse the Lenders in respect thereof pursuant to Section 8.04(c).

SECTION 2.10 Increased Costs. (a) If, due to either (i) the introduction of or any change in or in the interpretation of any law or regulation or (ii) the compliance with any rule, guideline, requirement, directive or request from any central bank or other Governmental Authority (whether or not having the force of law), there shall be any increase in the cost to any Person of agreeing to make or making, funding or maintaining Revolving Credit Advances or participating in any Facility LC hereunder, including as a result of any tax, levy, impost, deduction, fee, assessment, duty, charge or withholding, and all liabilities with respect thereto, imposed on its loans, loan principal, letters of credit, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto, excluding for purposes of this Section 2.10 any such increased costs resulting from Taxes, amounts excluded from Taxes pursuant to Section 2.13, and Other Taxes, then the Borrower shall from time to time, upon demand by such Person (with a copy of such demand to the Agent), pay to the Agent on its own account or for the account of such Person, as applicable, additional amounts sufficient to compensate such Person, for such increased cost. A certificate as to the amount of such increased cost, submitted to the Borrower and the Agent by such Person, shall be conclusive and binding for all purposes, absent manifest error.

(b) If any Lender or LC Issuer determines that compliance with any law or regulation or any rule, guideline, requirement, directive or request from any central bank or other Governmental Authority (whether or not having the force of law) affects or would affect the amount of capital or liquidity required or expected to be maintained by such Lender or such LC Issuer or any corporation controlling such Lender or such LC Issuer, as applicable, and that the amount of such capital or liquidity is increased by or based upon the existence of such Lender’s

commitment to lend hereunder or to participate in Facility LCs hereunder and other commitments of this type or such LC Issuer's issuance of Facility LCs hereunder, then, upon demand by such Lender or such LC Issuer, as applicable, (with a copy of such demand to the Agent), the Borrower shall pay to the Agent for the account of such Lender or such LC Issuer, as applicable, from time to time as specified by such Lender or such LC Issuer, as applicable, additional amounts sufficient to compensate such Lender or such LC Issuer, as applicable, or such corporation in the light of such circumstances, to the extent that such Lender or such LC Issuer, as applicable, reasonably determines such increase in capital or liquidity to be allocable to the existence of such Lender's commitment to lend hereunder or to participate in Facility LCs hereunder or such LC Issuer's agreement to issue Facility LCs hereunder. A certificate as to such amounts submitted to the Borrower and the Agent by such Lender or such LC Issuer, as applicable, shall be conclusive and binding for all purposes, absent manifest error.

(c) In the event that a Lender demands payment from the Borrower for amounts owing pursuant to subsection (a) or (b) of this Section 2.10, the Borrower may, upon payment of such amounts and subject to the requirements of Sections 8.04 and 8.07, substitute for such Lender another financial institution, which financial institution shall be an Eligible Assignee and shall assume the Commitments of such Lender and purchase the Outstanding Credit Exposures held by such Lender in accordance with Section 8.07, provided, however, that (i) no Default shall have occurred and be continuing, (ii) the Borrower shall have satisfied all of its obligations in connection with the Loan Documents with respect to such Lender, and (iii) if such assignee is not a Lender, (A) such assignee is acceptable to the Agent and (B) the Borrower shall have paid the Agent a $3,500 administrative fee.

(d) If any Lender requests compensation under this Section 2.10, then such Lender shall, if requested by the Borrower, use reasonable efforts to designate a different Applicable Lending Office for funding or booking its Revolving Credit Advances hereunder or to assign its rights and obligations hereunder to another of its offices, branches or affiliates, if, in the judgment of such Lender, such designation or assignment (i) would eliminate or reduce amounts payable pursuant to Section 2.10 in the future and (ii) would not subject such Lender to any unreimbursed cost or expense and would not otherwise be disadvantageous to such Lender. The Borrower hereby agrees to pay all reasonable costs and expenses incurred by any Lender in connection with any such designation or assignment.

(e) For purposes of this Section 2.10, and notwithstanding anything herein to the contrary, (i) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, requirements, guidelines and directives thereunder or issued in connection therewith or in implementation thereof and (ii) all requests, rules, guidelines, requirements and directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or foreign regulatory authorities, in each case pursuant to Basel III, shall in each case be deemed to have been enacted, adopted and issued after the date hereof, regardless of the date enacted, adopted, issued or implemented.

(f) Failure or delay on the part of any Lender or LC Issuer to demand compensation pursuant to this Section shall not constitute a waiver of such Lender's or such LC Issuer's right to demand such compensation; provided that, the Borrower shall not be required to compensate a Lender or LC Issuer pursuant to this Section for any increased costs incurred more than 270 days prior to the date that such Lender or such LC Issuer, as the case may be, notifies the Borrower of the circumstances giving rise to such increased costs and of such Lender's or such LC Issuer's intention to claim compensation therefor; provided further that, if the circumstance giving rise to such increased costs is retroactive, then the 270-day period referred to above shall be extended to include the period of retroactive effect thereof.

SECTION 2.11 Illegality.

(a) Notwithstanding any other provision of this Agreement, if any Lender shall notify the Agent that the introduction of or any change in or in the interpretation of any law or regulation makes it unlawful, or any central bank or other Governmental Authority asserts that it is unlawful, for any Lender or its Eurodollar Lending Office to perform its obligations hereunder to make Eurodollar Rate Advances or to fund or maintain Eurodollar Rate Advances hereunder, (i) each Eurodollar Rate Advance will automatically, upon such demand, Convert into a Base Rate Advance or a Revolving Credit Advance that bears interest at the rate set forth in Section 2.06(a)(i), as the case may be, and (ii) the obligation of the Lenders to make Eurodollar Rate Advances or to Convert Revolving Credit Advances into Eurodollar Rate Advances shall be suspended until the Agent shall notify the Borrower and the Lenders that the circumstances causing such suspension no longer exist.

(b) If a Conversion occurs or the obligation of the Lenders to make Eurodollar Rate Advances or to Convert Revolving Credit Advances into Eurodollar Rate Advances is suspended, in each case, pursuant to Section 2.11(a), then the Lender causing such Conversion and/or suspension shall use reasonable efforts to designate a different Applicable Lending Office for funding or booking its Revolving Credit Advances hereunder or to assign its rights and obligations hereunder to another of its offices, branches or affiliates, if, in the judgment of such Lender, such designation or assignment (i) would reinstate the Lenders' obligations to make Eurodollar Rate Advances and to Convert Revolving Credit Advances into Eurodollar Rate Advances and (ii) would not subject such Lender to any unreimbursed cost or expense and would not otherwise be disadvantageous to such Lender. The Borrower hereby agrees to pay all reasonable costs and expenses incurred by any Lender in connection with any such designation or assignment.

SECTION 2.12 Payments and Computations. (a) The Borrower shall make each payment hereunder and under the Notes not later than 11:00 A.M. (New York City time) on the day when due in U.S. dollars to the Agent at the Agent's Account in same day funds and without set off, deduction or counterclaim other than deductions on account of taxes. The Agent will promptly thereafter cause to be distributed like funds relating to the payment of principal, interest, Facility Fees or LC Fees ratably (other than amounts payable pursuant to Section 2.10, 2.13 or 8.04(c)) to the Lenders and the LC Issuers, as applicable, for the account of their respective Applicable Lending Offices, and like funds relating to the payment of any other

amount payable to any Lender or LC Issuer to such Lender or LC Issuer for the account of its Applicable Lending Office, in each case to be applied in accordance with the terms of this Agreement. Upon its acceptance of an Assignment and Assumption and recording of the information contained therein in the Register pursuant to Section 8.07(c), from and after the effective date specified in such Assignment and Assumption, the Agent shall make all payments hereunder and under the Notes in respect of the interest assigned thereby to the Lender assignee thereunder, and the parties to such Assignment and Assumption shall make all appropriate adjustments in such payments for periods prior to such effective date directly between themselves.

(b) The Borrower hereby authorizes each Lender and each LC Issuer, if and to the extent payment owed to such Lender or LC Issuer is not made when due hereunder or under the Note held by such Lender or LC Issuer, to charge from time to time against any or all of the Borrower's accounts with such Lender or LC Issuer any amount so due.

(c) All computations of interest based on the Base Rate, when such computations of the Base Rate are based on the Prime Rate, shall be made by the Agent on the basis of a year of 365 or 366 days, as the case may be, and all computations of interest based on the Base Rate (other than such computations of the Base Rate that are based on the Prime Rate), of interest based on the Eurodollar Rate, of the Facility Fees and of the LC Fees shall be made by the Agent on the basis of a year of 360 days, in each case, for the actual number of days (including the first day but excluding the last day) occurring in the period for which such interest, such Facility Fees or such LC Fees are payable. Each determination by the Agent of an interest rate hereunder shall be conclusive and binding for all purposes, absent manifest error.

(d) Whenever any payment hereunder or under the Notes shall be stated to be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day, and such extension of time shall in such case be included in the computation of payment of interest, Facility Fee or LC Fee, as the case may be; provided, however, that, if such extension would cause payment of interest on or principal of Eurodollar Rate Advances to be made in the next following calendar month, such payment shall be made on the next preceding Business Day.

(e) Unless the Agent shall have received notice from the Borrower prior to the date on which any payment is due to the Lenders or the LC Issuers hereunder that the Borrower will not make such payment in full, the Agent may assume that the Borrower has made such payment in full to the Agent on such date and the Agent may, in reliance upon such assumption, cause to be distributed to each Lender or LC Issuer, as applicable, on such due date an amount equal to the amount then due such Lender or LC Issuer. If and to the extent the Borrower shall not have so made such payment in full to the Agent, each Lender or LC Issuer, as applicable, shall repay to the Agent forthwith on demand such amount distributed to such Lender or LC Issuer together with interest thereon, for each day from the date such amount is distributed to such Lender or LC Issuer until the date such Lender or LC Issuer repays such amount to the Agent, at the NYFRB Rate.

SECTION 2.13 Taxes. (a) Subject to the exclusions set forth below in this Section 2.13(a) and, if applicable, compliance with Section 2.13(e), any and all payments by the

Borrower hereunder or under the Notes shall be made, in accordance with Section 2.12, free and clear of and without deduction for any and all present or future taxes, levies, imposts, deductions, fees, assessments, duties, charges or withholdings, and all liabilities with respect thereto, excluding, in the case of each Lender, each LC Issuer and the Agent, (i) any and all present or future taxes, levies, imposts, deductions, fees, assessments, duties, charges or withholdings imposed on its net income, and franchise taxes imposed on it in lieu of net income taxes, (x) by the jurisdiction under the laws of which such Lender, such LC Issuer or the Agent (as the case may be) is organized or any political subdivision thereof and (y), in the case of each Lender and each LC Issuer, by the jurisdiction of such Lender's or such LC Issuer's Applicable Lending Office or any political subdivision thereof and (ii) any United States withholding taxes imposed by FATCA (all such non-excluded taxes, levies, imposts, deductions, fees, assessments, duties, charges, withholdings and liabilities in respect of payments hereunder or under the Notes being hereinafter referred to as "Taxes"). Notwithstanding the above, if the Borrower shall be required by law to deduct any Taxes from or in respect of any sum payable hereunder or under any Note to any Lender, any LC Issuer or the Agent, the Borrower will so deduct and (i) the sum payable shall be increased as may be necessary so that after making all such deductions on account of Taxes (including deductions on account of Taxes applicable to additional sums payable under this Section 2.13) such Lender, such LC Issuer or the Agent (as the case may be) receives an amount equal to the sum it would have received had no such deductions been made, (ii) the Borrower shall make such deductions and (iii) the Borrower shall pay the full amount deducted to the relevant taxation authority or other authority in accordance with applicable law.

(b) The Borrower agrees to pay any present or future stamp or documentary taxes or any other excise or property taxes, charges or similar levies that arise from any payment made hereunder or under the Notes or from the execution, delivery or registration of this Agreement or the Notes (hereinafter referred to as "Other Taxes").

(c) Without duplication of the Borrower's payment obligations on account of Taxes or Other Taxes pursuant to Sections 2.13(a) and (b), the Borrower shall indemnify each Lender, each LC Issuer and the Agent for the full amount of Taxes or Other Taxes (including, without limitation, any Taxes imposed by any jurisdiction on amounts payable under this Section 2.13) imposed on or paid by such Lender or the Agent (as the case may be) and any liability (including penalties, interest and expenses) arising therefrom or with respect thereto. This indemnification shall be made within 30 days from the date such Lender, such LC Issuer or the Agent (as the case may be) makes written demand therefor.

(d) Within 30 days after the date of any payment of Taxes, the Borrower shall furnish to the Agent, at its address referred to in Section 8.02, the original or a certified copy of a receipt evidencing payment thereof. In the case of any payment hereunder or under the Notes by or on behalf of the Borrower through an account or branch outside the United States or by or on behalf of the Borrower by a payor that is not a United States person, if the Borrower determines that no Taxes are payable in respect thereof, the Borrower shall furnish, or shall cause such payor to furnish, to the Agent, at such address, an opinion of counsel acceptable to the Agent stating that such payment is exempt from Taxes. For purposes of this subsection (d) and subsection (e), the

terms "United States" and "United States person" shall have the meanings specified in Section 7701 of the Internal Revenue Code.

(e) Each Lender organized under the laws of a jurisdiction outside the United States, on or prior to the date of its execution and delivery of this Agreement in the case of each Initial Lender and on the date of the Assignment and Assumption pursuant to which it becomes a Lender in the case of each other Lender, and from time to time thereafter as requested in writing by the Borrower (but only so long as such Lender remains lawfully able to do so), shall provide each of the Agent and the Borrower with two original Internal Revenue Service Form W-8BEN, W-8BEN-E or W-8ECI, as appropriate, or any successor or other form prescribed by the Internal Revenue Service, certifying that such Lender is exempt from United States withholding tax on payments pursuant to this Agreement or the Notes. If any form or document referred to in this subsection (e) requires the disclosure of information, other than information necessary to compute the tax payable and information required on the date hereof by Internal Revenue Service Form W-8BEN, W-8BEN-E or W-8ECI, that the Lender reasonably considers to be confidential, the Lender shall give notice thereof to the Borrower and shall not be obligated to include in such form or document such confidential information; however, such a Lender will not be entitled to any payment or indemnification on account of any Taxes imposed by the United States.

(f) If a payment made to a Lender hereunder would be subject to United States withholding tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Internal Revenue Code, as applicable), such Lender shall deliver to the Borrower and the Agent at the time or times prescribed by law and at such time or times reasonably requested by the Borrower or the Agent such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Internal Revenue Code) and such additional documentation reasonably requested by the Borrower or the Agent as may be necessary for the Borrower and the Agent to comply with their obligations under FATCA and to determine that such Lender has or has not complied with such Lender's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (f), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

(g) Notwithstanding any provision to the contrary in this Agreement, the Borrower will not be obligated to make payments on account of or indemnify the Lenders, the LC Issuers or the Agent for any present or future taxes, levies, imposts, deductions, fees, assessments, duties, charges or withholdings, and all liabilities with respect thereto, or any present or future stamp or other documentary taxes or property taxes, charges or similar levies that are neither Taxes nor Other Taxes except as may be required by Section 2.10.

(h) For any period with respect to which a Lender has failed to provide the Borrower with the appropriate form described in Section 2.13(e) (other than if such failure is due to a change in law occurring subsequent to the date on which a form originally was required to be provided, or if such form otherwise is not required under the first sentence of subsection (e)

above), such Lender shall not be entitled to indemnification under Section 2.13(a) or (c) with respect to Taxes imposed by the United States by reason of such failure; provided, however, that should a Lender become subject to Taxes because of its failure to deliver a form required hereunder, the Borrower shall take such steps as the Lender shall reasonably request to assist the Lender to recover such Taxes.

(i) In the event that a Lender demands payment from the Borrower for amounts owing pursuant to subsection (a) or (b) of this Section 2.13, the Borrower may, upon payment of such amounts and subject to the requirements of Sections 8.04 and 8.07, substitute for such Lender another financial institution, which financial institution shall be an Eligible Assignee and shall assume the Commitments of such Lender and purchase the Outstanding Credit Exposures held by such Lender in accordance with Section 8.07, provided, however, that (i) no Default shall have occurred and be continuing, (ii) the Borrower shall have satisfied all of its obligations in connection with the Loan Documents with respect to such Lender, and (iii) if such assignee is not a Lender, (A) such assignee is acceptable to the Agent and (B) the Borrower shall have paid the Agent a $3,500 administrative fee.

(j) Notwithstanding any provision to the contrary in this Agreement, in the event that a Lender that is not an Initial Lender and who purchased its interest in this Agreement without the consent of the Borrower pursuant to Section 8.07(a), seeks (i) payment of additional amounts pursuant to Section 2.13(a), (ii) payment of Other Taxes pursuant to Section 2.13(b), or (iii) indemnification for Taxes or Other Taxes pursuant to Section 2.13(c), the amount of any such payment or indemnification will be no greater than what it would have been had the Initial Lender not transferred, assigned or sold its interest in this Agreement.

(k) If the Borrower is required to pay any additional amount to any Lender or any Governmental Authority for the account of any Lender pursuant to this Section 2.13, then such Lender shall use reasonable efforts to designate a different Applicable Lending Office for funding or booking its Revolving Credit Advances hereunder or to assign its rights and obligations hereunder to another of its offices, branches or affiliates, if, in the judgment of such Lender, such designation or assignment (i) would eliminate or reduce amounts payable pursuant to this Section 2.13 in the future and (ii) would not subject such Lender to any unreimbursed cost or expense and would not otherwise be disadvantageous to such Lender. The Borrower hereby agrees to pay all reasonable costs and expenses incurred by any Lender in connection with any such designation or assignment.

(l) Each Lender shall severally indemnify the Agent for any taxes, levies, imposts, deductions, fees, assessments, duties, charges or withholdings, and all liabilities with respect thereto, (but, in the case of any Taxes or Other Taxes, only to the extent that the Borrower has not already indemnified the Agent for such Taxes or Other Taxes and without limiting the obligation of the Borrower to do so) attributable to such Lender that are paid or payable by the Agent in connection with this Agreement and any reasonable expenses arising therefrom or with respect thereto, whether or not such amounts were correctly or legally imposed or asserted by the relevant Governmental Authority. The indemnity under this Section 2.13(l) shall be paid within 30 days after the Agent delivers to the applicable Lender a certificate stating the amount so paid

or payable by the Agent. Such certificate shall be conclusive of the amount so paid or payable absent manifest error.

SECTION 2.14 Sharing of Payments, Etc. If any Lender shall obtain any payment (whether voluntary, involuntary, through the exercise of any right of set-off, or otherwise) on account of the Outstanding Credit Exposures owing to it (other than pursuant to Section 2.10, 2.13 or 8.04(c)) in excess of its ratable share of payments on account of the Aggregate Outstanding Credit Exposures obtained by all of the Lenders, such Lender shall forthwith purchase from the other Lenders such participations in the Aggregate Outstanding Credit Exposures owing to them as shall be necessary to cause such purchasing Lender to share the excess payment ratably with each of them; provided, however, that if all or any portion of such excess payment is thereafter recovered from such purchasing Lender, such purchase from each Lender shall be rescinded and such Lender shall repay to the purchasing Lender the purchase price to the extent of such recovery together with an amount equal to such Lender's ratable share (according to the proportion of (i) the amount of such Lender's required repayment to (ii) the total amount so recovered from the purchasing Lender) of any interest or other amount paid or payable by the purchasing Lender in respect of the total amount so recovered. The Borrower agrees that any Lender so purchasing a participation from another Lender pursuant to this Section 2.14 may, to the fullest extent permitted by law, exercise all its rights of payment (including the right of set-off) with respect to such participation as fully as if such Lender were the direct creditor of the Borrower in the amount of such participation.

SECTION 2.15 Use of Proceeds. The proceeds of the Revolving Credit Advances shall be available and Facility LCs shall be issued hereunder (and the Borrower agrees that it shall use such proceeds and Facility LCs) solely for general corporate purposes of the Borrower and its Subsidiaries.

SECTION 2.16 Facility LCs. Notwithstanding anything in this Section 2.16 or otherwise in this Agreement, no Facility LCs shall be issued under this Agreement.

(a) Issuance. Each LC Issuer hereby agrees, on the terms and conditions set forth in this Agreement, to issue standby letters of credit denominated in U.S. dollars for the account of the Borrower and for the benefit of the Borrower or any Subsidiary of the Borrower (each, a "Facility LC") and to renew, extend, increase, decrease or otherwise modify each Facility LC ("Modify", and each such action a "Modification"), from time to time from and including the date of this Agreement and prior to the Termination Date upon the request of the Borrower; provided that immediately after each such Facility LC is issued or Modified, (i) the aggregate amount of the outstanding LC Obligations plus the aggregate amount, if any, by which the stated amount of all outstanding Facility LCs may by their terms or the terms of any Facility LC Applications be automatically increased shall not exceed $0 (the "LC Commitment"), (ii) the Aggregate Outstanding Credit Exposures shall not exceed the aggregate of all the Commitments and (iii) the aggregate stated amount of all outstanding Facility LCs issued by such LC Issuer shall not exceed $0, as such amount may be increased or decreased from time to time with the written consent of the Borrower, the Agent and each LC Issuer (provided that any increase in such amount with respect to any LC Issuer shall only require the consent of the Borrower and

such LC Issuer, but in all events shall be subject to the LC Commitment). No Facility LC shall have an expiry date later than the earlier of (x) the fifth Business Day prior to the Termination Date and (y) one year after its issuance; provided that any Facility LC with a one-year term may provide for the renewal thereof for additional one-year periods (which shall in no event extend beyond the date referenced in clause (x) above).

(b) Participations. Upon the issuance or Modification by any LC Issuer of a Facility LC in accordance with this Section 2.16, any LC Issuer shall be deemed, without further action by any party hereto, to have unconditionally and irrevocably sold to each Lender, and each Lender shall be deemed, without further action by any party hereto, to have unconditionally and irrevocably purchased from any LC Issuer, a participation in such Facility LC (and each Modification thereof) and the related LC Obligations in proportion to its Pro Rata Share.

(c) Notice. Subject to Section 2.16(a), the Borrower shall give any LC Issuer and the Agent notice prior to 11:00 a.m. (New York City time) at least five Business Days prior to the proposed date of issuance or Modification of each Facility LC by delivery of a Facility LC Application together with agreed-upon draft language for such Facility LC reasonably acceptable to the applicable LC Issuer, and specifying the beneficiary, the proposed date of issuance (or Modification) and the expiry date of such Facility LC, and describing the proposed terms of such Facility LC and the nature of the transactions proposed to be supported thereby. Upon receipt of such notice, the Agent shall promptly notify each Lender of the contents thereof and of the amount of such Lender's participation in such proposed Facility LC. The issuance or Modification by any LC Issuer of any Facility LC shall, in addition to the conditions precedent set forth in Article III (the satisfaction of which such LC Issuer shall have no duty to ascertain), be subject to the conditions precedent that such Facility LC shall be satisfactory to such LC Issuer and that the Borrower shall have executed and delivered such application agreement and/or such other instruments and agreements relating to such Facility LC as such LC Issuer shall have reasonably requested (each, a "Facility LC Application"). In the event of any conflict between the terms of this Agreement and the terms of any Facility LC Application, the terms of this Agreement shall control.

(d) Administration; Reimbursement by Lenders. Upon receipt from the beneficiary of any Facility LC of any demand for payment under such Facility LC, the applicable LC Issuer shall notify the Agent and the Agent shall promptly notify the Borrower and each other Lender as to the amount to be paid by such LC Issuer as a result of such demand and the proposed payment date (the "LC Payment Date"). The responsibility of such LC Issuer to the Borrower and each Lender shall be only to determine that the documents (including each demand for payment) delivered under each Facility LC in connection with such presentment shall be in conformity in all material respects with such Facility LC. Each LC Issuer shall endeavor to exercise the same care in the issuance and administration of the Facility LCs issued by such LC Issuer as it does with respect to letters of credit in which no participations are granted, it being understood that each Lender shall be unconditionally and irrevocably liable without regard to the occurrence of any Default or any condition precedent whatsoever to reimburse such LC Issuer on demand for (i) such Lender's Pro Rata Share of the amount of each payment made by such LC Issuer under each Facility LC issued by such LC Issuer to the extent such amount is not

reimbursed by the Borrower pursuant to Section 2.16(e) below, plus (ii) interest on the foregoing amount to be reimbursed by such Lender, for each day from the date of such LC Issuer's demand for such reimbursement (or, if such demand is made after 11:00 a.m. (New York City time) on such date, from the next succeeding Business Day) to the date on which such Lender pays the amount to be reimbursed by it, at a rate of interest per annum equal to the NYFRB Rate for the first three days and, thereafter, at a rate of interest equal to the rate applicable to Eurodollar Rate Advances.

(e) Reimbursement by Borrower. The Borrower shall be irrevocably and unconditionally obligated to reimburse each LC Issuer on or before the applicable LC Payment Date for any amounts to be paid by such LC Issuer upon any drawing under any Facility LC issued by such LC Issuer, without presentment, demand, protest or other formalities of any kind; provided that neither the Borrower nor any Lender shall hereby be precluded from asserting any claim for direct (but not consequential) damages suffered by the Borrower or such Lender to the extent, but only to the extent, caused by (i) the willful misconduct or gross negligence as determined in a final, non-appealable judgment by a court of competent jurisdiction of such LC Issuer in determining whether a request presented under any Facility LC issued by it complied with the terms of such Facility LC or (ii) such LC Issuer's failure to pay under any Facility LC issued by it after the presentation to it of a request strictly complying with the terms and conditions of such Facility LC. All such amounts paid by such LC Issuer and remaining unpaid by the Borrower shall bear interest, payable on demand, for each day until paid at a rate per annum equal to (x) the rate applicable to Base Rate Advances for such day if such day falls on or before the applicable LC Payment Date and (y) the sum of 2% plus the rate applicable to Base Rate Advances for such day if such day falls after such LC Payment Date. Each LC Issuer will pay to each Lender ratably in accordance with its Pro Rata Share all amounts received by it from the Borrower for application in payment, in whole or in part, of the Reimbursement Obligation in respect of any Facility LC issued by such LC Issuer, but only to the extent such Lender has made payment to such LC Issuer in respect of such Facility LC pursuant to Section 2.16(d). Subject to the terms and conditions of this Agreement (including without limitation the submission of a Notice of Borrowing in compliance with Section 2.02(a) and the satisfaction of the applicable conditions precedent set forth in Section 3.02), the Borrower may request a Revolving Credit Advance hereunder for the purpose of satisfying any Reimbursement Obligation.

(f) Obligations Absolute. The Borrower's obligations under this Section 2.16 shall be absolute and unconditional under any and all circumstances and irrespective of any setoff, counterclaim or defense to payment which the Borrower may have or have had against any LC Issuer, any Lender or any beneficiary of a Facility LC. The Borrower further agrees with the LC Issuers and the Lenders that the LC Issuers and the Lenders shall not be responsible for, and the Borrower's Reimbursement Obligation in respect of any Facility LC shall not be affected by, among other things, the validity or genuineness of documents or of any endorsements thereon, even if such documents should in fact prove to be in any or all respects invalid, fraudulent or forged, or any dispute between or among the Borrower, any of its Affiliates, the beneficiary of any Facility LC or any financing institution or other party to whom any Facility LC may be transferred or any claims or defenses whatsoever of the Borrower or of any of its Affiliates against the beneficiary of any Facility LC or any such transferee. The LC Issuers shall not be

liable for any error, omission, interruption or delay in transmission, dispatch or delivery of any message or advice, however transmitted, in connection with any Facility LC. The Borrower agrees that any action taken or omitted by any LC Issuer or any Lender under or in connection with each Facility LC and the related drafts and documents, if done without gross negligence or willful misconduct as determined in a final, non-appealable judgment by a court of competent jurisdiction, shall be binding upon the Borrower and shall not put any LC Issuer or any Lender under any liability to the Borrower. Nothing in this Section 2.16(f) is intended to limit the right of the Borrower to make a claim against any LC Issuer for damages as contemplated by the proviso to the first sentence of Section 2.16(e).

(g) Actions of LC Issuers. Each LC Issuer shall be entitled to rely, and shall be fully protected in relying, upon any Facility LC, draft, writing, resolution, notice, consent, certificate, affidavit, letter, cablegram, telegram, telecopy, telex or teletype message, statement, order or other document believed by it to be genuine and correct and to have been signed, sent or made by the proper Person or Persons, and upon advice and statements of legal counsel, independent accountants and other experts selected by such LC Issuer. Each LC Issuer shall be fully justified in failing or refusing to take any action under this Agreement unless it shall first have received such advice or concurrence of the Required Lenders as it reasonably deems appropriate or it shall first be indemnified to its reasonable satisfaction by the Lenders against any and all liability and expense which may be incurred by it by reason of taking or continuing to take any such action. Notwithstanding any other provision of this Section 2.16, each LC Issuer shall in all cases be fully protected in acting, or in refraining from acting, under this Agreement in accordance with a request of the Required Lenders, and such request and any action taken or failure to act pursuant thereto shall be binding upon the Lenders and any future holders of a participation in any Facility LC. No LC Issuer shall have any obligation to issue any Facility LC if (i) any order, judgment or decree of any Governmental Authority or arbitrator shall by its terms purport to enjoin or restrain such LC Issuer from issuing such Facility LC, or any applicable law or any request or directive (whether or not having the force of law) from any Governmental Authority with jurisdiction over such LC Issuer shall prohibit, or request that such LC Issuer refrain from, the issuance of letters of credit generally or such Facility LC in particular or shall impose upon such LC Issuer with respect to such Facility LC any restriction, reserve or capital or liquidity requirement (for which such LC Issuer is not otherwise compensated hereunder) not in effect on the Effective Date, or shall impose upon such LC Issuer any unreimbursed loss, cost or expense which was not applicable on the Effective Date and which such LC Issuer in good faith deems material to it, or (ii) the issuance of such Facility LC would violate one or more policies of such LC Issuer applicable to letters of credit generally.

(h) Lenders' Indemnification. Each Lender shall, ratably in accordance with its Pro Rata Share, indemnify each LC Issuer, its Affiliates and their respective directors, officers, agents and employees (to the extent not reimbursed by the Borrower) against any cost, expense (including reasonable counsel fees and disbursements), claim, demand, action, loss or liability (except such as result from such indemnitees' gross negligence or willful misconduct as determined in a final, non-appealable judgment by a court of competent jurisdiction or such LC Issuer's failure to pay under any Facility LC after the presentation to it of a request strictly complying with the terms and conditions of the Facility LC) that such indemnitees may suffer or

incur in connection with this Section 2.16 or any action taken or omitted by such indemnitees hereunder.

(i) Facility LC Collateral Account. The Borrower agrees that it will, upon the request of the Agent or the Required Lenders and until the final expiration date of any Facility LC and thereafter as long as any amount is payable to any LC Issuer or the Lenders in respect of any Facility LC, maintain a special collateral account pursuant to arrangements satisfactory to the Agent (the "Facility LC Collateral Account") at the Agent's office at the address specified pursuant to Section 8.02, in the name of the Borrower but under the sole dominion and control of the Agent, for the benefit of the Lenders and in which the Borrower shall have no interest other than as set forth in Section 6.01. The Borrower hereby pledges, assigns and grants to the Agent, on behalf of and for the ratable benefit of the Lenders and any LC Issuer, a security interest in all of the Borrower's right, title and interest in and to all funds which may from time to time be on deposit in the Facility LC Collateral Account to secure the prompt and complete payment and performance of the Obligations. The Agent will invest any funds on deposit from time to time in the Facility LC Collateral Account in certificates of deposit of the Agent having a maturity not exceeding 30 days. Nothing in this Section 2.16(i) shall either obligate the Agent to require the Borrower to deposit any funds in the Facility LC Collateral Account or limit the right of the Agent to release any funds held in the Facility LC Collateral Account in each case other than as required by Section 6.01.

(j) Rights as a Lender. In its capacity as a Lender, each LC Issuer shall have the same rights and obligations as any other Lender.

(k) LC Issuer Agreements. Unless otherwise requested by the Agent, each LC Issuer shall report in writing to the Agent (i) promptly following the end of each calendar month, the aggregate amount of Facility LCs issued by it and outstanding at the end of such month, (ii) on or prior to each Business Day on which such LC Issuer expects to issue, amend, renew or extend any Facility LC, the date of such issuance, amendment, renewal or extension, and the aggregate face amount of the Facility LC to be issued, amended, renewed or extended by it and outstanding after giving effect to such issuance, amendment, renewal or extension occurred (and whether the amount thereof changed), it being understood that such LC Issuer shall not permit any issuance, renewal, extension or amendment resulting in an increase in the amount of any Facility LC to occur without first obtaining written confirmation from the Agent that it is then permitted under this Agreement, (iii) on each Business Day on which such LC Issuer makes any payment under any Facility LC, the date of such payment under such Facility LC and the amount of such payment, (iv) on any Business Day on which the Borrower fails to reimburse any payment under any Facility LC required to be reimbursed to such LC Issuer on such day, the date of such failure and the amount of such payment and (v) on any other Business Day, such other information as the Agent shall reasonably request.

SECTION 2.17 Noteless Agreement; Evidence of Indebtedness.

(a) Each Lender shall maintain in accordance with its usual practice an account or accounts evidencing the indebtedness of the Borrower to such Lender resulting from each Credit

Extension made by such Lender from time to time, including the amounts of principal and interest payable and paid to such Lender from time to time hereunder.

(b) The Agent shall also maintain accounts in which it will record (i) the date and the amount of each Credit Extension made hereunder and the Interest Period, if any, applicable thereto, (ii) the amount of any principal or interest due and payable or to become due and payable from the Borrower to each Lender hereunder, (iii) the effective date and amount of each Assignment and Assumption delivered to and accepted by it and the parties thereto pursuant to Section 8.07, (iv) the amount of any sum received by the Agent hereunder from the Borrower and each Lender's share thereof, (v) the original stated amount of each Facility LC and the amount of LC Obligations outstanding at any time, and (vi) all other appropriate debits and credits as provided in this Agreement, including, without limitation, all fees, charges, expenses and interest.

(c) The entries maintained in the accounts maintained pursuant to clauses (a) and (b) above shall be prima facie evidence of the existence and amounts of the obligations hereunder and under the Notes therein recorded; provided, however, that the failure of the Agent or any Lender to maintain such accounts or any error therein shall not in any manner affect the obligation of the Borrower to repay such obligations in accordance with their terms.

(d) Any Lender may request that its Revolving Credit Advances be evidenced by a promissory note representing its Revolving Credit Advances substantially in the form of Exhibit A (each, a "Note"). In such event, the Borrower shall prepare, execute and deliver to such Lender such Note payable to the order of such Lender. Thereafter, the Revolving Credit Advances evidenced by each such Note and interest thereon shall at all times (including after any assignment pursuant to Section 8.07) be represented by one or more Notes payable to the order of the payee named therein or any assignee pursuant to Section 8.07, except to the extent that any such Lender or assignee subsequently returns any such Note for cancellation and requests that such Revolving Credit Advances once again be evidenced as described in clauses (a) and (b) above.

SECTION 2.18 Defaulting Lenders. Notwithstanding any provision of this Agreement to the contrary, if any Lender becomes a Defaulting Lender, then the following provisions shall apply for so long as such Lender is a Defaulting Lender:

(a) fees shall cease to accrue on the unfunded portion of the Commitment of such Defaulting Lender pursuant to Section 2.03(a);

(b) the Commitment and Outstanding Credit Exposure of such Defaulting Lender shall not be included in determining whether the Required Lenders have taken or may take any action hereunder (including any consent to any amendment or waiver pursuant to Section 8.01, other than those which require the consent of all Lenders or of each affected Lender);

(c) if any LC Obligations exist at the time such Lender becomes a Defaulting Lender, then:

(i) so long as no Default or Event of Default has occurred and is continuing, all or any part of the LC Obligations shall be reallocated among the non-Defaulting Lenders in accordance with their respective Pro Rata Shares but only to the extent the sum of all non-Defaulting Lenders' LC Obligations plus such Defaulting Lender's LC Obligations does not exceed the total of all non-Defaulting Lenders' Commitments and the sum of all non-Defaulting Lenders' Outstanding Credit Exposure plus such Defaulting Lender's LC Obligations does not exceed the total of all non-Defaulting Lenders' Commitments;

(ii) if the reallocation described in clause (i) above cannot, or can only partially, be effected, the Borrower shall within one Business Day following notice by the Agent, cash collateralize for the benefit of the LC Issuers only the Borrower's obligations corresponding to such Defaulting Lender's LC Obligations (after giving effect to any partial reallocation pursuant to clause (i) above) by depositing funds in the Facility LC Collateral Account for so long as such LC Obligations are outstanding;

(iii) if the Borrower cash collateralizes any portion of such Defaulting Lender's LC Obligations pursuant to clause (ii) above, the Borrower shall not be required to pay any Facility Fees or LC Fees with respect to such Defaulting Lender's LC Obligations during the period such Defaulting Lender's LC Obligations are cash collateralized;

(iv) if the LC Obligations of the non-Defaulting Lenders are reallocated pursuant to clause (i) above, then the LC Fees payable to the Lenders pursuant to Section 2.03(c) shall be adjusted in accordance with such non-Defaulting Lenders' Pro Rata Shares; and

(v) if all or any portion of such Defaulting Lender's LC Obligations is neither cash collateralized nor reallocated pursuant to clause (i) or (ii) above, then, without prejudice to any rights or remedies of the LC Issuers or any Lender hereunder, all Facility Fees that otherwise would have been payable to such Defaulting Lender pursuant to Section 2.03(a) (solely with respect to the portion of such Defaulting Lender's Commitment that was utilized by such LC Obligations) and LC Fees payable to such Defaulting Lender pursuant to Section 2.03(c) with respect to such Defaulting Lender's LC Obligations shall be payable to the LC Issuers until such LC Obligations are cash collateralized and/or reallocated;

(d) so long as such Lender is a Defaulting Lender, no LC Issuer shall be required to issue or Modify any Facility LC, unless it is satisfied that the related exposure will be 100% covered by the Commitments of the non-Defaulting Lenders and/or cash collateral will be provided by the Borrower in accordance with Section 2.18(c), and participating interests in any such newly issued or Modified Facility LC shall be allocated among non-Defaulting Lenders in a manner consistent with Section 2.18(c)(i) (and Defaulting Lenders shall not participate therein);

(e) the Borrower may, subject to the requirements of Sections 8.04 and 8.07, substitute for such Defaulting Lender another financial institution, which financial institution

shall be an Eligible Assignee and shall assume the Commitments of such Defaulting Lender and purchase the Outstanding Credit Exposures held by such Defaulting Lender in accordance with Section 8.07; provided, however, that (i) no Default shall have occurred and be continuing, (ii) the Borrower shall have satisfied all of its obligations in connection with the Loan Documents with respect to such Defaulting Lender, and (iii) if such assignee is not a Lender, (A) such assignee is acceptable to the Agent and (B) the Borrower shall have paid the Agent a $3,500 administrative fee;

(f) to the extent the Agent receives any payments or other amounts for the account of a Defaulting Lender under the Loan Documents, such Defaulting Lender shall be deemed to have requested that the Agent use such payment or other amount to fulfill such Defaulting Lender's previously unsatisfied obligations to fund a Revolving Credit Advance or any other unfunded payment obligation of such Defaulting Lender under Section 2.02(d), 2.12(e), 2.16(d) or 7.05; and

(g) for the avoidance of doubt, the Borrower shall retain and reserve its other rights and remedies respecting each Defaulting Lender.

If (i) a Bankruptcy Event or a Bail-In Action with respect to a parent of any Lender shall occur following the date hereof and for so long as such event shall continue or (ii) any LC Issuer has a good faith belief that any Lender has defaulted in fulfilling its obligations under one or more other agreements in which such Lender commits to extend credit, such LC Issuer shall not be required to Modify any Facility LC, unless such LC Issuer shall have entered into arrangements with the Borrower or such Lender, reasonably satisfactory to such LC Issuer to defease any risk to it in respect of such Lender hereunder.

In the event that the Agent, the Borrower and the LC Issuers each agrees that a Defaulting Lender has adequately remedied all matters that caused such Lender to be a Defaulting Lender, then the LC Obligations shall be readjusted to reflect the inclusion of such Lender's Commitment and on such date such Lender shall purchase at par on a ratable basis such of the Outstanding Credit Exposures of the other Lenders as the Agent shall determine may be necessary in order for such Lender to hold such Outstanding Credit Exposures in accordance with its Pro Rata Share, whereupon such Lender shall cease to be a Defaulting Lender. For the purposes of clarity, in the event any Defaulting Lender is reinstated as a non-Defaulting Lender in accordance with the terms hereof (i) no adjustments will be made retroactively with respect to fees accrued or payments made by or on behalf of the Borrower while such Lender was a Defaulting Lender, and (ii) except to the extent otherwise expressly agreed by the affected parties, such reinstatement shall not constitute a waiver or release of any claim of any party hereunder arising from such Lender having been a Defaulting Lender.

SECTION 2.19 [RESERVED]

ARTICLE III: CONDITIONS TO EFFECTIVENESS AND CREDIT EXTENSIONS

SECTION 3.01 Conditions Precedent to Effectiveness of this Agreement. This Agreement shall become effective on and as of the date hereof (the "Effective Date"), provided that the following conditions precedent have been satisfied on such date:

(a) There shall have occurred (i) no Material Adverse Change since December 31, 2020, except as shall have been disclosed or contemplated in the SEC Reports, and (ii) no material adverse change in the primary or secondary loan syndication markets or capital markets generally that makes it impracticable to consummate the transactions contemplated by the Loan Documents.

(b) The Lenders shall have been given such access, as such Lenders have reasonably requested, to the management, records, books of account, contracts and properties of the Borrower and its Significant Subsidiaries as they shall have requested.

(c) All governmental and third party consents, authorizations and approvals necessary in connection with the transactions contemplated hereby shall have been obtained (without the imposition of any conditions that are not acceptable to the Lenders) and shall remain in effect, and no law or regulation shall be applicable in the reasonable judgment of the Agent that restrains, prevents or imposes materially adverse conditions upon the transactions contemplated by the Loan Documents.

(d) The Borrower shall have notified each Lender and the Agent in writing as to the proposed Effective Date.

(e) The Borrower shall have paid all accrued fees and reasonable expenses due and payable to the Agent, the Lenders and the Arrangers on or prior to the Effective Date, including, to the extent invoiced, reimbursements or payment of all out-of-pocket expenses required to be reimbursed or paid by the Borrower hereunder.

(f) Each of the Agent and the Lenders shall have received (i) all documentation and other information that it reasonably requested from the Borrower (such request to be made not less than three (3) Business Days prior to the Effective Date) in order to comply with its obligations under the applicable "know your customer" and anti-money laundering rules and regulations, including the USA PATRIOT Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)) (the "PATRIOT Act") and (ii) to the extent the Borrower qualifies as a "legal entity customer" under the Beneficial Ownership Regulation, at least five days prior to the Effective Date, the Agent and any Lender that has requested a Beneficial Ownership Certification in relation to the Borrower shall have received such Beneficial Ownership Certification.

(g) On the Effective Date, the following statements shall be true and the Agent shall have received for the account of each Lender a certificate, substantially in the form of Exhibit D hereto, signed on behalf of the Borrower by a duly authorized Financial Officer of the Borrower, dated the Effective Date, stating, among other things, that:

(i) The representations and warranties contained in Section 4.01 are correct on and as of the Effective Date, and

(ii) No event has occurred and is continuing that constitutes a Default.

(h) The Agent shall have received on or before the Effective Date the following, each dated such day, in form and substance satisfactory to the Agent and (except for any Notes requested by the Lenders) in sufficient copies for each Lender:

(i) Counterpart signature pages of this Agreement, executed by each of the parties hereto.

(ii) Notes, if any, to the order of each Lender requesting the issuance of a Note as of the Effective Date pursuant to Section 2.17.

(iii) Certified copies of the resolutions of the Board of Directors of the Borrower approving each Loan Document to which it is a party, and of all documents evidencing other necessary corporate action and governmental approvals, if any, with respect to each Loan Document to which it is a party.

(iv) A certificate of the Corporate Secretary or an Assistant Corporate Secretary of the Borrower certifying the names and true signatures of the officers of the Borrower authorized to sign each Loan Document to which it is a party and the other documents to be delivered hereunder or thereunder.

(v) Favorable opinion letters of JoAnn Chávez, the Senior Vice President and Chief Legal Officer of the Borrower, and Hunton Andrews Kurth LLP, counsel to the Borrower, substantially in the form of Exhibits E-1 and E-2, respectively, hereto.

SECTION 3.02 Conditions Precedent to Each Credit Extension. The obligation of each Lender or LC Issuer, as the case may be, to make a Credit Extension shall be subject to the conditions precedent that the Effective Date shall have occurred and on the date of such Credit Extension: (a) the following statements shall be true (and each of the giving of the applicable Notice of Borrowing, the acceptance by the Borrower of the proceeds of such Borrowing and the request for the issuance, renewal, extension or increase of any Facility LC hereunder shall constitute a representation and warranty by the Borrower that on the date of such Credit Extension such statements are true):

(i) the representations and warranties contained in Section 4.01 are correct on and as of the date of such Credit Extension, before and after giving effect to such Credit Extension and to the application of the proceeds therefrom, as though made on and as of such date; provided, that such condition shall not apply to (x) the last sentence of Section 4.01(e) or (y) Section 4.01(f), and

(ii) after giving effect to the application of the proceeds of all Credit Extensions on such date (together with any other resources of the Borrower applied together therewith), no event has occurred and is continuing, or would result from such Credit Extension or from the application of the proceeds therefrom, that constitutes a Default;

and (b) the Agent shall have received such other approvals, opinions or documents as any Lender through the Agent may reasonably request.

SECTION 3.03 Determinations Under Section 3.01. For purposes of determining compliance with the conditions specified in Section 3.01, each Lender shall be deemed to have consented to, approved or accepted or to be satisfied with each document or other matter required thereunder to be consented to or approved by or acceptable or satisfactory to the Lenders unless an officer of the Agent responsible for the transactions contemplated by this Agreement shall have received notice from such Lender prior to the date that the Borrower, by notice to the Lenders, designates as the proposed Effective Date, specifying its objection thereto. The Agent shall promptly notify the Lenders of the occurrence of the Effective Date.

ARTICLE IV: REPRESENTATIONS AND WARRANTIES

SECTION 4.01 Representations and Warranties of the Borrower. The Borrower represents and warrants as follows:

(a) The Borrower is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation.

(b) The execution, delivery and performance by the Borrower of the Loan Documents to which it is a party, and the consummation of the transactions contemplated hereby and thereby, are within the Borrower's corporate powers, have been duly authorized by all necessary corporate action, and do not contravene (i) the Borrower's charter or by-laws or (ii) law or any contractual restriction binding on or affecting the Borrower.

(c) No consent, authorization or approval or other action by, and no notice to or filing with, any Governmental Authority or regulatory body or any other third party is required for the due execution, delivery and performance by the Borrower of any Loan Document to which it is a party.

(d) This Agreement has been, and each of the Notes when delivered hereunder will have been, duly executed and delivered by the Borrower. This Agreement is, and each of the Notes when delivered hereunder will be, the legal, valid and binding obligation of the Borrower enforceable against the Borrower in accordance with their respective terms, subject to the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar law affecting creditors rights generally.

(e) The Audited Statements of the Borrower, DTE Electric and DTE Gas, copies of each of which have been furnished to each Lender, fairly present, in all material respects, the

Consolidated financial condition, results of operations and cash flows of the relevant Persons and entities, as at the dates and for the periods therein indicated, all in accordance with generally accepted accounting principles consistently applied as in effect on the date of such Audited Statements. Since December 31, 2020, there has been no Material Adverse Change, except as shall have been disclosed or contemplated in the SEC Reports.

(f) There is no pending or threatened action, suit, investigation, litigation or proceeding, including, without limitation, any Environmental Action, affecting the Borrower or any of its Significant Subsidiaries before any court, governmental agency or arbitrator that (i) could be reasonably likely to have a Material Adverse Effect other than the matters disclosed or contemplated in the SEC Reports (the "Disclosed Litigation") or (ii) purports to affect the legality, validity or enforceability of any Loan Document or the consummation of the transactions contemplated hereby, and there has been no adverse change in the status or financial effect on the Borrower or any of its Significant Subsidiaries, of the Disclosed Litigation from that disclosed or contemplated in the SEC Reports that could be reasonably likely to have a Material Adverse Effect.

(g) The operations and properties of the Borrower and each of the Significant Subsidiaries comply in all material respects with all applicable Environmental Laws and Environmental Permits, all past non-compliance with such Environmental Laws and Environmental Permits has been resolved without ongoing material obligations or costs, except as disclosed or contemplated in the SEC Reports, and no circumstances exist that could be reasonably likely to (i) form the basis of an Environmental Action against the Borrower or any of the Significant Subsidiaries or any of their properties that could have a Material Adverse Effect or (ii) cause any such property to be subject to any restrictions on ownership, occupancy, use or transferability under any Environmental Law that could have a Material Adverse Effect.

(h) No ERISA Event has occurred or is reasonably expected to occur with respect to any Plan.

(i) Schedule B (Actuarial Information) to the most recent annual report (Form 5500 Series) for each Plan, copies of which have been filed with the Internal Revenue Service, is complete and accurate and fairly presents the funding status of such Plan, and since the date of such Schedule B there has been no material adverse change in such funding status.

(j) (i) Neither the Borrower nor any ERISA Affiliate has incurred or is reasonably expected to incur any Withdrawal Liability to any Multiemployer Plan and (ii) none of the Borrower and its Subsidiaries is an entity deemed to hold "plan assets" (within the meaning of the Plan Asset Regulations), and neither the execution, delivery or performance of the transactions contemplated hereby, including the making of any Loan and the issuance of any Facility LCs hereunder, will give rise to a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Internal Revenue Code.

(k) Neither the Borrower nor any ERISA Affiliate has been notified by the sponsor of a Multiemployer Plan that such Multiemployer Plan is in reorganization or has been terminated,

within the meaning of Title IV of ERISA, and no such Multiemployer Plan is reasonably expected to be in reorganization or to be terminated, within the meaning of Title IV of ERISA.

(l) Except as set forth in the financial statements referred to in subsection (e) above, the Borrower and its Subsidiaries have no material liability with respect to "expected post retirement benefit obligations" within the meaning of Statement of Financial Accounting Standards No. 106.

(m) The Borrower is not engaged in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulation U issued by the Board of Governors of the Federal Reserve System), and no proceeds of any Credit Extension will be used to purchase or carry any margin stock or to extend credit to others for the purpose of purchasing or carrying any margin stock; and after applying the proceeds of each Credit Extension hereunder, margin stock (within the meaning of Regulation U issued by the Board of Governors of the Federal Reserve System) constitutes less than twenty-five percent (25%) of the value of those assets of the Borrower and its Subsidiaries which are subject to any limitation on sale or pledge, or any other restriction hereunder.

(n) Neither the Borrower nor any of its Subsidiaries is, or after the making of any Credit Extension or the application of the proceeds or repayment thereof, or the consummation of any of the other transactions contemplated hereby, will be, required to be registered as an "investment company", or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company" (within the meaning of the Investment Company Act of 1940, as amended).

(o) The Borrower has implemented and maintains in effect policies and procedures designed to ensure, in its reasonable judgment, compliance in all material respects by the Borrower, its Subsidiaries and their respective directors, officers, employees and agents with Anti-Corruption Laws, Anti-Money Laundering Laws and applicable Sanctions, and the Borrower, its Subsidiaries and their respective officers and employees and to the knowledge of the Borrower its directors and agents, are in compliance with Anti-Corruption Laws and applicable Sanctions in all material respects. None of (a) the Borrower, any Subsidiary of the Borrower or, to the knowledge of the Borrower or such Subsidiary, any of their respective directors, officers or employees, or (b) to the knowledge of the Borrower, any agent of the Borrower or any Subsidiary that will act in any capacity in connection with or benefit from the credit facility established hereby, is a Sanctioned Person. No Borrowing, use of proceeds or other transaction contemplated by this Agreement will violate Anti-Corruption Laws or applicable Sanctions.

(p) Neither the Borrower nor any Subsidiary of the Borrower (i) is under investigation by any Governmental Authority for, or has been charged with, or convicted of, money laundering, drug trafficking, terrorist-related activities, or any violation under any laws or regulations relating to money laundering or terrorist financing, including the Bank Secrecy Act, 31 U.S.C. §§5311 et. seq. (the "Anti-Money Laundering Laws"), (ii) has been assessed civil penalties under any Anti-Money Laundering Laws, or (iii) has had any of its funds seized or forfeited in an action under any Anti-Money Laundering Laws.

(q) The Borrower is not an Affected Financial Institution.

(r) As of the Effective Date, the information included in the Beneficial Ownership Certification provided on or prior to the Effective Date to any Lender in connection with this Agreement is true and correct in all respects.

ARTICLE V: COVENANTS OF THE BORROWER

SECTION 5.01 Affirmative Covenants. So long as any Outstanding Credit Exposure shall remain unpaid or any Lender shall have any Commitment hereunder, the Borrower will:

(a) Compliance with Laws, Etc. Comply, and cause each of its Subsidiaries to comply with all applicable laws, rules, regulations and orders, such compliance to include, without limitation, compliance with ERISA and Environmental Laws, except where the failure to do so, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect.

(b) Payment of Taxes, Etc. Pay and discharge, and cause each of its Subsidiaries to pay and discharge, before the same shall become delinquent, all taxes, assessments and governmental charges or levies imposed upon it or upon its property that, if not paid, could be reasonably expected to result in a Material Adverse Effect; provided, however, that neither the Borrower nor any of its Subsidiaries shall be required to pay or discharge any such tax, assessment, charge or claim that is being contested in good faith and by proper proceedings and as to which appropriate reserves are being maintained, unless and until any Lien resulting therefrom attaches to its property and becomes enforceable against its other creditors.

(c) Maintenance of Insurance. Maintain, and cause each of its Subsidiaries to maintain, insurance with responsible and reputable insurance companies or associations in such amounts and covering such risks as is usually carried by companies engaged in similar businesses and owning similar properties (including customary self-insurance) in the same general areas in which the Borrower or such Subsidiary operates.

(d) Preservation of Corporate Existence, Etc. Preserve and maintain its corporate existence, rights (charter and statutory) and franchises; provided, however, that the Borrower shall not be required to preserve any right or franchise if the Board of Directors of the Borrower or such Subsidiary shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Borrower and that the loss thereof is not disadvantageous in any material respect to the Borrower and its Subsidiaries taken as a whole or the ability of the Borrower to meet its obligations hereunder.

(e) Visitation Rights. At any reasonable time and from time to time, permit the Agent or any of the Lenders or any agents or representatives thereof, to examine and make copies of and abstracts from the records and books of account of, and visit the properties of, the Borrower and any of its Significant Subsidiaries, and to discuss the affairs, finances and accounts

of the Borrower and any of its Significant Subsidiaries with any of their officers or directors and with their independent certified public accountants.

(f) Keeping of Books. Keep, and cause each of its Significant Subsidiaries to keep, proper books of record and account, in which full and correct entries shall be made of all financial transactions and the assets and business of the Borrower and each such Subsidiary in accordance with generally accepted accounting principles in effect from time to time.

(g) Maintenance of Properties, Etc. Subject to clause (d) above, maintain and preserve, and cause each of its Significant Subsidiaries to maintain and preserve, all of their respective properties that are used or useful in the conduct of their respective businesses in good working order and condition, ordinary wear and tear excepted.

(h) Reporting Requirements. Furnish to the Agent (and the Agent shall use commercially reasonable efforts to promptly furnish copies thereof to the Lenders via IntraLinks or other similar password-protected restricted internet site; or, in the case of clause (viii) below, to the applicable Lender):

(i) as soon as available and in any event within 65 days after the end of each of the first three quarters of each fiscal year of the Borrower, commencing with the fiscal quarter ending March 31, 2022, Consolidated balance sheet of the Borrower and its Consolidated Subsidiaries as of the end of such quarter and Consolidated statements of income and cash flows of the Borrower and its Subsidiaries for the period commencing at the end of the previous fiscal year and ending with the end of such quarter;

(ii) as soon as available and in any event within 115 days after the end of each fiscal year of the Borrower commencing with the fiscal year ending December 31, 2021, (A) to the extent provided to shareholders of the Borrower, a copy of the annual report to such shareholders for such year for the Borrower and its Consolidated Subsidiaries, (B) the Consolidated balance sheet of the Borrower and its Consolidated Subsidiaries as of the end of such fiscal year and (C) the Consolidated statements of income and cash flows of the Borrower and its Subsidiaries for such fiscal year, in each case accompanied by an opinion by PricewaterhouseCoopers LLP or any other independent public accounting firms which (x) as of the date of this Agreement is one of the "big four" accounting firms or (y) is reasonably acceptable to the Required Lenders;

(iii) together with the financial statements required under clauses (i) or (ii) above, a compliance certificate in substantially the form of Exhibit F signed by a Financial Officer of the Borrower showing the then current information and calculations necessary to determine compliance with this Agreement and stating that no Event of Default or Default exists, or if any Event of Default or Default exists, stating the nature and status thereof;

(iv) as soon as possible and in any event within five days after the occurrence of each Default continuing on the date of such statement, a statement of a Financial

Officer of the Borrower setting forth details of such Default and the action that the Borrower has taken and proposes to take with respect thereto;

(v) reasonably promptly after the sending or filing thereof copies of all reports and registration statements that the Borrower or any Subsidiary filed with the Securities and Exchange Commission or any national securities exchange;

(vi) such other information respecting the Borrower or any of its Subsidiaries as any Lender through the Agent may from time to time reasonably request;

(vii) promptly, but within five (5) Business Days of such change, written notice to the Agent of each change to the Borrower's Moody's Rating and S&P Rating; and

(viii) promptly, any change in the information provided in the Beneficial Ownership Certification delivered to any Lender that would result in a change to the list of beneficial owners identified in such certification.

Information required to be delivered pursuant to clauses (i), (ii) or (v) above shall be deemed to have been delivered on the date on which the Borrower has posted such information on the Borrower's website on the Internet at www.dteenergy.com (or any successor or replacement website thereof), which website includes an option to subscribe to a free service alerting subscribers by email of new Securities and Exchange Commission filings at http://phx.corporate-ir.net/phoenix.zhtml?c=68233&p=irol-alerts, or at www.sec.gov or at another website identified in a notice to the Lenders and accessible by the Lenders without charge.

(i) Sanctions and Anti-Corruption Laws. Maintain in effect and enforce policies and procedures designed to ensure, in its reasonable judgment, compliance in all material respects by the Borrower, its Subsidiaries and their respective directors, officers, employees and agents with Anti-Corruption Laws, Anti-Money Laundering Laws and applicable Sanctions.

SECTION 5.02 Negative Covenants. At all times on and after the Effective Date so long as any Outstanding Credit Exposure shall remain unpaid or any Lender shall have any Commitment hereunder, the Borrower will not:

(a) Liens, Etc. Create or suffer to exist, or permit any Significant Subsidiary to create or suffer to exist, any Lien on or with respect to any shares of any class of equity securities (including, without limitation, Voting Stock) of any Significant Subsidiary, whether such shares are now owned or hereafter acquired.

(b) Debt. Create, incur, assume or suffer to exist any Debt except (i) Debt that is expressly or effectively *pari passu* with or expressly subordinated to the Debt of the Borrower hereunder, (ii) Nonrecourse Debt or (iii) other Debt incurred in the ordinary course of the Borrower's business up to an aggregate amount of $100,000,000.

(c) Mergers, Etc. (i) Merge or consolidate with or into, or (ii) consummate a Division as the Dividing Person with respect to, or convey, transfer, lease or otherwise dispose of

(whether in one transaction or in a series of transactions and whether effected pursuant to a Division or otherwise) all or substantially all of its assets (whether now owned or hereafter acquired) to, any Person, or permit any Significant Subsidiary to do so, except that (A) any Significant Subsidiary may merge, consolidate or consummate a Division with or into any other Significant Subsidiary, (B) any Significant Subsidiary may merge into or dispose of assets pursuant to a Division or otherwise to the Borrower, and (C) the Borrower may merge, consolidate or consummate a Division with or into any other Person so long as the Borrower shall be the surviving entity and has, after giving effect to such merger, consolidation or Division, senior unsecured Debt outstanding rated at least BBB- by S&P and Baa3 by Moody's; provided, in each case, that no Default shall have occurred and be continuing at the time of such proposed transaction or would result therefrom.

(d) Change in Nature of Business. Make, or permit any of its Significant Subsidiaries to make, any material change in the nature of its business as carried on the date hereof, other than as disclosed or contemplated in the SEC Reports.

(e) Accounting Changes. Make or permit any change in accounting policies or reporting practices, except as required or permitted by generally accepted accounting principles; or permit any of its Subsidiaries to make or permit any change in accounting policies or reporting practices if, as a result of such change, the Borrower shall fail to maintain a system of accounting established and administered in accordance with generally accepted accounting principles.

(f) Sanctions and Anti-Corruption Laws. Request any Borrowing or other Credit Extension, and the Borrower shall not use, and shall procure that its Subsidiaries and its or their respective directors, officers, employees and agents shall not use, the proceeds of any Borrowing or other Credit Extension (A) in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any Person in violation of any Anti-Corruption Laws, (B) for the purpose of funding, financing or facilitating any activities, business or transaction of or with any Sanctioned Person, or in any Sanctioned Country, or (C) in any manner that would result in the violation of any Sanctions applicable to any party hereto.

ARTICLE VI: EVENTS OF DEFAULT

SECTION 6.01 Events of Default. If any of the following events ("Events of Default") shall occur and be continuing:

(a) The Borrower shall fail to pay any principal of any Revolving Credit Advance when the same becomes due and payable; or the Borrower shall fail to pay any Reimbursement Obligation within one Business Day after the same becomes due and payable; or the Borrower shall fail to pay any interest on any Outstanding Credit Exposure or make any other payment of fees or other amounts payable under this Agreement or any Note within three Business Days after the same becomes due and payable; or

(b) Any representation or warranty made by the Borrower herein, by the Borrower (or any of its officers) in connection with this Agreement shall prove to have been incorrect in any material respect when made; or

(c) (i) The Borrower shall fail to perform or observe any term, covenant or agreement contained in Section 2.18(c)(ii), 5.01(d), (e) or (h) or 5.02, or (ii) the Borrower shall fail to perform or observe any other term, covenant or agreement contained in any Loan Document on its part to be performed or observed if such failure shall remain unremedied for 30 days after written notice thereof shall have been given to the Borrower by the Agent or any Lender; or

(d) The Borrower or any of its Significant Subsidiaries shall fail to pay any principal of or premium or interest on any Debt that is outstanding in a principal or notional amount of at least $100,000,000 in the aggregate (but excluding Debt outstanding hereunder and Nonrecourse Debt) of the Borrower or such Significant Subsidiary (as the case may be), when the same becomes due and payable (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise), and such failure shall continue after the applicable grace period, if any, specified in the agreement or instrument relating to such Debt; or any other event shall occur or condition shall exist under any agreement or instrument relating to any such Debt and shall continue after the applicable grace period, if any, specified in such agreement or instrument, if the effect of such event or condition is to accelerate, or to permit the acceleration of, the maturity of such Debt; or any such Debt shall be declared to be due and payable, or required to be prepaid or redeemed (other than by a regularly scheduled required prepayment or redemption), purchased or defeased, or an offer to prepay, redeem, purchase or defease such Debt shall be required to be made, in each case prior to the stated maturity thereof; or

(e) The Borrower or any of its Significant Subsidiaries shall generally not pay its debts as such debts become due, or shall admit in writing its inability to pay its debts generally, or shall make a general assignment for the benefit of creditors; or any proceeding shall be instituted by or against the Borrower or any of its Significant Subsidiaries seeking to adjudicate it a bankrupt or insolvent, or seeking liquidation, winding up, reorganization, arrangement, adjustment, protection, relief, or composition of it or its debts under any law relating to bankruptcy, insolvency or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian or other similar official for it or for any substantial part of its property and, in the case of any such proceeding instituted against it (but not instituted by it), either such proceeding shall remain undismissed or unstayed for a period of 60 days, or any of the actions sought in such proceeding (including, without limitation, the entry of an order for relief against, or the appointment of a receiver, trustee, custodian or other similar official for, it or for any substantial part of its property) shall occur; or the Borrower or any of its Significant Subsidiaries shall take any corporate action to authorize any of the actions set forth above in this subsection (e); or

(f) Any judgment or order for the payment of money, individually or in the aggregate, in excess of $100,000,000 shall be rendered against the Borrower or any of its Significant Subsidiaries and either (i) enforcement proceedings shall have been commenced by any creditor upon such judgment or order or (ii) there shall be any period of 30 consecutive days

during which a stay of enforcement of such judgment or order, by reason of a pending appeal or otherwise, shall not be in effect; or

(g) (i) any Person or "group" (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) shall either (A) acquire beneficial ownership (within the meaning of Rule 13d-3 of the Exchange Act) of 50% or more of Voting Stock of the Borrower, or (B) obtain the power (whether or not exercised) to elect a majority of the Borrower's directors, or (ii) the Borrower shall at any time cease to hold directly or indirectly 100% of the Voting Stock of DTE Electric and DTE Gas; or

(h) The Borrower or any of its ERISA Affiliates shall incur, or, in the reasonable opinion of the Required Lenders, shall be reasonably likely to incur liability in excess of $50,000,000 individually or in the aggregate as a result of one or more of the following: (i) the occurrence of any ERISA Event; (ii) the partial or complete withdrawal of the Borrower or any of its ERISA Affiliates from a Multiemployer Plan; or (iii) the reorganization or termination of a Multiemployer Plan; or

(i) The Borrower and its Subsidiaries, on a Consolidated basis, shall, as of the last day of any fiscal quarter of the Borrower, have a ratio of (a) Total Funded Debt to (b) Capitalization in excess of (i) solely to the extent the Midstream Business Spin-Off shall have been consummated prior to the last day of such fiscal quarter, as of the last day of any fiscal quarter of the Borrower ending during the period commencing on September 30, 2021 to and including December 31, 2022, 0.70:1 or (ii) as of the last day of any other fiscal quarter of the Borrower, 0.65:1; provided that for purposes of calculating the foregoing ratio as of the last day of any fiscal quarter other than any fiscal quarter ending on June 30, "Total Funded Debt" for purposes of clauses (a) and (b) above shall be calculated exclusive of all Excluded Short-Term Debt outstanding as of such date;

(j) Any provision of any of the Loan Documents after delivery thereof pursuant to Section 3.01 shall for any reason cease to be valid and binding on or enforceable against the Borrower, or the Borrower shall so state in writing;

then, and in any such event, the Agent (i) shall at the request, or may with the consent, of the Required Lenders, by notice to the Borrower, declare the obligation of each Lender and each LC Issuer to make Credit Extensions to be terminated, whereupon the same shall forthwith terminate, (ii) shall at the request, or may with the consent, of the Required Lenders, by notice to the Borrower, declare the Aggregate Outstanding Credit Exposures (other than the undrawn stated amount under all Facility LCs outstanding at such time), all interest thereon and all other amounts payable under this Agreement to be forthwith due and payable, whereupon the Aggregate Outstanding Credit Exposures (other than the undrawn stated amount under all Facility LCs outstanding at such time), all such interest and all such amounts shall become and be forthwith due and payable, without presentment, demand, protest or further notice of any kind, all of which are hereby expressly waived by the Borrower and (iii) shall at the request, or may with the consent, of the Required Lenders upon notice to the Borrower and in addition to the continuing right to demand payment of all amounts payable under this Agreement, make demand on the Borrower to pay, and the Borrower will, forthwith upon such demand and without any

further notice or act, pay to the Agent the Collateral Shortfall Amount, which funds shall be deposited in the Facility LC Collateral Account; provided, however, that in the event of an actual or deemed entry of an order for relief with respect to the Borrower under the Federal Bankruptcy Code, (A) the obligation of each Lender and each LC Issuer to make Credit Extensions shall automatically be terminated, (B) the Aggregate Outstanding Credit Exposures (other than the undrawn stated amount under all Facility LCs outstanding at such time), all such interest and all such amounts shall automatically become and be due and payable, without presentment, demand, protest or any notice of any kind, all of which are hereby expressly waived by the Borrower, and (C) the Borrower shall pay to the Agent the Collateral Shortfall Amount, which funds shall be held in the Facility LC Collateral Account. If at any time while any Default is continuing, the Agent determines that the Collateral Shortfall Amount at such time is greater than zero, the Agent may make demand on the Borrower to pay, and the Borrower will, forthwith upon such demand and without any further notice or act, pay to the Agent the Collateral Shortfall Amount, which funds shall be deposited in the Facility LC Collateral Account. The Agent may at any time or from time to time after funds are deposited in the Facility LC Collateral Account, apply such funds to the payment of the Obligations and any other amounts as shall from time to time have become due and payable by the Borrower to the Lenders or the LC Issuers under the Loan Documents. At any time while any Default is continuing, neither the Borrower nor any Person claiming on behalf of or through the Borrower shall have any right to withdraw any of the funds held in the Facility LC Collateral Account. After all of the Obligations have been indefeasibly paid in full and the aggregate Commitments have been terminated, any funds remaining in the Facility LC Collateral Account shall be returned by the Agent to the Borrower or paid to whomever may be legally entitled thereto at such time.

ARTICLE VII: THE AGENT

SECTION 7.01 Authorization and Action. Each Lender hereby appoints and authorizes the Agent to take such action as agent on its behalf and to exercise such powers and discretion under this Agreement as are delegated to the Agent by the terms hereof, together with such powers and discretion as are reasonably incidental thereto. As to any matters not expressly provided for by this Agreement (including, without limitation, enforcement or collection of the Outstanding Credit Exposures), the Agent shall not be required to exercise any discretion or take any action, but shall be required to act or to refrain from acting (and shall be fully protected in so acting or refraining from acting) upon the instructions of the Required Lenders (or all of the Lenders to the extent required by the terms of this Agreement), and such instructions shall be binding upon all Lenders and all holders of Outstanding Credit Exposures; provided, however, that the Agent shall not be required to take any action that exposes the Agent to personal liability or that is contrary to this Agreement or applicable law. The Agent agrees to give to each Lender prompt notice of each notice given to it by the Borrower pursuant to the terms of this Agreement.

SECTION 7.02 Agent's Reliance, Etc. Neither the Agent nor any of its directors, officers, agents or employees shall be liable for any action taken or omitted to be taken by it or them under or in connection with this Agreement, except for its or their own gross negligence or willful misconduct as determined in a final, non-appealable judgment by a court of

competent jurisdiction. Without limitation of the generality of the foregoing, the Agent: (i) may treat the payee in respect of any Outstanding Credit Exposure as the owner thereof until the Agent receives and accepts an Assignment and Assumption entered into by the Lender that is the payee in respect of such Outstanding Credit Exposure, as assignor, and an Eligible Assignee, as assignee, as provided in Section 8.07; (ii) may consult with legal counsel (including counsel for the Borrower), independent public accountants and other experts selected by it and shall not be liable for any action taken or omitted to be taken in good faith by it in accordance with the advice of such counsel, accountants or experts; (iii) makes no warranty or representation to any Lender and shall not be responsible to any Lender for any statements, warranties or representations (whether written or oral) made in or in connection with this Agreement; (iv) shall not have any duty to ascertain or to inquire as to the performance or observance of any of the terms, covenants or conditions of this Agreement on the part of the Borrower or to inspect the property (including the books and records) of the Borrower; (v) shall not be responsible to any Lender for the due execution, legality, validity, enforceability, genuineness, sufficiency or value of, or the perfection or priority of any lien or security interest created or purported to be created under or in connection with, any Loan Document or any other instrument or document furnished pursuant hereto; and (vi) shall incur no liability under or in respect of this Agreement by acting upon any notice, consent, certificate or other instrument or writing (which may be by telecopier, telegram or telex) believed by it to be genuine and signed or sent by the proper party or parties.

SECTION 7.03 JPMorgan and Affiliates. With respect to its Commitment, the Credit Extensions made by it and any Note issued to it, JPMorgan shall have the same rights and powers under this Agreement as any other Lender and may exercise the same as though it were not the Agent; and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated, include JPMorgan in its individual capacity. JPMorgan and its Affiliates may accept deposits from, lend money to, act as trustee under indentures of, accept investment banking engagements from and generally engage in any kind of business with, the Borrower, any of its Subsidiaries and any Person who may do business with or own securities of the Borrower or any such Subsidiary, all as if JPMorgan were not the Agent and without any duty to account therefor to the Lenders.

SECTION 7.04 Lender Credit Decision. Each Lender acknowledges that it has, independently and without reliance upon the Agent or any other Lender and based on the financial statements referred to in Section 4.01 and such other documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Agreement. Each Lender also acknowledges that it will, independently and without reliance upon the Agent or any other Lender and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under this Agreement.

SECTION 7.05 Indemnification. The Lenders agree to indemnify the Agent (to the extent not reimbursed by the Borrower), solely in its capacity as Agent hereunder, ratably according to the respective principal amounts of their respective Outstanding Credit Exposures (or if the Aggregate Outstanding Credit Exposures are zero or if no Credit Extensions are owing to Persons that are not Lenders, ratably according to the respective amounts of their

Commitments), from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever that may be imposed on, incurred by, or asserted against the Agent in any way relating to or arising out of any Loan Document or any action taken or omitted by the Agent under any Loan Document, provided that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements resulting from the Agent's gross negligence or willful misconduct as determined in a final, non-appealable judgment by a court of competent jurisdiction. Without limitation of the foregoing, each Lender agrees to reimburse the Agent promptly upon demand for its ratable share of any out-of-pocket expenses (including reasonable counsel fees) incurred by the Agent, solely in its capacity as Agent, in connection with the preparation, execution, delivery, administration, modification, amendment or enforcement (whether through negotiations, legal proceedings or otherwise) of, or legal advice in respect of rights or responsibilities under, any Loan Document, to the extent that the Agent is not reimbursed for such expenses by the Borrower.

SECTION 7.06 Successor Agent. The Agent may resign at any time by giving written notice thereof to the Lenders and the Borrower. Upon any such resignation, the Required Lenders shall have the right to appoint a successor Agent. If no successor Agent shall have been so appointed by the Required Lenders, and shall have accepted such appointment, within 30 days after the retiring Agent's giving of notice of resignation, then the retiring Agent may, on behalf of the Lenders, appoint a successor Agent, which shall be a commercial bank organized under the laws of the United States of America or of any State thereof and having a combined capital and surplus of at least $500,000,000. Upon the acceptance of any appointment as Agent hereunder by a successor Agent, such successor Agent shall thereupon succeed to and become vested with all the rights, powers, discretion, privileges and duties of the retiring Agent, and the retiring Agent shall be discharged from its duties and obligations under this Agreement. After any retiring Agent's resignation, the provisions of this Article VII shall inure to its benefit as to any actions taken or omitted to be taken by it while it was Agent under this Agreement.

SECTION 7.07 Certain Payments.

(a) Each Lender hereby agrees that (x) if the Agent notifies such Lender that the Agent has determined in its sole discretion that any funds received by such Lender from the Agent or any of its Affiliates (whether as a payment, prepayment or repayment of principal, interest, fees or otherwise; individually and collectively, a "Payment") were erroneously transmitted to such Lender (whether or not known to such Lender), and demands the return of such Payment (or a portion thereof), such Lender shall promptly, but in no event later than one Business Day thereafter, return to the Agent the amount of any such Payment (or portion thereof) as to which such a demand was made in same day funds, together with interest thereon in respect of each day from and including the date such Payment (or portion thereof) was received by such Lender to the date such amount is repaid to the Agent at the greater of the NYFRB Rate and a rate determined by the Agent in accordance with banking industry rules on interbank compensation from time to time in effect, and (y) to the extent permitted by applicable law, such Lender shall not assert, and hereby waives, as to the Agent, any claim, counterclaim, defense or right of set-off or recoupment with respect to any demand, claim or counterclaim by the Agent

for the return of any Payments received, including without limitation any defense based on "discharge for value" or any similar doctrine. A notice of the Agent to any Lender under this Section 7.07 shall be conclusive, absent manifest error.

(b) Each Lender hereby further agrees that if it receives a Payment from the Agent or any of its Affiliates (x) that is in a different amount than, or on a different date from, that specified in a notice of payment sent by the Agent (or any of its Affiliates) with respect to such Payment (a "Payment Notice") or (y) that was not preceded or accompanied by a Payment Notice, it shall be on notice, in each such case, that an error has been made with respect to such Payment. Each Lender agrees that, in each such case, or if it otherwise becomes aware a Payment (or portion thereof) may have been sent in error, such Lender shall promptly notify the Agent of such occurrence and, upon demand from the Agent, it shall promptly, but in no event later than one Business Day thereafter, return to the Agent the amount of any such Payment (or portion thereof) as to which such a demand was made in same day funds, together with interest thereon in respect of each day from and including the date such Payment (or portion thereof) was received by such Lender to the date such amount is repaid to the Agent at the greater of the NYFRB Rate and a rate determined by the Agent in accordance with banking industry rules on interbank compensation from time to time in effect.

(c) The Borrower hereby agrees that (x) in the event an erroneous Payment (or portion thereof) are not recovered from any Lender that has received such Payment (or portion thereof) for any reason, the Agent shall be subrogated to all the rights of such Lender with respect to such amount and (y) an erroneous Payment shall not pay, prepay, repay, discharge or otherwise satisfy any Obligations owed by the Borrower, except, in each case, to the extent such erroneous Payment is, and solely with respect to the amount of such erroneous Payment that is, comprised of funds of the Borrower.

(d) Each party's obligations under this Section 7.07 shall survive the resignation or replacement of the Agent or any transfer of rights or obligations by, or the replacement of, a Lender, the termination of the Commitments or the repayment, satisfaction or discharge of all Obligations under any Loan Document.

ARTICLE VIII: MISCELLANEOUS

SECTION 8.01 Amendments, Etc. No amendment or waiver of any provision of this Agreement or the Notes, nor consent to any departure by the Borrower therefrom, shall in any event be effective unless the same shall be in writing and signed by the Required Lenders, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given; provided, however, that no amendment, waiver or consent shall, unless in writing and signed by all the Lenders affected thereby, do any of the following: (a) waive any of the conditions specified in Section 3.01, (b) increase or extend the Commitments of the Lenders or subject the Lenders to any additional obligations, (c) reduce the principal of, or rate of interest on, the Outstanding Credit Exposures or any fees or other amounts payable hereunder, (d) postpone any date fixed for any payment of principal of, or interest on, the Outstanding Credit Exposures or any fees or other amounts payable hereunder, (e) change the percentage of the Commitments or of the aggregate unpaid principal amount of the Outstanding

Credit Exposures, or the number of Lenders, that shall be required for the Lenders or any of them to take any action hereunder (including, without limitation, amending the definition of "Required Lenders"), (f) extend the expiry date of any Facility LC to a date after the Termination Date or forgive all or any portion of any Reimbursement Obligation, (g) alter the manner in which payments or prepayments of principal, interest or other amounts hereunder shall be applied or shared as among the Lenders or Types of Revolving Credit Advances, (h) amend any provisions hereunder relating to the pro rata treatment of the Lenders, or (i) amend this Section 8.01; and provided further that no amendment, waiver or consent shall, unless in writing and signed by the Agent in addition to the Lenders required above to take such action, affect the rights or duties of the Agent under this Agreement or any Note; and provided further that no amendment, waiver or consent shall, unless in writing and signed by the applicable LC Issuer in addition to the Lenders required above to take such action, affect the rights and duties of such LC Issuer under this Agreement or any Facility LC.

If the Agent and the Borrower acting together identify any ambiguity, omission, mistake, typographical error or other defect in any provision of this Agreement or any other Loan Document, then the Agent and the Borrower shall be permitted to amend, modify or supplement such provision to cure such ambiguity, omission, mistake typographical error or other defect, and such amendment shall become effective without any further action or consent of any other party to this Agreement.

SECTION 8.02 Notices, Etc.

(a) All notices and other communications provided for hereunder shall be in writing or confirmed in writing (including telecopier communication) and mailed, telecopied or delivered, if to the Borrower, at its address at One Energy Plaza, Detroit, MI 48226, Attention: Treasurer; if to any LC Issuer or any Lender, at its Domestic Lending Office; and if to the Agent (including for compliance reporting), at its address at JPMorgan Chase Bank, N.A., Loan and Agency Services Group, 10 S. Dearborn St., Floor L2, Chicago, Illinois, 60603-2003, Attention: Charitra Shetty (E-mail: charitra.shetty@chase.com, jpm.agency.cri@jpmorgan.com; Tel: (312) 732-2007), with a copy to Nancy R. Barwig, Executive Director, Wholesale Credit Risk, Energy, JPMorgan Chase Bank, N.A., 8181 Communications Pkwy, Plano, TX 75024 (E-mail: nancy.r.barwig@jpmorgan.com; Tel: (972) 324-1721; or, as to the Borrower or the Agent, at such other address as shall be designated by such party in a written notice to the other parties and, as to each other party, at such other address as shall be designated by such party in a written notice to the Borrower and the Agent. All such notices and other communications (i) sent by hand or overnight courier service, or mailed by certified or registered mail, shall be deemed to have been given when received or (ii) sent by telecopier shall be deemed to have been given when sent, provided that if not given during normal business hours for the recipient, shall be deemed to have been given at the opening of business on the next Business Day for the recipient. Notwithstanding the foregoing, all such notices and communications to the Agent pursuant to Article II, III or VII shall not be deemed to have been given until received by the Agent. Delivery by telecopier of an executed counterpart of any amendment or waiver of any provision of this Agreement or the Notes or of any Exhibit hereto to be executed and delivered hereunder shall be effective as delivery of a manually executed counterpart thereof.

(b) (i) Except as otherwise provided in Section 5.01(h), the Borrower shall provide to the Agent all information, documents and other materials that it is obligated to furnish to the Agent pursuant to this Agreement and the other Loan Documents, including, without limitation, all notices, requests, financial statements, financial and other reports, certificates and other information materials, but excluding any such communication that (i) relates to a Notice of Borrowing or other request for a new, or a conversion of an existing, Borrowing or other Credit Extension (including any election of an interest rate or Interest Period relating thereto), (ii) relates to the payment of any principal or other amount due hereunder prior to the scheduled date therefor, (iii) provides notice of any Default or Event of Default hereunder or (iv) is required to be delivered to satisfy any condition precedent to the effectiveness of this Agreement and/or any Borrowing or other Credit Extension hereunder (all such non-excluded communications being referred to herein collectively as "Communications"), by transmitting the Communications in an electronic/soft medium in a format acceptable to the Agent to nancy.r.barwig@jpmorgan.com and ayush.mishra@jpmorgan.com, or such other electronic mail address as the Agent shall identify to the Borrower. In addition, the Borrower shall continue to provide the Communications to the Agent in the manner specified in this Agreement but only to the extent requested by the Agent. The Borrower further agrees that the Agent may make the Communications available to the Lenders by posting the Communications on Intralinks, or a substantially similar electronic transmission system mutually agreeable to the Agent and the Borrower (the "Platform"). Nothing in this Section 8.02(b) shall prejudice the right of the Agent or any Lender to give any notice or other communication pursuant hereto or to any other Loan Document in any other manner specified herein or therein.

(ii) The Agent agrees that the receipt of the Communications by the Agent at its e-mail address set forth in clause (i) above shall constitute effective delivery of the Communications to the Agent for purposes of each Loan Document. The Borrower agrees that e-mail notice to it (at the address provided pursuant to the next sentence and deemed delivered as provided in clause (iii) below) specifying that Communications have been posted to the Platform shall constitute effective delivery of such Communications to it for purposes of the Loan Documents. The Borrower agrees (A) to notify the Agent in writing (including by electronic communication) from time to time to ensure that the Agent has on record an effective e-mail address for the Borrower to which the foregoing notices may be sent by electronic transmission and (B) that the foregoing notices may be sent to such e-mail address. Each Lender agrees that e-mail notice to it (at the address provided pursuant to the next sentence and deemed delivered as provided in clause (iii) below) specifying that the Communications have been posted to the Platform shall constitute effective delivery of the Communications to such Lender for purposes of the Loan Documents. Each Lender agrees (A) to notify the Agent in writing (including by electronic communication) from time to time of such Lender's e-mail address to which the foregoing notice may be sent by electronic transmission and (B) that the foregoing notice may be sent to such e-mail address.

(iii) Each party hereto agrees that any electronic communication referred to in this clause (b) shall be deemed delivered upon the posting of a record of such Communication as "sent" in the e-mail system of the sending party or, in the case of any

such Communication to the Agent or any Lender, upon the posting of a record of such Communication as "received" in the e-mail system of the Agent or such Lender; provided, however, that if such Communication is received by the Agent or such Lender after the normal business hours of the Agent or such Lender, such Communication shall be deemed delivered at the opening of business on the next Business Day for the Agent or such Lender; provided, further, that in the event that the Agent's or such Lender's e-mail system shall be unavailable for receipt of any Communication, Borrower may deliver such Communication to the Agent or such Lender in a manner mutually agreeable to the Agent or such Lender, as applicable, and the Borrower.

(iv) The parties hereto acknowledge and agree that the distribution of the Communications and other material through an electronic medium is not necessarily secure and that there are confidentiality and other risks associated with such distribution. EACH OF THE PARTIES HERETO ACKNOWLEDGES AND AGREES AS FOLLOWS: (A) THE PLATFORM IS PROVIDED "AS IS" AND "AS AVAILABLE"; (B) THE AGENT PARTIES DO NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE COMMUNICATIONS, OR THE ADEQUACY OF THE PLATFORM AND EXPRESSLY DISCLAIM LIABILITY FOR ERRORS OR OMISSIONS IN THE COMMUNICATIONS; (C) NO WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF THIRD PARTY RIGHTS OR FREEDOM FROM VIRUSES OR OTHER CODE DEFECTS, IS MADE BY THE AGENT PARTIES IN CONNECTION WITH THE COMMUNICATIONS OR THE PLATFORM; AND (D) IN NO EVENT SHALL THE AGENT OR ANY OF ITS AFFILIATES OR ANY OF THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, ADVISORS OR REPRESENTATIVES (COLLECTIVELY, THE "AGENT PARTIES") HAVE ANY LIABILITY TO THE BORROWER, ANY LENDER OR ANY OTHER PERSON OR ENTITY FOR DAMAGES OF ANY KIND, INCLUDING, WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES OR EXPENSES (WHETHER IN TORT, CONTRACT OR OTHERWISE) ARISING OUT OF THE BORROWER'S OR THE AGENT'S TRANSMISSION OF COMMUNICATIONS THROUGH THE INTERNET, EXCEPT TO THE EXTENT THE LIABILITY OF ANY AGENT PARTY IS FOUND IN A FINAL NON-APPEALABLE JUDGMENT BY A COURT OF COMPETENT JURISDICTION TO HAVE RESULTED PRIMARILY FROM SUCH AGENT PARTY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

(v) This clause (b) shall terminate on the date that neither JPMorgan nor any of its Affiliates is the Agent under this Agreement.

SECTION 8.03 No Waiver; Remedies. No failure on the part of any Lender or the Agent to exercise, and no delay in exercising, any right hereunder or under any Note shall operate as a waiver thereof; nor shall any single or partial exercise of any such right

preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided are cumulative and not exclusive of any remedies provided by law.

SECTION 8.04 Costs and Expenses; Damage Waiver. (a) The Borrower agrees to pay on demand, upon presentation of a statement of account and absent manifest error, all reasonable costs and reasonable expenses of the Agent in connection with the preparation, execution, delivery, administration, modification and amendment of the Loan Document and the other documents to be delivered hereunder and thereunder, including, without limitation, (A) all due diligence, syndication (including printing, distribution and bank meetings), transportation, computer, duplication, appraisal, consultant, and audit expenses, and (B) the reasonable fees and reasonable expenses of counsel for the Agent with respect thereto and with respect to advising the Agent as to its rights and responsibilities under the Loan Documents. The Borrower further agrees to pay on demand (i) all reasonable out-of-pocket expenses incurred by the LC Issuers in connection with the issuance or Modification of and draws under Facility LCs, and (ii) all reasonable costs and reasonable expenses of the Agent, each LC Issuer and the Lenders, if any (including, without limitation, reasonable internal and external counsel fees and expenses, provided such fees and expenses are not duplicative), in connection with the "workout", restructuring or enforcement (whether through negotiations, legal proceedings or otherwise) of the Loan Documents and the other documents to be delivered hereunder, including, without limitation, reasonable fees and expenses of counsel for the Agent, each LC Issuer and each Lender in connection with the enforcement of rights under this Section 8.04(a).

(b) The Borrower agrees to indemnify, to the extent legally permissible, and hold harmless the Agent, each LC Issuer and each Lender and each of their Related Parties (each, an "Indemnified Party") from and against any and all claims, damages, losses, liabilities and expenses (including, without limitation, reasonable fees and expenses of counsel) that may be incurred by or asserted or awarded against any Indemnified Party, in each case arising out of or in connection with or by reason of, or in connection with the preparation for a defense of, any investigation, litigation or proceeding arising out of, related to or in connection with (i) the Loan Documents, any Facility LC, any of the transactions contemplated herein or therein or the actual or proposed use of the proceeds of the Credit Extensions or (ii) the actual or alleged presence of Hazardous Materials on any property of the Borrower or any of its Subsidiaries or any Environmental Action relating in any way to the Borrower or any of its Subsidiaries, in each case whether or not such investigation, litigation or proceeding is brought by the Borrower, its directors, shareholders or creditors or an Indemnified Party or any other Person or any Indemnified Party is otherwise a party thereto and whether or not the transactions contemplated hereby are consummated, except to the extent such claim, damage, loss, liability or expense is found in a final, non-appealable judgment by a court of competent jurisdiction to have resulted from such Indemnified Party's gross negligence or willful misconduct; provided that upon receipt of notice of any such matter by a representative of the Agent, any LC Issuer or any Lender, as applicable, having primary responsibility for the relationship between the Borrower and the Agent, such LC Issuer or such Lender, as applicable, the Agent, such LC Issuer or such Lender, as applicable, shall promptly notify the Borrower to the extent permitted by applicable law. The Borrower shall have no liability for any settlement effected without its prior written consent, which consent shall not be unreasonably withheld or delayed. The Borrower also agrees

not to assert any claim against the Agent, any LC Issuer, any Lender, any of their Affiliates, or any of their respective directors, officers, employees, attorneys and agents, on any theory of liability, for special, indirect, consequential or punitive damages arising out of or otherwise relating to the Loan Documents, any Facility LC, any of the transactions contemplated herein or therein or the actual or proposed use of the proceeds of the Credit Extensions.

(c) If any payment or reallocation of principal of, or Conversion of, any Eurodollar Rate Advance is made by the Borrower to or for the account of a Lender other than on the last day of the Interest Period for such Revolving Credit Advance, as a result of a payment or Conversion pursuant to Section 2.07(d) or (e), 2.09 or 2.11(a), acceleration of the maturity of the Revolving Credit Advances pursuant to Section 6.01, or for any other reason, the Borrower shall, upon demand by such Lender (with a copy of such demand to the Agent), pay to the Agent for the account of such Lender any amounts required to compensate such Lender for any additional losses, costs or expenses that it may reasonably incur as a result of such payment or Conversion, including, without limitation, any loss (including loss of anticipated profits), cost or expense incurred by reason of the liquidation or reemployment of deposits or other funds acquired by any Lender to fund or maintain such Credit Extension.

(d) Without prejudice to the survival of any other agreement of the Borrower hereunder, the agreements and obligations of the Borrower contained in Sections 2.10, 2.13 and 8.04 shall survive the payment in full of principal, interest and all other amounts payable hereunder and under the Notes.

(e) To the extent permitted by applicable law, the Borrower shall not assert, and hereby waives, any claim against any Indemnified Party (i) for any damages arising from the use by others of information or other materials obtained through telecommunications, electronic or other information transmission systems (including the internet), or (ii) on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Agreement, any other Loan Document or any agreement or instrument contemplated hereby or thereby, any of the transactions contemplated in any Loan Document, any Revolving Credit Advance or Letter of Credit or the use of the proceeds thereof.

(f) To the extent permitted by applicable law, none of the Agent, the LC Issuers or the Lenders shall assert, and each of the Agent, the LC Issuers and the Lenders hereby waives, any claim against the Borrower on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Agreement, any other Loan Document or any agreement or instrument contemplated hereby or thereby, any of the transactions contemplated in any Loan Document, any Revolving Credit Advance or Letter of Credit or the use of the proceeds thereof; provided that, nothing contained in this paragraph shall limit the Borrower's reimbursement and indemnity obligations set forth in this Section 8.04. For the avoidance of doubt, all payments to which the Agent, the LC Issuers and the Lenders are expressly entitled under this Agreement, including without limitation amounts due under Sections 2.10, 2.11 and 2.13, if demanded in accordance with the terms of this Agreement, shall be deemed direct and not consequential damages.

SECTION 8.05 Right of Set-off. Upon (i) the occurrence and during the continuance of any Event of Default and (ii) the making of the request or the granting of the consent specified by Section 6.01 to authorize the Agent to declare the Aggregate Outstanding Credit Exposures due and payable pursuant to the provisions of Section 6.01, each Lender, each LC Issuer and each of its Affiliates is hereby authorized at any time and from time to time, to the fullest extent permitted by law, upon prior notice to the Agent (provided that, the failure to provide such notice shall not affect the validity of such set off), to set off and apply any and all deposits (general or special, time or demand, provisional or final) at any time held and other indebtedness at any time owing by such Lender, such LC Issuer or such Affiliate to or for the credit or the account of the Borrower against any and all of the obligations of the Borrower now or hereafter existing under the Loan Documents and any Note held by such Lender or such LC Issuer, whether or not such Lender or such LC Issuer shall have made any demand under this Agreement or such Note and although such obligations may be unmatured; provided that in the event that any Defaulting Lender shall exercise any such right of setoff, (x) all amounts so set off shall be paid over immediately to the Agent for further application in accordance with Section 2.18(f) and, pending such payment, shall be segregated by such Defaulting Lender from its other funds and deemed held in trust for the benefit of the Agent, the LC Issuers and the Lenders, and (y) the Defaulting Lender shall provide promptly to the Agent a statement describing in reasonable detail the indebtedness owing to such Defaulting Lender as to which it exercised such right of setoff. Each Lender and each LC Issuer agrees promptly to notify the Borrower after any such set-off and application, provided that the failure to give such notice shall not affect the validity of such set-off and application. The rights of each Lender, each LC Issuer and their respective Affiliates under this Section are in addition to other rights and remedies (including, without limitation, other rights of set-off) that such Lender, such LC Issuer and their respective Affiliates may have.

SECTION 8.06 Binding Effect. This Agreement shall become effective (other than Section 2.01, which shall only become effective upon satisfaction of the conditions precedent set forth in Section 3.01) when it shall have been executed by the Borrower and the Agent and when the Agent shall have been notified by each Initial Lender that such Initial Lender has executed it and thereafter shall be binding upon and inure to the benefit of the Borrower, the Agent, each LC Issuer and each Lender and their respective successors and assigns, except that the Borrower shall not have the right to assign its rights or obligations hereunder or any interest herein without the prior written consent of the Lenders to any Person.

SECTION 8.07 Assignments, Designations and Participations. (a) Each Lender may (i) with the prior consent of the Agent (which consent shall not be unreasonably withheld or delayed, and which consent shall not be required in the event of an assignment or grant pursuant to Sections 8.07(g) or (h) or an assignment to any other Lender, an Affiliate of a Lender, or an Approved Fund), (ii) for so long as no Default has occurred and is continuing, with the consent of the Borrower (which consent shall not be unreasonably withheld or delayed and provided, in any event, that the Borrower shall be deemed to have consented to any such assignment unless it shall object thereto by written notice to Agent within ten (10) days after having received notice thereof, and which consent shall not be required in the event of an assignment or grant pursuant to Sections 8.07(g) or (h) or an assignment to any other Lender, an Affiliate of a Lender, or an Approved Fund), and (iii) with the prior consent of the LC Issuers (which consent shall not be unreasonably withheld or delayed, and which consent shall not be

required in the event of an assignment or grant pursuant to Section 8.07(g) or (h)), assign to one or more Persons all or a portion of its rights and obligations under this Agreement (including, without limitation, all or a portion of its Commitment, the Outstanding Credit Exposures owed to it and any Note or Notes held by it); provided, however, that (A) each such assignment shall be of a constant, and not a varying, percentage of all rights and obligations under this Agreement, (B) except in the case of an assignment to a Person that, immediately prior to such assignment, was a Lender or an assignment of all of a Lender's rights and obligations under this Agreement, the amount of the Commitment of the assigning Lender being assigned pursuant to each such assignment (determined as of the date of the Assignment and Assumption with respect to such assignment) shall in no event be less than $10,000,000 or an integral multiple of $1,000,000 in excess thereof, (C) each such assignment shall be to an Eligible Assignee, and (D) the parties to each such assignment shall execute and deliver to the Agent, for its acceptance and recording in the Register, an Assignment and Assumption, together with any Note subject to such assignment and a processing and recordation fee of $3,500, which fee may be waived by the Agent in its sole discretion if such assignment is to an Affiliate of the assigning Lender. Upon such execution, delivery, acceptance and recording, from and after the effective date specified in each Assignment and Assumption, (1) the assignee thereunder shall be a party hereto and, to the extent that rights and obligations hereunder have been assigned to it pursuant to such Assignment and Assumption, have the rights and obligations of a Lender hereunder and (2) the Lender assignor thereunder shall, to the extent that rights and obligations hereunder have been assigned by it pursuant to such Assignment and Assumption, relinquish its rights and be released from its obligations under this Agreement (and, in the case of an Assignment and Assumption covering all or the remaining portion of an assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto).

(b) By executing and delivering an Assignment and Assumption, the Lender assignor thereunder and the assignee thereunder confirm to and agree with each other and the other parties hereto as follows: (i) other than as provided in such Assignment and Assumption, such assigning Lender makes no representation or warranty and assumes no responsibility with respect to any statements, warranties or representations made in or in connection with this Agreement or the execution, legality, validity, enforceability, genuineness, sufficiency or value of, or the perfection or priority of any lien or security interest created or purported to be created under or in connection with, this Agreement or any other instrument or document furnished pursuant hereto; (ii) such assigning Lender makes no representation or warranty and assumes no responsibility with respect to the financial condition of the Borrower or the performance or observance by the Borrower of any of its obligations under this Agreement or any other instrument or document furnished pursuant hereto; (iii) such assignee confirms that it has received a copy of this Agreement, together with copies of the financial statements referred to in Section 4.01 and such other documents and information as it has deemed appropriate to make its own credit analysis and decision to enter into such Assignment and Assumption; (iv) such assignee will, independently and without reliance upon the Agent, such assigning Lender or any other Lender and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under this Agreement; (v) such assignee confirms that it is an Eligible Assignee; (vi) such assignee appoints and authorizes the Agent to take such action as agent on its behalf and to exercise such powers and discretion under

this Agreement as are delegated to the Agent by the terms hereof, together with such powers and discretion as are reasonably incidental thereto; and (vii) such assignee agrees that it will perform in accordance with their terms all of the obligations that by the terms of this Agreement are required to be performed by it as a Lender.

(c) Upon its receipt of an Assignment and Assumption executed by an assigning Lender and an assignee representing that it is an Eligible Assignee, together with any Note or Notes subject to such assignment, the Agent shall, if such Assignment and Assumption has been completed and is in substantially the form of Exhibit C hereto, (i) accept such Assignment and Assumption, (ii) record the information contained therein in the Register and (iii) give prompt notice thereof to the Borrower. Within five Business Days after the Borrower's receipt of such notice, if requested by the applicable Lender, the Borrower, at its own expense, shall execute and deliver to the Agent in exchange for the surrendered Note a new Note to the order of such Eligible Assignee in an amount equal to the Commitment assumed by it pursuant to such Assignment and Assumption and, if the assigning Lender has retained a Commitment hereunder, if requested by such assigning Lender, a new Note to the order of the assigning Lender in an amount equal to the Commitment retained by it hereunder. Such new Note or Notes shall be in an aggregate principal amount equal to the aggregate principal amount of such surrendered Note or Notes, shall be dated the effective date of such Assignment and Assumption and shall otherwise be in substantially the form of Exhibit A hereto.

(d) The Agent shall maintain at its address referred to in Section 8.02 a copy of each Assignment and Assumption delivered to and accepted by it and a register for the recordation of the names and addresses and Commitment of, and principal amount of Outstanding Credit Exposure owing to, each Lender from time to time (the "Register"). The entries in the Register shall be conclusive and binding for all purposes, absent manifest error, and the Borrower, the Agent and the Lenders may treat each Person whose name is recorded in the Register as a Lender hereunder for all purposes of this Agreement. The Register shall be available for inspection by the Borrower or any Lender at any reasonable time and from time to time upon reasonable prior notice.

(e) Each Lender may sell participations to one or more banks or other entities, other than an Ineligible Institution, in or to all or a portion of its rights and obligations under this Agreement (including, without limitation, all or a portion of its Commitment, the Outstanding Credit Exposure owing to it and any Note or Notes held by it); provided, however, that (i) such Lender's obligations under this Agreement (including, without limitation, its Commitment to the Borrower hereunder) shall remain unchanged, (ii) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations, (iii) such Lender shall remain the owner of such Credit Extensions for all purposes of this Agreement, (iv) the Borrower, the Agent and the other Lenders shall continue to deal solely and directly with such Lender in connection with such Lender's rights and obligations under this Agreement and (v) no participant under any such participation shall have any right to approve any amendment or waiver of any provision of this Agreement or any Note, or any consent to any departure by the Borrower therefrom, except to the extent that such amendment, waiver or consent would (A) reduce the principal of, or interest on, the Credit Extensions or any fees or other amounts payable

hereunder, or (B) increase the Commitments, in each case to the extent subject to such participation, or postpone any date fixed for any payment of principal of, or interest on, the Aggregate Outstanding Credit Exposures or any fees or other amounts payable hereunder, in each case to the extent subject to such participation. Each participant shall be entitled to the benefits and subject to the exclusions, in each case, as if it were a Lender, of Sections 2.10, 2.11(a) and 2.13 to the same extent as if it were a Lender and had acquired its interest under this Agreement by an assignment made pursuant to this Section 8.07, provided, however, that (i) such participant complies with the requirements of Section 2.13(e) and (ii) in no event shall the Borrower be obligated to make any payment with respect to such Sections that is greater than the amount that the Borrower would have otherwise made had no participations been sold under this Section 8.07(e) (it being understood that the documentation required under Section 2.13(e) shall be delivered to the participating Lender). Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Borrower, maintain a register on which it enters the name and address of each participant and the principal amounts (and stated interest) of each participant's interest in the obligations under this Agreement (the "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register to any Person (including the identity of any participant or any information relating to a participant's interest in the obligations under this Agreement) except to the extent that such disclosure is necessary to establish that such interest is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary.

(f) Any Lender may, in connection with any assignment, designation or participation or proposed assignment, designation or participation pursuant to this Section 8.07, disclose to the assignee, designee or participant or proposed assignee, designee or participant, any information relating to the Borrower furnished to such Lender by or on behalf of the Borrower; provided that, prior to any such disclosure, the assignee, designee or participant or proposed assignee, designee or participant shall agree to preserve the confidentiality of any Confidential Information relating to the Borrower received by it from such Lender.

(g) Notwithstanding any other provision set forth in this Agreement, any Lender may at any time create a security interest in all or a portion of its rights under this Agreement (including, without limitation, the Outstanding Credit Exposure owing to it and the Note or Notes held by it) in favor of any Person (other than the Borrower or an Affiliate of the Borrower), including, without limitation, any Federal Reserve Bank or any other central bank in accordance with Regulation A of the Board of Governors of the Federal Reserve System, provided that no such security interest shall release such Lender from its obligations hereunder or substitute any such other Person for such Lender as a party hereto.

(h) Notwithstanding anything to the contrary contained herein, any Lender (a "Designating Lender") may grant to one or more special purpose funding vehicles (each an "SPV"), identified as such in writing from time to time by the Designating Lender to the Agent and the Borrower, the option to provide to the Borrower all or any part of any Revolving Credit

Advance that such Designating Lender would otherwise be obligated to make to the Borrower or to participate in any Facility LC pursuant to this Agreement; provided that (i) nothing herein shall constitute a commitment by any SPV to make any Revolving Credit Advance or to participate in any Facility LC issued hereunder, (ii) if an SPV elects not to exercise such option or otherwise fails to provide all or any part of such Revolving Credit Advance, the Designating Lender shall be obligated to make such Revolving Credit Advance pursuant to the terms hereof, (iii) the Designating Lender shall remain liable for any indemnity or other payment obligation (including, without limitation, pursuant to Section 2.16) with respect to its Commitment hereunder and (iv) no SPV or Designating Lender shall be entitled to receive any greater amount under this Agreement than the Designating Lender would have been entitled to receive had the Designating Lender not otherwise granted such SPV the option to provide any Revolving Credit Advance to the Borrower. The making of a Revolving Credit Advance by an SPV hereunder and the participation of an SPV in any Facility LC issued hereunder shall utilize the Commitment of the Designating Lender to the same extent, and as if, such Revolving Credit Advance or participation in such Facility LC were made by such Designating Lender.

(i) Each party hereto hereby acknowledges and agrees that no SPV shall have the rights of a Lender hereunder, such rights being retained by the applicable Designating Lender. Accordingly, and without limiting the foregoing, each party hereby further acknowledges and agrees that no SPV shall have any voting rights hereunder and that the voting rights attributable to any Credit Extension made by an SPV shall be exercised only by the relevant Designating Lender and that each Designating Lender shall serve as the administrative agent and attorney-in-fact for its SPV and shall on behalf of its SPV receive any and all payments made for the benefit of such SPV and take all actions hereunder to the extent, if any, such SPV shall have any rights hereunder. No additional Note shall be required to evidence the Credit Extensions or portion thereof made by an SPV; and the related Designating Lender shall be deemed to hold its Note or Notes, if any, as administrative agent for such SPV to the extent of the Credit Extensions or portion thereof funded by such SPV. In addition, any payments for the account of any SPV shall be paid to its Designating Lender as administrative agent for such SPV.

(j) Each party hereto hereby agrees that no SPV shall be liable for any indemnity or payment under this Agreement for which a Lender would otherwise be liable so long as, and to the extent that, the related Designating Lender provides such indemnity or makes such payment; provided, with respect to such agreement by the Borrower that the related Designating Lender shall not be in breach of its obligation to make Credit Extensions to the Borrower hereunder. In furtherance of the foregoing, each party hereto hereby agrees (which agreements shall survive the termination of this Agreement) that prior to the date that is one year and one day after the payment in full of all outstanding commercial paper or other senior indebtedness of any SPV, it will not institute against, or join any other person in instituting against, such SPV any bankruptcy, reorganization, arrangement, insolvency or liquidation proceedings under the laws of the United States or any State thereof; provided, with respect to such agreement by the Borrower that the related Designating Lender shall not be in breach of its obligation to make Credit Extensions to the Borrower hereunder. Notwithstanding the foregoing, the Designating Lender unconditionally agrees to indemnify the Borrower, the Agent and each Lender against all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or

disbursements of any kind or nature whatsoever which may be incurred by or asserted against the Borrower, the Agent or such Lender, as the case may be, in any way relating to or arising as a consequence of any such forbearance or delay in the initiation of any such proceeding against its SPV.

(k) In addition, notwithstanding anything to the contrary contained in subsection 8.07(h), (i), (j) or (k) or otherwise in this Agreement, any SPV may (i) at any time and without paying any processing fee therefor, assign or participate all or a portion of its interest in any Outstanding Credit Exposure to the Designating Lender or to any financial institutions providing liquidity and/or credit support to or for the account of such SPV to support the funding or maintenance of Outstanding Credit Exposure and (ii) disclose on a confidential basis any non-public information relating to its Outstanding Credit Exposure to any rating agency, commercial paper dealer or provider of any surety, guarantee or credit or liquidity enhancements to such SPV. Subsection 8.07(h), (i), (j) or (k) may not be amended without the written consent of any Designating Lender affected thereby.

SECTION 8.08 Confidentiality. Neither the Agent nor any LC Issuer or Lender shall disclose any Confidential Information to any other Person without the consent of the Borrower, other than (a) to the Agent's, such LC Issuer's or such Lender's Affiliates and each of their Related Parties and, as contemplated by Section 8.07(f), to actual or prospective assignees and participants, and then only on a confidential basis, (b) as required by any law, rule or regulation or judicial process, (c) to any rating agency when required by it, provided that, prior to any such disclosure, such rating agency shall undertake to preserve the confidentiality of any Confidential Information relating to the Borrower received by it from the Agent, such LC Issuer or such Lender, (d) as requested or required by any state, federal or foreign authority or examiner regulating banks, other financial institutions or banking, (e) in connection with the exercise of any remedies hereunder or any suit, action or proceeding relating to this Agreement or the enforcement of rights hereunder, (f) on a confidential basis to any such LC Issuer's or Lender's direct or indirect contractual counterparties in swap agreements or to legal counsel, accountants and other professional advisors to such counterparties, (g) subject to an agreement containing provisions substantially the same as those of this Section, (x) to any credit or financial insurance provider in connection with the Borrower's obligations hereunder, and (y) to any Person that requires such Confidential Information in connection with obtaining CUSIP-based identifiers and (h) information pertaining to this Agreement routinely provided by arrangers to data service providers, including league table providers, that serve the lending industry.

EACH LENDER ACKNOWLEDGES THAT CONFIDENTIAL INFORMATION FURNISHED TO IT PURSUANT TO THIS AGREEMENT MAY INCLUDE MATERIAL NON-PUBLIC INFORMATION CONCERNING THE BORROWER AND ITS RELATED PARTIES OR THEIR RESPECTIVE SECURITIES, AND CONFIRMS THAT IT HAS DEVELOPED COMPLIANCE PROCEDURES REGARDING THE USE OF MATERIAL NON-PUBLIC INFORMATION AND THAT IT WILL HANDLE SUCH MATERIAL NON-PUBLIC INFORMATION IN ACCORDANCE WITH THOSE PROCEDURES AND APPLICABLE LAW, INCLUDING FEDERAL AND STATE SECURITIES LAWS.

ALL INFORMATION, INCLUDING REQUESTS FOR WAIVERS AND AMENDMENTS, FURNISHED BY THE BORROWER OR THE AGENT PURSUANT TO, OR IN THE COURSE OF ADMINISTERING, THIS AGREEMENT WILL BE SYNDICATE-LEVEL INFORMATION, WHICH MAY CONTAIN MATERIAL NON-PUBLIC INFORMATION ABOUT THE BORROWER AND ITS RELATED PARTIES OR THEIR RESPECTIVE SECURITIES. ACCORDINGLY, EACH LENDER REPRESENTS TO THE BORROWER AND THE AGENT THAT IT HAS IDENTIFIED IN ITS ADMINISTRATIVE QUESTIONNAIRE PROVIDED TO THE AGENT A CREDIT CONTACT WHO MAY RECEIVE INFORMATION THAT MAY CONTAIN MATERIAL NON-PUBLIC INFORMATION IN ACCORDANCE WITH ITS COMPLIANCE PROCEDURES AND APPLICABLE LAW.

SECTION 8.09 Governing Law. This Agreement and the Notes shall be governed by, and construed in accordance with, the laws of the State of New York.

SECTION 8.10 Execution in Counterparts; Integration; Electronic Execution. Delivery of an executed counterpart of a signature page of (x) this Agreement, (y) any other Loan Document and/or (z) any document, amendment, approval, consent, information, notice (including, for the avoidance of doubt, any notice delivered pursuant to Section 8.02), certificate, request, statement, disclosure or authorization related to this Agreement, any other Loan Document and/or the transactions contemplated hereby and/or thereby (each an "Ancillary Document") that is an Electronic Signature transmitted by telecopy, emailed pdf. or any other electronic means that reproduces an image of the actual executed signature page shall be effective as delivery of a manually executed counterpart of this Agreement, such other Loan Document or such Ancillary Document, as applicable. The words "execution," "signed," "signature," "delivery," and words of like import in or relating to this Agreement, any other Loan Document and/or any Ancillary Document shall be deemed to include Electronic Signatures, deliveries or the keeping of records in any electronic form (including deliveries by telecopy, emailed pdf. or any other electronic means that reproduces an image of an actual executed signature page), each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be; provided that nothing herein shall require the Agent to accept Electronic Signatures in any form or format without its prior written consent and pursuant to procedures approved by it; provided, further, without limiting the foregoing, (i) to the extent the Agent has agreed to accept any Electronic Signature, the Agent and each of the Lenders shall be entitled to rely on such Electronic Signature purportedly given by or on behalf of the Borrower without further verification thereof and without any obligation to review the appearance or form of any such Electronic Signature and (ii) upon the request of the Agent or any Lender, any Electronic Signature shall be promptly followed by a manually executed counterpart. Without limiting the generality of the foregoing, the Borrower hereby (i) agrees that, for all purposes, including without limitation, in connection with any workout, restructuring, enforcement of remedies, bankruptcy proceedings or litigation among the Agent, the Lenders and the Borrower, Electronic Signatures transmitted by telecopy, emailed pdf. or any other electronic means that reproduces an image of an actual executed signature page and/or any electronic images of this Agreement, any other Loan Document and/or any Ancillary Document shall have the same legal

effect, validity and enforceability as any paper original, (ii) the Agent and each of the Lenders may, at its option, create one or more copies of this Agreement, any other Loan Document and/or any Ancillary Document in the form of an imaged electronic record in any format, which shall be deemed created in the ordinary course of such Person's business, and destroy the original paper document (and all such electronic records shall be considered an original for all purposes and shall have the same legal effect, validity and enforceability as a paper record), (iii) waives any argument, defense or right to contest the legal effect, validity or enforceability of this Agreement, any other Loan Document and/or any Ancillary Document based solely on the lack of paper original copies of this Agreement, such other Loan Document and/or such Ancillary Document, respectively, including with respect to any signature pages thereto and (iv) waives any claim against the Agent, the Arrangers, any Lender or any of their respective Related Parties for any claims, damages, losses, liabilities and expenses (including reasonable fees and expenses of counsel) arising solely from the Agent's and/or any Lender's reliance on or use of Electronic Signatures and/or transmissions by telecopy, emailed pdf. or any other electronic means that reproduces an image of an actual executed signature page, including any claims, damages, losses, liabilities and expenses (including reasonable fees and expenses of counsel) arising as a result of the failure of the Borrower to use any available security measures in connection with the execution, delivery or transmission of any Electronic Signature.

SECTION 8.11 Jurisdiction, Etc. (a) Each of the parties hereto hereby irrevocably and unconditionally submits, for itself and its property, to the nonexclusive jurisdiction of the United States District Court for the Southern District of New York, sitting in the Borough of Manhattan (or if such court lacks subject matter jurisdiction, the Supreme Court of the State of New York sitting in the Borough of Manhattan), and any appellate court from any thereof, in any action or proceeding arising out of or relating to this Agreement or the Notes, or for recognition or enforcement of any judgment, and each of the parties hereto hereby irrevocably and unconditionally agrees that all claims in respect of any such action or proceeding may be heard and determined in any such New York State court or, to the extent permitted by law, in such federal court. Each of the parties hereto agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Nothing in this Agreement shall affect any right that any party may otherwise have to bring any action or proceeding relating to this Agreement or the Notes in the courts of any jurisdiction.

(b) Each of the parties hereto irrevocably and unconditionally waives, to the fullest extent it may legally and effectively do so, any objection that it may now or hereafter have to the laying of venue of any suit, action or proceeding arising out of or relating to this Agreement or the Notes in any New York State or federal court. Each of the parties hereto hereby irrevocably waives, to the fullest extent permitted by law, the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court.

SECTION 8.12 Waiver of Jury Trial. Each of the Borrower, the Agent, the LC Issuers and the Lenders hereby irrevocably waives all right to trial by jury in any action, proceeding or counterclaim (whether based on contract, tort or otherwise) arising out of or

relating to this Agreement or the Notes or the actions of the Agent, any LC Issuer or any Lender in the negotiation, administration, performance or enforcement thereof.

SECTION 8.13 USA Patriot Act Notification. The following notification is provided to the Borrower pursuant to Section 326 of the PATRIOT Act:

IMPORTANT INFORMATION ABOUT PROCEDURES FOR OPENING A NEW ACCOUNT. To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify, and record information that identifies each person or entity that opens an account, including any deposit account, treasury management account, loan, other extension of credit, or other financial services product. What this means for the Borrower: When the Borrower opens an account, the Agent and the Lenders will ask for the Borrower's name, tax identification number, business address, and other information that will allow the Agent and the Lenders to identify the Borrower. The Agent and the Lenders may also ask to see the Borrower's legal organizational documents or other identifying documents.

SECTION 8.14 Severability. In the event any one or more of the provisions contained in this Agreement should be held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

SECTION 8.15 No Advisory or Fiduciary Responsibility. In connection with all aspects of each transaction contemplated hereby (including in connection with any amendment, waiver or other modification hereof or of any other Loan Document or any syndication of the credit facility provided hereunder), the Borrower acknowledges and agrees that: (i) (A) the arranging and other services regarding this Agreement provided by the Agent and the Arrangers are arm's-length commercial transactions between the Borrower and its Affiliates, on the one hand, and the Agent and the Arrangers, and each of their respective Affiliates, on the other hand, (B) it has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate, and (C) it is capable of evaluating, and understands and accepts, the terms, risks and conditions of the transactions contemplated hereby and by the other Loan Documents; (ii) (A) each of the Agent, the Arrangers and the Borrower has been acting under this Agreement and the other Loan Documents as independent contractors and has not been, is not, and will not be acting as an advisor, agent or fiduciary for any other party hereto, any Affiliates of any other party hereto, or any other Person and (B) none of the Agent, the Arrangers or the Borrower has any obligation to each other or to their respective Affiliates with respect to the transactions contemplated hereby except those obligations expressly set forth herein and in the other Loan Documents; and (iii) the Agent, the Arrangers and their respective Affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Borrower and its Affiliates, and neither the Agent nor the Arrangers has any obligation to disclose any of such interests to the Borrower or its Affiliates. To the fullest extent permitted by law, the Agent, the Arrangers and the Borrower hereby waive and release any claims that they may have against each other with respect to any breach or alleged breach of agency or fiduciary duty in connection with any aspect of any transaction contemplated hereby.

Each of the Agent and the Lenders acknowledges and agrees that it has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate.

SECTION 8.16 Acknowledgment and Consent to Bail-In of Affected Financial Institutions. Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any Affected Financial Institution arising under any Loan Document may be subject to the Write-Down and Conversion Powers of the applicable Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by the applicable Resolution Authority to any such liabilities arising hereunder which may be payable to it by any party hereto that is an Affected Financial Institution; and

(b) the effects of any Bail-In Action on any such liability, including, if applicable:

(i) a reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such Affected Financial Institution, its parent entity, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the Write-Down and Conversion Powers of the applicable Resolution Authority.

SECTION 8.17 Lender ERISA Matters.

(a) Each Lender (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Agent, and the Arrangers and their respective Affiliates, and not, for the avoidance of doubt, to or for the benefit of the Borrower, that at least one of the following is and will be true:

(i) such Lender is not using "plan assets" (within the meaning of the Plan Asset Regulations or otherwise) of one or more Benefit Plans with respect to such Lender's entrance into, participation in, administration of and performance of the Credit Extensions, the Commitments or this Agreement;

(ii) the transaction exemption set forth in one or more PTEs, such as PTE 84-14 (a class exemption for certain transactions determined by independent qualified professional asset managers), PTE 95-60 (a class exemption for certain transactions involving insurance company general accounts), PTE 90-1 (a class exemption for certain transactions involving insurance company pooled separate accounts), PTE 91-38 (a class

exemption for certain transactions involving bank collective investment funds) or PTE 96-23 (a class exemption for certain transactions determined by in-house asset managers), is applicable with respect to such Lender's entrance into, participation in, administration of and performance of the Credit Extensions, the Commitments and this Agreement, and the conditions for exemptive relief thereunder are and will continue to be satisfied in connection therewith;

(iii) (A) such Lender is an investment fund managed by a "Qualified Professional Asset Manager" (within the meaning of Part VI of PTE 84-14), (B) such Qualified Professional Asset Manager made the investment decision on behalf of such Lender to enter into, participate in, administer and perform the Credit Extensions, the Commitments and this Agreement, (C) the entrance into, participation in, administration of and performance of the Credit Extensions, the Commitments and this Agreement satisfies the requirements of sub-sections (b) through (g) of Part I of PTE 84-14 and (D) to the best knowledge of such Lender, the requirements of subsection (a) of Part I of PTE 84-14 are satisfied with respect to such Lender's entrance into, participation in, administration of and performance of the Credit Extensions, the Commitments and this Agreement; or

(iv) such other representation, warranty and covenant as may be agreed in writing between the Agent, in its sole discretion, and such Lender.

(b) In addition, unless either (1) sub-clause (i) in the immediately preceding clause (a) is true with respect to a Lender or (2) a Lender has provided another representation, warranty and covenant in accordance with sub-clause (iv) in the immediately preceding clause (a), such Lender further (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Agent, and the Arrangers and their respective Affiliates, and not, for the avoidance of doubt, to or for the benefit of the Borrower, that none of the Agent, or the Arrangers or any of their respective Affiliates is a fiduciary with respect to the assets of such Lender involved in such Lender's entrance into, participation in, administration of and performance of the Credit Extensions, the Commitments and this Agreement (including in connection with the reservation or exercise of any rights by the Agent under this Agreement or any documents related to hereto or thereto).

Remainder of Page Intentionally Blank

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized, as of the date first above written.

DTE ENERGY COMPANY

By /s/Timothy J. Lepczyk
Name: Timothy J. Lepczyk
Title: Assistant Treasurer

Borrower's FEIN: 38-3217752

THE BANK OF NOVA SCOTIA, as a Lender

By: /s/David Dewar
Name: David Dewar
Title: Director

SCHEDULE I
DTE ENERGY COMPANY
LENDER COMMITMENTS

Name of Initial Lender	Commitment
JPMorgan Chase Bank, N.A.	$200,000,000
The Bank of Nova Scotia	$200,000,000
TOTAL	**$400,000,000.00**

EXHIBIT A - FORM OF NOTE

U.S.$_____ Dated: _____20,__

FOR VALUE RECEIVED, the undersigned, DTE ENERGY COMPANY, a Michigan corporation (the "Borrower"), HEREBY PROMISES TO PAY to the order of _____ (the "Lender") for the account of its Applicable Lending Office on the Termination Date (each as defined in the Credit Agreement referred to below), the principal sum of U.S.$[amount of the Lender's Commitment in figures] or, if less, the aggregate principal amount of the Revolving Credit Advances made by the Lender to the Borrower pursuant to the Credit Agreement dated as of December 22, 2021 (as amended or modified from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined) among the Borrower, the Lender and certain other lenders parties thereto, and JPMorgan Chase Bank, N.A., as Agent for the Lender and such other lenders outstanding on the Termination Date.

The Borrower promises to pay interest on the unpaid principal amount of each Revolving Credit Advance from the date of such Revolving Credit Advance until such principal amount is paid in full, at such interest rates, and payable at such times, as are specified in the Credit Agreement.

Both principal and interest are payable in lawful money of the United States of America the Agent, at its address set forth in the Credit Agreement, Account No. Reference: DTE Energy Co., Attention: Agency Operations, in same day funds. Each Revolving Credit Advance owing to the Lender by the Borrower pursuant to the Credit Agreement, and all payments made on account of principal thereof, shall be recorded by the Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Promissory Note.

This Promissory Note is one of the Notes referred to in, and is entitled to the benefits of, the Credit Agreement. The Credit Agreement, among other things, (i) provides for the making of Revolving Credit Advances by the Lender to the Borrower from time to time in an aggregate amount not to exceed at any time outstanding the U.S. dollar amount first above mentioned, the indebtedness of the Borrower resulting from each such Revolving Credit Advance being evidenced by this Promissory Note, and (ii) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events and also for prepayments on account of principal hereof prior to the maturity hereof upon the terms and conditions therein specified.

This Promissory Note shall be governed by, and construed in accordance with, the laws of the State of New York.

DTE ENERGY COMPANY

By: _____
Title: _____

ADVANCES AND PAYMENTS OF PRINCIPAL

Date	Amount of Advance	Amount of Principal Paid or Prepaid	Unpaid Principal Balance	Notation Made By

EXHIBIT B - FORM OF NOTICE OF BORROWING

JPMorgan Chase Bank, N.A., as Agent for the Lenders parties
to the Credit Agreement referred to below

Loan and Agency Services Group
10 S. Dearborn St., Floor L2
Chicago, Illinois, 60603-2003
Attention: Charitra Shetty

[Date]

Ladies and Gentlemen:

The undersigned, DTE ENERGY COMPANY, refers to the Credit Agreement dated as of December 22, 2021 (as amended or modified from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among the undersigned, certain Lenders parties thereto and JPMorgan Chase Bank, N.A., as Agent for said Lenders, and hereby gives you notice, irrevocably, pursuant to Section 2.02 of the Credit Agreement that the undersigned hereby requests a Borrowing under the Credit Agreement, and in that connection sets forth below the information relating to such Borrowing (the "Proposed Borrowing") as required by Section 2.02(a) of the Credit Agreement:

(i) The Business Day of the Proposed Borrowing is _____, ____.

(ii) The Type of Advances comprising the Proposed Borrowing is [Base Rate Advances] [Eurodollar Rate Advances].

(iii) The aggregate amount of the Proposed Borrowing is $_____.

(iv) [The initial Interest Period for each Eurodollar Rate Advance made as part of the Proposed Borrowing is _____ month[s].]

(v) [Wire transfer instructions].

The undersigned hereby certifies that the following statements are true on the date hereof, and will be true on the date of the Proposed Borrowing:

(i) the representations and warranties contained in Section 4.01 of the Credit Agreement are correct, before and after giving effect to the Proposed Borrowing and to the application of the proceeds therefrom, as though made on and as of such date; provided, that, the foregoing certification shall not apply to the representations and warranties set forth in (x) the last sentence of Section 4.01(e) of the Credit Agreement, and (y) Section 4.01(f) of the Credit Agreement; and

(ii) after giving effect to the application of the proceeds of all Credit Extensions on such date (together with any other resources of the Borrower applied

together therewith), no event has occurred and is continuing, or would result from such Proposed Borrowing or from the application of the proceeds therefrom, that constitutes a Default.

Very truly yours,

By: _____
Title: [Financial Officer]

EXHIBIT C - FORM OF
ASSIGNMENT AND ASSUMPTION

ASSIGNMENT AND ASSUMPTION

This Assignment and Assumption (the "Assignment and Assumption") is dated as of the Effective Date set forth below and is entered into by and between [*Insert name of Assignor*] (the "Assignor") and [*Insert name of Assignee*] (the "Assignee"). Capitalized terms used but not defined herein shall have the meanings given to them in the Credit Agreement identified below (as amended, the "Credit Agreement"), receipt of a copy of which is hereby acknowledged by the Assignee. The Standard Terms and Conditions set forth in Annex 1 attached hereto are hereby agreed to and incorporated herein by reference and made a part of this Assignment and Assumption as if set forth herein in full.

For an agreed consideration, the Assignor hereby irrevocably sells and assigns to the Assignee, and the Assignee hereby irrevocably purchases and assumes from the Assignor, subject to and in accordance with the Standard Terms and Conditions and the Credit Agreement, as of the Effective Date inserted by the Administrative Agent as contemplated below (i) all of the Assignor's rights and obligations in its capacity as a Lender under the Credit Agreement and any other documents or instruments delivered pursuant thereto to the extent related to the amount and percentage interest identified below of all of such outstanding rights and obligations of the Assignor under the respective facilities identified below (including any letters of credit and guarantees included in such facilities) and (ii) to the extent permitted to be assigned under applicable law, all claims, suits, causes of action and any other right of the Assignor (in its capacity as a Lender) against any Person, whether known or unknown, arising under or in connection with the Credit Agreement, any other documents or instruments delivered pursuant thereto or the loan transactions governed thereby or in any way based on or related to any of the foregoing, including contract claims, tort claims, malpractice claims, statutory claims and all other claims at law or in equity related to the rights and obligations sold and assigned pursuant to clause (i) above (the rights and obligations sold and assigned pursuant to clauses (i) and (ii) above being referred to herein collectively as the "Assigned Interest"). Such sale and assignment is without recourse to the Assignor and, except as expressly provided in this Assignment and Assumption, without representation or warranty by the Assignor.

1. Assignor:
2. Assignee:

[and is an Affiliate/Approved Fund of [identify Lender][1]]

3. Borrower(s): DTE Energy Company

[1] Select as applicable.

4. Administrative Agent: JPMorgan Chase Bank, N.A., as the administrative agent under the Credit Agreement

5. Credit Agreement: The Credit Agreement dated as of December 22, 2021 among DTE Energy Company, the Lenders parties thereto, JPMorgan Chase Bank, N.A., as Administrative Agent

6. Assigned Interest:

Aggregate Amount of Commitment/Loans for all Lenders	Amount of Commitment/Loans Assigned	Percentage Assigned of Commitment/Loans[2]
$	$	%
$	$	%
$	$	%

Effective Date: _____ ___, 20___ [TO BE INSERTED BY ADMINISTRATIVE AGENT AND WHICH SHALL BE THE EFFECTIVE DATE OF RECORDATION OF TRANSFER IN THE REGISTER THEREFOR.]

The terms set forth in this Assignment and Assumption are hereby agreed to:

ASSIGNOR

[NAME OF ASSIGNOR]

By: _____
Title:

ASSIGNEE

[NAME OF ASSIGNEE]

By: _____
Title:

[Consented to and][3] Accepted:

JPMORGAN CHASE BANK, N.A., as Administrative Agent

[2] Set forth, to at least 9 decimals, as a percentage of the Commitment/Loans of all Lenders thereunder.

[1] To be added only if the consent of the Administrative Agent is required by the terms of the Credit Agreement.

By:
Title:

[Consented to:][4]

DTE ENERGY COMPANY

By:
Title:

[4] To be added only if the consent of the Borrower is required by the terms of the Credit Agreement.

ANNEX I

STANDARD TERMS AND CONDITIONS FOR

ASSIGNMENT AND ASSUMPTION

1. Representations and Warranties.

1.1 Assignor. The Assignor (a) represents and warrants that (i) it is the legal and beneficial owner of the Assigned Interest, (ii) the Assigned Interest is free and clear of any lien, encumbrance or other adverse claim and (iii) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby; and (b) assumes no responsibility with respect to (i) any statements, warranties or representations made in or in connection with the Credit Agreement or any other Loan Document, (ii) the execution, legality, validity, enforceability, genuineness, sufficiency or value of the Loan Documents or any collateral thereunder, (iii) the financial condition of the Borrower, any of its Subsidiaries or Affiliates or any other Person obligated in respect of any Loan Document or (iv) the performance or observance by the Borrower, any of its Subsidiaries or Affiliates or any other Person of any of their respective obligations under any Loan Document.

1.2. Assignee. The Assignee (a) represents and warrants that (i) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and to become a Lender under the Credit Agreement, (ii) it satisfies the requirements, if any, specified in the Credit Agreement that are required to be satisfied by it in order to acquire the Assigned Interest and become a Lender, (iii) from and after the Effective Date, it shall be bound by the provisions of the Credit Agreement as a Lender thereunder and, to the extent of the Assigned Interest, shall have the obligations of a Lender thereunder, and (iv) it has received a copy of the Credit Agreement, together with copies of the most recent financial statements delivered pursuant to Section 5.01 thereof, as applicable, and such other documents and information as it has deemed appropriate to make its own credit analysis and decision to enter into this Assignment and Assumption and to purchase the Assigned Interest on the basis of which it has made such analysis and decision independently and without reliance on the Administrative Agent or any other Lender; and (b) agrees that (i) it will, independently and without reliance on the Administrative Agent, the Assignor or any other Lender, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Loan Documents, and (ii) it will perform in accordance with their terms all of the obligations which by the terms of the Loan Documents are required to be performed by it as a Lender.

2. Payments. From and after the Effective Date, the Administrative Agent shall make all payments in respect of the Assigned Interest (including payments of principal, interest, fees and other amounts) to the Assignor for amounts which have accrued to but excluding the Effective Date and to the Assignee for amounts which have accrued from and after the Effective Date.

3. General Provisions. This Assignment and Assumption shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and assigns. This Assignment and Assumption may be executed in any number of counterparts, which together shall constitute one instrument. Delivery of an executed counterpart of a signature page of this Assignment and Assumption by telecopy shall be effective as delivery of a manually executed counterpart of this Assignment and Assumption. This Assignment and Assumption shall be governed by, and construed in accordance with, the law of the State of New York.

EXHIBIT D - FORM OF CERTIFICATE BY BORROWER

DTE ENERGY COMPANY
OFFICER'S CERTIFICATE

I, Timothy J. Lepczyk, Assistant Treasurer of DTE ENERGY COMPANY ("DTE Energy"), a Michigan corporation (the "Borrower"), DO HEREBY CERTIFY, pursuant to Section 3.01 of the Credit Agreement (the "DTE Energy Credit Agreement"), dated as of December 22, 2021, among DTE Energy, the financial institutions from time to time parties thereto as "Lenders" and JPMorgan Chase Bank, N.A. ("JPMorgan"), as agent for said Lenders, that the terms defined in the Credit Agreement are used herein as therein defined and, further, that:

1. The Effective Date shall be December 22, 2021.

2. The representations and warranties contained in Section 4.01 of the Credit Agreement are true and correct on and as of the date hereof.

3. No event has occurred and is continuing that constitutes a Default.

Dated as of the 22nd day of December, 2021.

DTE ENERGY COMPANY

By
Name: Timothy J. Lepczyk
Title: Assistant Treasurer

EXHIBIT E-1 - FORM OF
OPINION OF ASSOCIATE GENERAL COUNSEL TO THE BORROWER

December 22, 2021

To each of the Lenders party to the
Credit Agreement defined below
DTE Energy Company

Ladies and Gentlemen:

This opinion is furnished to you pursuant to Section 3.01(h)(v) of the Credit Agreement (the "Credit Agreement"), dated as of December 22, 2021, among DTE Energy Company (the "Borrower"), the financial institutions from time to time parties thereto as "Lenders" and JPMorgan Chase Bank, N.A. (the "Agent"), as agent for said Lenders. Terms defined in the Credit Agreement are used herein as therein defined.

I am the Associate General Counsel of the Borrower and have acted as counsel for the Borrower in connection with the preparation, execution and delivery of the Loan Documents.

In that connection, I, in conjunction with the members of my staff, have examined:

(i) Each Loan Document, executed by each of the parties thereto.

(ii) The other documents furnished by the Borrower pursuant to Article III of the Credit Agreement.

(iii) The Restated Articles of Incorporation of the Borrower and all amendments thereto (the "Charter").

(iv) The Bylaws of the Borrower and all amendments thereto (the "Bylaws").

(v) A certificate from the State of Michigan attesting to the continued corporate existence and good standing of the Borrower.

In addition, I have examined the originals or copies certified to my satisfaction, of such other corporate records of the Borrower, certificates of public officials and of officers of the Borrower, and agreements, instruments and other documents, as I have deemed necessary as a basis for the opinions expressed below. As to questions of fact material to such opinions, I have, when relevant facts were not independently established by me, relied upon certificates of public officials. I have assumed the due execution and delivery, pursuant to due authorization, of the Credit Agreement by the Lenders and the Agent.

My opinions expressed below are limited to the law of the State of Michigan and the federal law of the United States.

Based upon the foregoing and upon such investigation as I have deemed necessary, I am of the following opinion:

1. The Borrower is a corporation duly organized, validly existing and in good standing under the laws of the State of Michigan.

2. The execution, delivery and performance by the Borrower of the Loan Documents to which it is party, and the consummation of the transactions contemplated thereby, are within the Borrower's corporate powers, have been duly authorized by all necessary corporate action, and do not contravene (i) the Charter or the Bylaws, (ii) any law, rule or regulation applicable to the Borrower, or (iii) any contractual restriction binding on or affecting the Borrower.

3. No consent, authorization or approval or other action by, and no notice to or filing with, any Governmental Authority or regulatory body or any other third party is required for the due execution, delivery, recordation, filing or performance by the Borrower of the Loan Documents to which it is a party.

4. The Credit Agreement has been, and each of the Notes when delivered will have been, duly executed and delivered on behalf of the Borrower.

5. Except as may have been disclosed to you in the SEC Reports, to the best of my knowledge (after due inquiry) there are no pending or overtly threatened actions or proceedings affecting the Borrower or any of its Significant Subsidiaries before any court, governmental agency or arbitrator that (i) could be reasonably likely to have a Material Adverse Effect or (ii) purport to affect the legality, validity, or enforceability of any Loan Documents to which the Borrower is a party or the consummation of the transactions contemplated thereby.

6. In a properly presented case, a Michigan court or a federal court sitting in the State of Michigan applying Michigan choice of law rules should give effect to the choice of law provisions of the Loan Documents and should hold that the Loan Documents are to be governed by the laws of the State of New York rather than the laws of the State of Michigan. In rendering the foregoing opinion, I note that by their terms the Loan Documents expressly select New York law as the laws governing their interpretation and that the Loan Documents governed by New York law were delivered by the parties thereto to the Agent in New York. The choice of law provisions of the Loan Documents are not voidable under the laws of the State of Michigan.

7. If, despite the provisions of Section 8.09 of the Credit Agreement, wherein the parties thereto agree that the Loan Documents shall be governed by, and construed in accordance with, the laws of the State of New York, a court of the State of Michigan or a federal court sitting in the State of Michigan were to hold that the Loan Documents are governed by, and to be construed in accordance with the laws of the State of Michigan, the Loan Documents would be, under the laws of the State of Michigan, legal, valid and binding obligations of the Borrower, enforceable against the Borrower in accordance with their respective terms.

8. Neither the Borrower nor any of its Subsidiaries is an "investment company," or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended;

The opinions set forth above are subject to the following qualifications:

(a) My opinion in paragraph 7 above as to enforceability is subject to the effect of any applicable bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or laws affecting creditors' rights generally.

(b) My opinion in paragraph 7 above as to enforceability is subject to the effect of general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing (regardless of whether considered in a proceeding in equity or at law).

(c) I express no opinion as to participation and the effect of the law of any jurisdiction other than the State of Michigan wherein any Lender may be located or wherein enforcement of the Loan Documents may be sought that limits the rates of interest legally chargeable or collectible.

I am a member of the Bar of the State of Michigan, and do not express any opinion concerning any law other than the law of the State of Michigan and the federal laws of the United States of America.

This opinion letter is rendered to you in connection with the above-described transaction. This opinion letter may not be relied upon by you for any other purpose, or relied upon by any other person or entity without my prior written consent (provided, that this opinion letter may be furnished to and relied upon by a subsequent assignee of, or participant under, the Credit Agreement and a Note, if any, solely for the purpose of such assignment or participation, subject to the assumptions, limitations and qualifications, set forth herein, without any prior written consent). I undertake no duty to inform you or any assignee or participant of events occurring subsequent to the date hereof.

Very truly yours,

EXHIBIT E-2 - FORM OF
OPINION OF HUNTON ANDREWS KURTH LLP

[ATTACHED]

HUNTON
ANDREWS KURTH

December 22, 2021

To each of the Lenders (defined below) party to the
Credit Agreement (defined below) on the date hereof

DTE Energy Company
Short Term Credit Agreement

Ladies and Gentlemen:

This opinion letter is delivered to you pursuant to Section 3.01(h)(v) of the Credit Agreement (the "Credit Agreement"), dated as of December 22, 2021, among DTE Energy Company, a Michigan corporation, as the Borrower (the "Borrower"), lenders from time to time party thereto as lenders (each a "Lender", and collectively, the "Lenders") and JPMorgan Chase Bank, N.A., as administrative agent for such Lenders (in such capacity, the "Agent"). Terms used herein which are defined in the Credit Agreement shall have the respective meanings set forth in the Credit Agreement, unless otherwise defined herein.

We have acted as special counsel to the Borrower in connection with the preparation of the Credit Agreement.

In connection with this opinion letter we have examined a copy of the Credit Agreement. We have also examined the originals, or duplicates or certified or conformed copies, of such records, agreements, instruments and other documents and have made such other investigations as we have deemed relevant and necessary in connection with the opinions expressed herein. As to questions of fact material to this opinion letter, we have relied upon, without independent investigation, and have assumed the correctness of, the representations of the Borrower set forth in the Credit Agreement and upon certificates of public officials and of officers and representatives of the Borrower.

In rendering the opinions set forth below, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as duplicates or certified or conformed copies, and the authenticity of the originals of such latter documents. We have assumed without independent investigation that (i) the Credit Agreement has been duly authorized, executed and delivered by the parties thereto, (ii) the parties to the Credit Agreement have been duly incorporated or organized, as the case may be, and are validly existing and in good standing under the laws of their respective jurisdictions of incorporation or organization, and have the corporate or other entity power and authority to execute, deliver and perform their respective obligations under the Credit Agreement and

(iii) the execution, delivery and performance of the Credit Agreement by each party thereto (a) have been duly authorized by all necessary entity action on its part, (b) do not contravene its certificate of organization or by-laws or similar governing documents or, except as expressly opined upon in paragraph 2 below with respect to the Borrower, violate, or require any consent not obtained under, any applicable law or regulation or any order, writ, injunction or decree of any court or other governmental authority binding upon any of them, (c) do not violate, or require any consent not obtained under, any contractual obligation applicable to or binding upon any of them and (d) the Credit Agreement constitutes the valid, legally binding and enforceable obligation of the Agent and the Lenders party thereto.

Our opinions expressed below are limited to the law of the State of New York and the Federal law of the United States.

We understand that you separately are receiving the opinion letter of JoAnn Chávez, the Senior Vice President and Chief Legal Officer of the Borrower for the Credit Agreement, dated the date hereof and addressed to you, as to certain of the foregoing matters, and we express no opinion thereon. We have assumed (i) that none of the proceeds of any advance made under the Credit Agreement will be used for the purposes of purchasing or "carrying" "margin stock" (as those terms are used in Regulation U of the Board of Governors of the Federal Reserve System), (ii) that none of the collateral for any of the Borrower's obligations under the Credit Agreement includes margin stock, and (iii) that neither the Agent nor any Lender in good faith is relying on margin stock as collateral.

Based upon and subject to the foregoing, and subject to the assumptions, qualifications and comments set forth herein, we are of the opinion that:

1. The Credit Agreement is the legal, valid and binding obligation of the Borrower, enforceable against the Borrower in accordance with its terms.

2. The execution, delivery and performance by the Borrower of the Credit Agreement will not (i) violate any Federal or State of New York statute or (ii) any rule or regulation issued pursuant to any Federal or State of New York statute in each case under clauses (i) and (ii) that in our experience is generally applicable to the Borrower and to transactions of the type contemplated by the Credit Agreement.

The opinion set forth in paragraph 1 above is qualified to the extent enforceability is subject to the effect of (i) bankruptcy, insolvency, reorganization, arrangement, moratorium and other similar laws relating to or affecting the rights of creditors generally, including without limitation fraudulent conveyance or transfer laws (including, but not limited to, the common law trust fund doctrine and Section 548 of the United States Bankruptcy Code), and preference and equitable subordination laws and principles, (ii) general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law) and (iii) concepts of materiality, unconscionability, reasonableness, impracticability or impossibility of performance, good faith and fair dealing. In addition, we note that the enforceability of certain provisions of the Credit Agreement and the exercise of certain remedies under the Credit Agreement may be subject to application of laws other than those of the State of New York, as to which we express no opinion.

Further, we express no opinion as to the legality, validity, enforceability or effect, as applicable, of:

(i) the effect of any provision of the Credit Agreement that is intended to establish any standard as the measure of the performance by any party thereto of such party's obligations of good faith, diligence, fair dealing, reasonableness or care;

(ii) any provision that purports to (a) confer subject matter jurisdiction on a court that does not have independent grounds for subject matter jurisdiction, (b) establish the jurisdiction or venue of any action, (c) establish evidentiary standards, (d) act as a waiver, limitation or exclusion of certain rights, duties or remedies, including personal service, marshalling of assets or similar requirements, the right to notice, and the right to trial by jury, (e) act as a waiver of immunity, or (f) lengthen, shorten, toll or otherwise amend any statute of limitations or waive the benefit of any stay or extension;

(iii) any provision regarding indemnification or contribution to the extent it violates public policy of the State of New York, or any Federal law or regulation, or to the extent it purports to provide that a party shall be indemnified for its own negligence, bad faith, gross negligence or willful misconduct;

(iv) any provision that requires the payment of punitive damages, interest on interest, prepayment penalties or premiums, late fees or default rates of interest to the extent that they are found to constitute unenforceable penalties or forfeitures;

(v) any provision that purports to grant any person the ability to receive the remedies of specific performance, injunctive relief, rescission, liquidated damages or any similar remedy in any proceeding;

(vi) any provision pursuant to which the Borrower waives the benefit of any constitutional, statutory or common law right, duty or remedy;

(vii) any provision that appoints any person as attorney-in-fact or any provision that provides a right to appoint a receiver;

(viii) any provision that permits the exercise of rights or remedies without notice or without providing an opportunity to cure failures to perform;

(ix) any provision that excludes money damages as a remedy, if injunctive relief is not available under applicable law, or that permits a party to pursue multiple remedies or that provides that all remedies are cumulative or nonexclusive, or that violates laws relating to claim splitting or collateral estoppel;

(x) any provision requiring the payment or reimbursement of attorneys' fees other than "reasonable" attorneys' fees under the circumstances for which payment or reimbursement is sought;

(xi) any provision in any document regarding severability or separability;

(xii) any provision to the effect that failure or delay in taking action may not constitute a waiver of rights;

(xiii) any provision that requires that amendments or waivers be made in writing or requires the disregard of any course of dealing or usage of trade;

(xiv) any provision modifying the rules of contract construction, including any provision purporting to (a) establish certain determinations (including determinations by contracting parties and judgments of courts) as presumptively correct, conclusive or conclusive absent manifest error, or to commit such determinations to the discretion of any person or (b) permit any person to act in its sole judgment or discretion;

(xv) any agreement to agree or any provision purporting to constitute an irrevocable agreement to be bound thereby or to establish any matter as deemed or presumed;

(xvi) any provision purporting to establish any obligation of any party as absolute or unconditional regardless of the occurrence or non-occurrence or existence or non-existence of any event or other state of facts, or any provision purporting to obligate a party to conform to a standard that is not or may not be objectively determinable or employing terms that are vague or have no commonly accepted meaning in the context;

(xvii) any provision purporting to set forth rights or obligations of persons who are not signatories nor under the control of signatories;

(xviii) any provision relating to set-off, counterclaim or recoupment;

(xix) the attachment, perfection or priority of any security interest, lien or encumbrance;

(xx) any provision that requires that amendments or waivers be made in writing, or that require mitigation of damages;

To the extent that any opinion contained herein relates to the enforceability of the choice of New York law provisions of the Credit Agreement, we have, in rendering such opinion, relied solely upon New York General Obligations Law Section 5-1401 and have assumed that the Credit Agreement is not entered into with a view to violate the laws of the jurisdiction in which the contract is to be performed. Further, such opinion is subject to the qualification that such enforceability may be limited by important public policies of a moreinterested jurisdiction. We express no opinion regarding whether a court other than a court of or in the State of New York would give effect to a choice of New York law.

In rendering our opinions herein, we have made no examination of or determination, and express no opinion, as to any tax, accounting, financial or similar matters, including as to any covenant, restriction or provision with respect to any financial ratio or test contained in the Credit Agreement or as to the financial condition or solvency of the Borrower or as to the accuracy or completeness as to factual matters of any representation, warranty, recital, data or other information, whether oral or written, that may have been made or furnished by any entity in connection with the Credit Agreement or other transaction documents, whether named herein or otherwise. Furthermore, we have assumed that there are no agreements or understandings between or among any of the parties to the Credit Agreement, and there is no course of prior dealing between or among any of such parties, that would define, supplement or qualify the terms of any of the Credit Agreement or render any opinion expressed herein

inaccurate in any respect. We have also assumed that no fraud exists involving matters relevant to any of the opinions expressed herein.

We do not purport to express an opinion on the laws of any jurisdiction other than those of the United States of America and the State of New York.

Whenever any of our opinions address any of the laws, rules and regulations of the United States of America or of the State of New York, those opinions: (i) address only those laws, rules and regulations that are in effect and with respect to which copies are generally available on the date hereof and that, in our experience, are normally applicable to transactions of the type contemplated by the Credit Agreement, excluding all laws, rules and regulations that may be applicable to any party by virtue of the particular assets, activities or operations of such party that are not applicable to business entities generally; (ii) do not include any opinion as to (a) the laws of any municipality or any local government, authority or instrumentality within any state, or (b) any laws, rules or regulations related to: (1) telecommunications, communications, or transportation, (2) antitrust or unfair competition, (3) securities or blue sky, including except as expressly stated herein the Investment Company Act of 1940, (4) environmental matters, (5) bankruptcy, insolvency fraudulent conveyances, fraudulent transfers, or fraud, (6) zoning or land use or leasing, building or construction, (7) fiduciary duties, (8) pension or employee benefits, (9) tax, (10) labor, employment or federal contracts, (11) privacy, (12) health care, (13) qualification of entities doing business in foreign (out of state) jurisdictions, (14) health, safety, healthcare, food or drugs, (15) public utilities or energy, (16) insurance, (17) patent, copyright or trademark, or other intellectual property, (18) any mandatory choice of law rule, (19) foreign asset control, foreign investment in the United States, national security, terrorism, or money laundering (including, without limitation, the USA PATRIOT Act of 2001, as amended, and § 721 of the Defense Production Act of 1950, as amended), (20) corrupt practices, racketeering or criminal or civil forfeiture, (21) commodities, swaps or other derivatives or futures or indices or similar instruments, (22) banking and financial institutions, including the Dodd-Frank Wall Street Reform and Consumer Protection Act, (23) the Hague Convention on the Law Applicable to Certain Rights in Respect of Securities Held with an Intermediary, (24) any Write-Down and Conversion Powers or other similar powers of any EEA Resolution Authority or the effect of any bail-in action, or (25) except to the extent expressly set forth herein, Federal Reserve Board margin regulations; and (iii) do not express any opinion with respect to whether loans made to the Borrower under the Credit Agreement comply with (1) any statutory, regulatory or other loan limits applicable to the Lenders, (2) any laws, rules or regulations that prescribe permissible and lawful investments for the Lenders, (3) any judicial or administrative decisions, orders, rulings, directives, policies or other interpretations addressing any of the

laws, rules and regulations listed in this paragraph, or (4) any filing or notice requirements relating to any of the matters mentioned in this paragraph.

This opinion letter is rendered to you in connection with the above-described transactions. This opinion letter may not be relied upon by you for any other purpose, or relied upon by any other person, entity or firm, including any governmental agency ("Person") without our prior written consent; provided, that this opinion letter may be furnished to and relied upon by a subsequent assignee of, or participant under, the Credit Agreement solely for the purpose of such assignment or participation, subject to the assumptions, limitations and qualifications set forth herein without our prior written consent, on the condition and understanding that (i) we have no responsibility or obligation to consider the applicability or correctness of this opinion letter to any Person other than its addressees, (ii) in no event shall any future assignees or participants have any greater rights with respect hereto than the original addressees of this letter on the date hereof or its assignors (iii) in furtherance and not in limitation of the foregoing, our consent to such reliance shall in no event constitute a reissuance of the opinions expressed herein or otherwise extend any statute of limitations period applicable hereto on the date hereof, and (iv) any such reliance by a future assignee or participant must be actual and reasonable under the circumstances existing at the time of assignment or participation and (v) the knowledge of the addressees with respect to matters addressed in this opinion letter as of the date hereof shall be imputed to all future assignees and participants, including any changes in law, facts or any other developments known to or reasonably knowable by such an assignee or participant at such time. This opinion letter speaks only as of its date, there is no assurance that it will be correct as of any date after its date, and we undertake no duty to inform you or any assignee or participant of any changes in law or facts subsequent to the date hereof.

Very truly yours,

08091/10245/15344

EXHIBIT F - FORM OF
COMPLIANCE CERTIFICATE

COMPLIANCE CERTIFICATE

To: The Lenders parties to the
Credit Agreement Described Below

This Compliance Certificate is furnished pursuant to that certain Credit Agreement, dated as of December 22, 2021 (as amended or modified from time to time, the "Agreement") among DTE Energy Company, a Michigan corporation (the "Borrower"), the lenders parties thereto, and JPMorgan Chase Bank, N.A., as Agent for the lenders. Unless otherwise defined herein, capitalized terms used in this Compliance Certificate have the meanings ascribed thereto in the Agreement.

THE UNDERSIGNED HEREBY CERTIFIES THAT:

1. I am the duly elected _____ of the Borrower;

2. I have reviewed the terms of the Agreement and I have made, or have caused to be made under my supervision, a detailed review of the transactions and conditions of the Borrower and its Subsidiaries during the accounting period covered by the attached financial statements;

3. The examinations described in paragraph 2 did not disclose, and I have no knowledge of, the existence of any condition or event which constitutes an Event of Default or Default during or at the end of the accounting period covered by the attached financial statements or as of the date of this Certificate, except as set forth below; and

4. Schedule 1 attached hereto sets forth financial data and computations evidencing the Borrower's compliance with certain covenants of the Agreement, all of which data and computations are true, complete and correct.

Described below are the exceptions, if any, to paragraph 3 by listing, in detail, the nature of the condition or event, the period during which it has existed and the action which the Borrower has taken, is taking, or proposes to take with respect to each such condition or event:

The foregoing certifications, together with the computations set forth in Schedule I hereto and the financial statements delivered with this Certificate in support hereof, are made and delivered this ____ day of _____, _____.

DTE ENERGY COMPANY

By
Name:
Title:

SCHEDULE 1 TO COMPLIANCE CERTIFICATE

Compliance as of _____, ____ with
Provisions of Section 5.01(h) of
the Agreement

FINANCIAL COVENANT

Ratio of Total Funded Debt to Capitalization (Section 6.01(i)).

(A)	Numerator (Total Funded Debt):	
	(i) Debt for borrowed money or which has been incurred in connection with the acquisition of assets (exclusive of contingent reimbursement obligations in respect of letters of credit and bankers' acceptances):	$_____
	(ii) Minus: Nonrecourse Debt:	-$_____
	(iii) Minus: Junior Subordinated Debt:	-$_____
	(iv) Minus: Mandatorily Convertible Securities:	-$_____
	(v) Minus: Hybrid Equity Securities:	-$_____
	(vi) Minus: For any fiscal quarter other than the fiscal quarter ending on June 30, Excluded Short-Term Debt:	-$_____
	(vii) Plus: Capital lease obligations:	+$_____
	(viii) Plus: Guaranty Obligations of Funded Debt of other Persons:	+$_____
	(ix) Numerator: (A)(i) minus (A)(ii) through (A)(vi) plus (A)(vii) plus (A)(viii):	$_____
(B)	Denominator (Capitalization):	
	(i) Total Funded Debt: (A)(ix)	$_____
	(ii) Plus: Consolidated Net Worth:	+$_____
	(iii) Denominator: (B)(i) plus (B)(ii):	$_____
(C)	State whether the ratio of (A)(ix) to (B)(iii) was not greater than (i) solely to the extent the Midstream Business Spin-Off shall have been consummated prior to the last day of such fiscal quarter, as of the last day of any fiscal quarter of the Borrower ending during the period commencing on September 30, 2021 to and including December 31, 2022, 0.70:1 or (ii) as of the last day of any other fiscal quarter of the Borrower, 0.65:1:	
	(i) (A)(ix)	$
	(ii) (B)(iii)	$
	(iii) the ratio of (A)(ix) to (B)(iii)	_____
	(iv) the ratio of (A)(ix) to (B)(iii) was not greater than 0.65:1	YES/NO

EXHIBIT G - RESERVED

EXHIBIT H - FORM OF
CONVERSION NOTICE

JPMorgan Chase Bank, N.A., as Agent for the Lenders parties
to the Credit Agreement referred to below

Loan and Agency Services Group
10 S. Dearborn St., Floor L2
Chicago, Illinois, 60603-2003
Attention: Charitra Shetty

CONVERSION NOTICE

Dated _____ ____, 20___

Reference is made to that certain Credit Agreement, dated as of December 22, 2021 (as amended or modified from time to time, the "Credit Agreement") among DTE Energy Company, a Michigan corporation (the "Borrower"), the lenders parties thereto (the "Lenders"), and JPMorgan, N.A., as agent for the Lenders (the "Agent"). Unless otherwise defined herein, capitalized terms used in this Lender Supplement have the meanings ascribed thereto in the Credit Agreement.

Pursuant to Section 2.08 of the Credit Agreement, the Borrower hereby gives notice of its intent to Convert the Revolving Credit Advances comprising the following Borrowing(s) on dates set forth below:

(a) Date of Borrowing: _____
Outstanding principal amount of Borrowing: _____
Current Type (Base Rate/Eurodollar Rate): _____
Requested Type (Base Rate/Eurodollar Rate): _____
Interest Period (if converted Type is Eurodollar Rate): _____
Requested date of Conversion: _____

(b) Date of Borrowing: _____
Outstanding principal amount of Borrowing: _____
Current Type (Base Rate/Eurodollar Rate): _____
Requested Type (Base Rate/Eurodollar Rate): _____
Interest Period (if converted Type is Eurodollar Rate): _____
Requested date of Conversion: _____

IN WITNESS WHEREOF, the Borrower has caused this Conversion Notice to be executed by its officer thereunto duly authorized, as of the date first above written.

DTE ENERGY COMPANY, as the Borrower

By
Title: _____

EXHIBIT I - FORM OF
PREPAYMENT NOTICE

JPMorgan Chase Bank, N.A., as Agent for the Lenders parties
to the Credit Agreement referred to below

Loan and Agency Services Group
10 S. Dearborn St., Floor L2
Chicago, Illinois, 60603-2003
Attention: Charitra Shetty

With a copy to:

JPMorgan Chase Bank, N.A., as Agent for the Lenders parties
to the Credit Agreement referred to below
8181 Communications Pkwy
Plano, TX 75024
Attention: Nancy R. Barwig, Executive Director
E-mail: nancy.r.barwig@jpmorgan.com

PREPAYMENT NOTICE

Dated _____ ____, 20___

Reference is made to that certain Credit Agreement, dated as of December 22, 2021 (as amended or modified from time to time, the "Credit Agreement") among DTE Energy Company, a Michigan corporation (the "Borrower"), the lenders parties thereto (the "Lenders"), and JPMorgan Chase Bank, N.A., as agent for the Lenders (the "Agent"). Unless otherwise defined herein, capitalized terms used in this Lender Supplement have the meanings ascribed thereto in the Credit Agreement.

Pursuant to Section 2.09 of the Credit Agreement, the Borrower hereby gives notice of its intent to prepay the outstanding principal amount of the Revolving Credit Advances relating to the following Borrowing(s) in the following amounts:

1) Date of Borrowing: _____
Outstanding principal amount of Borrowing: _____
Type (Base Rate/Eurodollar Rate): _____
Aggregate principal amount of prepayment: $_____

2) Date of Borrowing: _____
Outstanding principal amount of Borrowing: _____
Type (Base Rate/Eurodollar Rate): _____
Aggregate principal amount of prepayment: $_____

IN WITNESS WHEREOF, the Borrower has caused this Prepayment Notice to be executed by its officer thereunto duly authorized, as of the date first above written.

DTE ENERGY COMPANY, as the Borrower

By
Title: _____

Exhibit 10.6

DTE ENERGY COMPANY
DEFERRED STOCK COMPENSATION PLAN
FOR NON-EMPLOYEE DIRECTORS

The DTE Energy Company Deferred Stock Compensation Plan (the "Plan") was originally established by DTE Energy Company (the "Company") effective as of January 1, 1999 and was amended and restated effective January 1, 2005. This amendment and restatement of the Plan is effective January 1, 2022, unless another effective date is specified for a particular Plan provision.

The Plan was amended and restated effective January 1, 2005 to comply with the requirements of Code Section 409A exclusively with respect to benefits accrued and vested after December 31, 2004. It is intended that all Plan benefits accrued and vested as of December 31, 2004 are not subject to Code Section 409A. Only Plan benefits accrued and vested after January 1, 2005 are subject to Code Section 409A. Any inconsistency or ambiguity in this Plan document is to be construed consistent with this paragraph.

The Plan is being amended and restated effective January 1, 2022 to provide additional election opportunities for participating Directors for amounts credited to their accounts after December 31, 2021. Except as permitted in Section IV, all deferral elections applicable to amounts credited to accounts before January 1, 2022 remain in effect and irrevocable.

As permitted by the Treasury Regulations promulgated under Code Section 409A and guidance issued by the Internal Revenue Service, the Plan was administered in compliance with applicable guidance under Code Section 409A in effect after December 31, 2004 before the adoption of the January 1, 2005 amended and restated Plan document.

SECTION I PURPOSE

The purpose of the Plan is to further the growth, development and financial success of the Company by providing incentives to Directors (as defined below) and to assist the Company in attracting and retaining Directors by offering Directors an opportunity to earn Company Common Stock.

SECTION II ELIGIBILITY

Any member of the Company's Board of Directors who is not a Company employee or an employee of any Affiliate (a "Director") who was a participant in the Plan on December 31, 2021 remains a participant on January 1, 2022. Any individual who was not a participant on December 31, 2021 becomes a participant in the Plan as of the date the individual becomes a Director. For purposes of the Plan, "Affiliate" means any entity in which the Company directly or indirectly beneficially owns more than 50% of the voting securities.

SECTION III ANNUAL AWARDS

Each Director participating in the Plan who is first elected or who is re-elected as a Director by the Company's shareholders at the Company's annual meeting of its shareholders will receive automatically, on the date approved for that year by the Company's Board of Directors

("Board"), a credit to an unfunded deferred stock account established for the Director under Section IV below, equal to the number of hypothetical shares of Company Common Stock approved for that year by the Board.

SECTION IV ESTABLISHMENT AND ADMINISTRATION OF DEFERRED STOCK ACCOUNT

(A) The annual amount of hypothetical Company Common Stock awarded to a Director under Section III will be credited to a deferred stock account maintained by the Company. Each Director's account remains a part of the general funds of the Company, and nothing contained in this Plan creates a trust or fund of any kind or create any fiduciary relationship.

(B) The deferred stock account for each Director who is a participant in the Plan is divided into three subaccounts:

(1) The "Pre-2005 Subaccount" is the portion of a participant's deferred stock account attributable to hypothetical shares of Company Common Stock awarded to the Director under Section III before January 1, 2005, and adjustments to the Director's deferred stock account made under this Section IV attributable to the hypothetical shares of Company Common Stock awarded to the Director before January 1, 2005.

(2) The "2005-2021 Subaccount" is the portion of a participant's deferred stock account attributable to hypothetical shares of Company Common Stock awarded to the Director under Section III after December 31, 2004 and before January 1, 2022, and adjustments to the Director's deferred stock account made under this Section IV attributable to the hypothetical shares of Company Common Stock awarded to the Director after December 31, 2004 and before January 1, 2022.

(3) The "Post-2021 Subaccount" is the portion of a participant's deferred stock account attributable to hypothetical shares of Company Common Stock awarded to the Director under Section III after December 31, 2021 and adjustments to the Director's deferred stock account made under this Section IV attributable to the hypothetical shares of Company Common Stock awarded to the Director after December 31, 2021.

(C) As of the last day of each month for each Director participating in this Plan and until all amounts in a Director's deferred stock account are distributed to the Director, the deferred stock account for the Director will be adjusted as follows:

(1) The account will first be charged with any distributions made during the month as of the date made.

(2) Next, the account will be credited with the amount, if any, of hypothetical Company Common Stock awarded during that month under Section III, with the credit made as of the date provided in Section III.

(3) Finally, the account will be adjusted to reflect the number of hypothetical shares of Company Common Stock allocated to the account during the month to reflect reinvested cash dividends. The number of hypothetical shares of Company Common

Stock allocated to reflect reinvested cash dividends will be equal to the number of shares of Company Common Stock that would have been allocated to the account as of any date if cash dividends paid on the equivalent number of shares of Company Common Stock treated as allocated to the account were automatically reinvested in the Company Common Stock at Fair Market Value on the trading day that is coincident with or next following the applicable dividend payment date. For purposes of the Plan, "Fair Market Value" means the closing sales price of Company Common Stock on the New York Stock Exchange (or any exchange on which Company Common Stock is listed if at any time Company Common Stock is not listed on the New York Stock Exchange) on the specified date.

In the event of any stock dividend or split, recapitalization, reclassification, increase or decrease in the number of outstanding shares, merger, consolidation or exchanges in shares or other similar changes in the Company's Common Stock, appropriate adjustments will be made in the hypothetical shares of Company Common Stock allocated to each Director's deferred stock account to reflect the change.

A separate record of the deferred stock account and adjustments to the account will be maintained by the Company for each participant in this Plan.

SECTION V PAYMENT OF DEFERRED STOCK ACCOUNT

(A) Pre-2005 Subaccount:

(1) The balance of the Director's Pre-2005 Subaccount shall be paid to a Director or, in the event of death, to the Director's designated beneficiary in accordance with the Beneficiary Designation form that has been filed with the Corporate Secretary of the Company, within 15 days after the date the Director terminates service on the Board for any reason. Payment will be made in a lump sum in cash, or at the election of the Director made prior to termination of service, in whole shares of Company Common Stock with any fractional share being paid in cash. The amount of any cash distribution from a Director's Pre-2005 Subaccount will be made at Fair Market Value on the trading day that is coincident with or next preceding the date the Director's Board service terminates.

(2) If a participating Director receives an assessment of income taxes from the Internal Revenue Service which treats any amount payable under this Plan from the Director's Pre-2005 Subaccount as being includible in the Director's gross income before the actual payment of the amount to the Director, the Company will pay an amount equal to the income taxes to the Director within 30 days after receiving written notice from the Director of the assessment, and the Director's Pre-2005 Subaccount will be reduced by an amount equal to the income taxes paid to the Director.

(B) 2005-2021 Subaccount:

(1) A Director's 2005-2021 Subaccount is subject to the Director's single election with respect to the deferral period and the form of distribution as in effect on December 31, 2021.

(2) The default deferral period for hypothetical shares credited to a Director's 2005-2021 Subaccount is three years from date awarded. The default form of distribution for hypothetical shares credited to a Director's 2005-2021 Subaccount is a single lump sum paid on the date the deferral period ends.

(3) A Director was permitted to change the deferral period for all hypothetical shares of Company Common Stock credited to the Director's 2005-2021 Subaccount to the date the Director's service on the Board terminates. For purposes of the Plan, a Director's service on the Board terminates as of the date specified by the Company in the Company's required filing with U.S. Securities and Exchange Commission.

A Director who elected to change the deferral period for the Director's 2005-2021 Subaccount to the date the Director's service on the Board terminates was also permitted to elect to change the form of distribution from a single lump sum to annual installments over a period of two to 10 years. The first annual installment will be paid on the date the deferral period ends (unless deferred under Section B(6)(b) of this Section V), and later annual installments will be paid on the anniversary of the date the first annual installment payment is paid. The initial installment will be determined by dividing the number of hypothetical shares of Company Common Stock in the Director's 2005-2021 Subaccount as of the first annual installment payment date by the number of annual installment payments to be made. Each annual installment payment thereafter is recalculated to reflect changes in the Director's 2005-2021 Subaccount through the anniversary of the first annual installment payment and the remaining number of annual installment payments to be made.

A Director who retained the default deferral period of three years from date awarded (or who elected before January 1, 2009 to reinstate the default deferral period of three years from the date awarded) for the Director's 2005-2021 Subaccount was not permitted to elect any form of distribution other than a single lump sum paid on the date the deferral period ends for the Director's 2005-2021 Subaccount.

(4) A Director who first became a participant in the Plan under Section II before January 1, 2009 was permitted to change the timing and form of the distribution of the Director's 2005-2021 Subaccount by filing a written election with the Company before January 1, 2009 that satisfied both of the following:

(a) The Director's election did not defer to a date after December 31, 2008 any distribution of the 2005-2021 Subaccount otherwise required to be made before January 1, 2009; and

(b) The Director's election did not accelerate to a date before January 1, 2009 any distribution of the 2005-2021 Subaccount otherwise required to be made after December 31, 2008.

(5) A Director who first became a participant in the Plan under Section II after December 31, 2008 and before January 1, 2022 was permitted to elect, not later than 30 days after the date the Director first became a participant in the Plan, to change the deferral period for all hypothetical shares credited to the Director's 2005-2021

Subaccount from three years after date awarded to the date the Director's service on the Board terminates. If a Director elected under this paragraph to change the deferral period to the date the Director's service on the Board terminates, the Director was also permitted to elect, not later than 30 days after the date the Director first became a participant in the Plan, to change the form of distribution from a single lump sum on the date the deferral period ends to annual installments for a period of two to 10 years. If a Director who first became a participant in the Plan after December 31, 2008 and before January 1, 2022 did not elect to change the deferral period within 30 days after the date the Director first became a participant in the Plan as permitted under this Section B(5), the Director is not permitted to change the deferral period at any later time.

(6) After December 31, 2008, a Director who has previously elected a deferral period ending on the date the Director's service on the Board terminates may make one election to change the form of distribution previously elected for the Director's 2005-2021 Subaccount by filing a written election with the Company that satisfies both of the following:

(a) The Director's election is filed with the Company at least 12 months before the date the Director's service on the Board terminates; and

(b) The Director's election designates that distribution of the Director's 2005-2021 Subaccount will begin at least 5 years after the date the Director's service on the Board terminates.

Any election under this Section B(6) also applies to the portion of the Director's Post-2021 Subaccount deferred until the date the Director's service on the Board terminates.

(7) Any distribution from a Director's 2005-2021 Subaccount will be made in cash or, at the election of the Director made before termination of the Director's Board service, in whole shares of Company Common Stock with any fractional share being paid in cash. An election to receive the Director's 2005-2021 Subaccount deferred until the date the Director's service on the Board terminates in stock also applies to the portion of the Director's Post-2021 Subaccount deferred until the date the Director's service on the Board terminates.

The Director's 2005-2021 Subaccount will be valued at Fair Market Value on the trading day that is coincident with or next preceding:

(a) the date the deferral period ends, for any distribution made under the default deferral period of three years after the date awarded or for any single lump sum payment or first annual installment that is not delayed under Section B(6)(b) of this Article V; or

(b) the date a single lump sum payment or first annual installment is to be paid under the Director's election under Section B(6) of this Article V; or

(c) each anniversary of the first annual installment, for any distribution to be made in the form of annual installments over a period of two to 10 years.

(8) If a Director receives an assessment of income taxes from the Internal Revenue Service that treats any amount payable under this Plan from the Director's 2005-2021 Subaccount as being includible in the Director's gross income before the actual payment of the amount to the Director, the Company will distribute from the Director's 2005-2021 Subaccount an amount equal to the income taxes to the Director within 30 days after the Company receives written notice from the Director of the assessment. The Director's 2005-2021 Subaccount will be reduced by the amount distributed to the Director under this Section B(8) of this Article V.

(C) Post-2021 Subaccount:

(1) A Director may elect the deferral period for each award credited to the Director's Post-2021 Subaccount by submitting an election to the Company, in a form acceptable to the Company, before January 1 of the calendar year in which the award will be credited. An individual who is first elected as a Director by the Company's shareholders must submit an election to the Company, in a form acceptable to the Company, not fewer than 30 days before the date of the annual meeting of the Company's shareholders at which the individual is first elected.

The election must specify one of the following deferral periods for the award:

(a) one year after date award is credited to the Director's Post-2021 Subaccount ("Credited Date");
(b) three years after Credited Date;
(c) five years after Credited Date; or
(d) termination of the Director's Board service (a Director's service on the Board terminates as of the date specified by the Company in the Company's required filing with U.S. Securities and Exchange Commission).

(2) If a Director does not timely submit an election for the deferral period for an award credited to the Director's Post-2021 Subaccount, the default deferral period specified in this Section C(2) applies to that award. The default deferral period for an award credited to a Director's Post-2021 Subaccount in 2022 is the Director's deferral period election in effect for the award credited to the Director's 2005-2021 Subaccount in 2021. The default deferral period for each award credited to a Director's Post-2021 Subaccount after 2022 is the Director's deferral period election in effect for the last award credited to the Director's Post-2021 Subaccount. The default deferral period for the first award credited to a newly elected Director's Post-2021 Subaccount is three years after Credited Date.

(3) The mandatory form of distribution for any award for which a Director elects a deferral period of one year, three years, or five years is a lump sum. No other form of distribution is permitted.

(4) A Director may elect the form of distribution for all awards credited to the Director's Post-2021 Subaccount that the Director elects to defer until termination of the Director's Board service, by submitting an election to the Company, in a form acceptable to the Company, before January 1 of the calendar year in which the first award to be deferred until termination of the Director's Board service will be credited. The election must specify one of the following forms of distribution:

(a) Single lump sum; or
(b) Annual installments over two to 10 years.

The first election of a form of distribution will apply to all awards credited to the Director's Post-2021 Subaccount that the Director elects to defer until termination of the Director's Board service.

However, if the Director elected to defer the Director's 2005-2021 Subaccount until termination of the Director's Board service, the form of distribution elected for the Director's 2005-2021 Subaccount automatically applies to all awards credited to the Director's Post-2021 Subaccount deferred until termination of the Director's Board service. The Director may not elect different forms of distribution for awards credited to the Director's 2005-2021 Subaccount and the Director's Post-2021 Subaccount that are deferred until termination of the Director's Board service.

(5) If a Director has not elected to defer the Director's 2005-2021 Subaccount until termination of the Director's Board service, and the Director first elects to defer an award credited to the Director's Post-2021 Subaccount until the termination of the Director's Board service but does not elect a form of distribution, the default form of distribution is a single lump sum.

(6) Except as specified in Section C(8), a Director may elect to receive payment of an award credited to the Director's Post-2021 Subaccount in cash or in shares of Company Common Stock, by submitting an election to the Company, in a form acceptable to the Company, before January 1 of the calendar year in which the award will be credited.

(7) Except as specified in Section C(8), if a Director does not timely submit an election for the form of payment for an award credited to the Director's Post-2021 Subaccount, the default form of payment specified in this Section C(7) applies to that award. The default form of payment for an award credited to a Director's Post-2021 Subaccount in 2022 is cash. The default form of payment for each award credited to a Director's Post-2021 Subaccount after 2022 is the Director's form of payment election in effect for the last award credited to the Director's Post-2021 Subaccount.

(8) Notwithstanding Sections C(6) and C(7), all awards credited to a Director's Post-2021 Subaccount for which the Director has elected a deferral period until the termination of the Director's Board service will be paid in cash, unless the Director elects to have those deferred awards paid in shares of Company Common Stock before the termination of the Director's Board service. A Director's election to receive any awards deferred until termination of the Director's Board service in shares of Company Common Stock applies to all awards credited to the Directors 2005-2021 Subaccount and the

Director's Post-2021 Subaccount that have been deferred until termination of the Director's Board service. A Director cannot elect a different form of payment for each award deferred until the termination of the Director's Board service.

(9) A Director who has previously elected a deferral period ending on the date the Director's service on the Board terminates may make one election to change the form of distribution previously elected for the Director's Post-2021 Subaccount by filing a written election with the Company that satisfies both of the following:

(a) The Director's election is filed with the Company at least 12 months before the date the Director's service on the Board terminates; and

(b) The Director's election designates that distribution of the Director's Post-2021 Subaccount will begin at least 5 years after the date the Director's service on the Board terminates.

Any election under this Section C(9) also applies to the Director's 2005-2021 Subaccount if the Director elected to defer the Director's 2005-2021 Subaccount until the date the Director's service on the Board terminates.

(10) The Director's Post-2021 Subaccount will be valued at Fair Market Value on the trading day that is coincident with or next preceding:

(a) the date a deferral period ends; or

(b) the date a single lump sum payment or first annual installment is to be paid under the Director's election under Section C(9) of this Article V; or

(c) each anniversary of the first annual installment, for any distribution to be made in the form of annual installments over a period of two to 10 years.

(11) If a Director receives an assessment of income taxes from the Internal Revenue Service that treats any amount payable under this Plan from the Director's Post-2021 Subaccount as being includible in the Director's gross income before the actual payment of the amount to the Director, the Company will distribute from the Director's Post-2021 Subaccount an amount equal to the income taxes to the Director within 30 days after the Company receives written notice from the Director of the assessment. The Director's Post-2021 Subaccount will be reduced by the amount distributed to the Director under this Section C(11) of this Article V.

(D) Provisions Applicable to Payments from All Subaccounts:

(1) Each payment under this Plan will be reduced by any federal, state, or local taxes the Company determines should be withheld from the payment.

(2) Benefits under this Plan are payable solely from the general assets of the Company. However, no provision in this Plan precludes the Company from segregating assets intended to be a source for payment of benefits under this Plan. Each participant in

this Plan has the status of a general unsecured creditor of the Company. This Plan constitutes a promise by the Company to make benefit payments in the future. It is intended that this Plan be unfunded for tax purposes and that this Plan remain unfunded for the entire period of its existence.

(3) Notwithstanding the foregoing or anything to the contrary in the Plan, the distribution of all or any portion of a Director's Subaccount will be delayed for a period not to exceed seven months or may be subject to prior approval by the Board to the extent that the Corporate Governance Committee of the Board ("Committee") determines that such delay or approval is necessary or desirable to ensure that the distribution from the Director's Subaccount under the Plan will qualify for an exemption from the liability provisions imposed on the Director under Section 16(b) of the Securities Exchange Act of 1934, as amended, or any rules and regulations issued thereunder. In the event of any such delay, the undistributed portion of the Director's Subaccount shall continue to be subject to adjustment as provided in Section IV until distribution is made.

SECTION VI DESIGNATION OF BENEFICIARY

Each Director, on becoming a participant, must file with the Corporate Secretary of the Company a beneficiary designation on a form approved by the Company designating one or more beneficiaries to whom payments otherwise due the participant will be made in the event of the Director's while serving as a Director or after leaving the Board. A beneficiary designation will be effective only if the signed beneficiary designation form is filed with the Corporate Secretary of the Company when the Director is alive, and will cancel all beneficiary designations signed and filed previously under this Plan. If the primary beneficiary survives the Director but dies before receiving all the amounts due under the Plan, the deferred amounts remaining unpaid at the time of the primary beneficiary's death will be paid in one lump sum to the legal representative of the primary beneficiary's estate. If the primary beneficiary predeceases the Director and the Director does not designate a new primary beneficiary before the Director's death, amounts remaining unpaid at the time of the Director's death will be paid in the order specified by the Director to the contingent beneficiary(s) surviving the Director. If the contingent beneficiary(s) dies before receiving all the amounts due under the Plan, the unpaid amount will be paid in one lump sum to the legal representative of the contingent beneficiary(s) estate. If the Director fails to designate a beneficiary(s) as provided in this Section, or if all designated beneficiaries predecease the Director, the deferred amounts remaining unpaid at the time of the Director's death will be paid in one lump sum to the legal representative of the Director's estate.

SECTION VII NON-ALIENABILITY AND NON-TRANSFERABILITY

No Director, beneficiary designated by the Director, or creditors of the Director have any right to, directly or indirectly, anticipate, alienate, sell, transfer, assign, pledge, encumber, attach, or garnish any amount that is or may be payable under the Plan.

SECTION VIII ADMINISTRATION OF PLAN; ARBITRATION

(A) Full power and authority to construe, interpret, and administer the Plan is vested in the Committee. Decisions of the Committee are final, conclusive, and binding upon all parties.

(B) Notwithstanding Section VIII(a) hereof, in the event of any dispute, claim, or controversy (hereinafter referred to as a "Grievance") between a Director who is eligible to elect to receive the benefits provided under this Plan and the Company with respect to the payment of benefits to the Director under this Plan, the computation of benefits under this Plan, or any of the terms and conditions of this Plan, the Grievance will be resolved by arbitration in accordance with this Section VIII(b).

(1) Arbitration is the sole and exclusive remedy to redress any Grievance.

(2) The arbitration decision will be final and binding, and a judgment on the arbitration award may be entered in any court of competent jurisdiction and enforcement may be had according to its terms.

(3) The arbitration will be conducted by the American Arbitration Association ("AAA") in accordance with the Commercial Arbitration Rules of the AAA and the Company will bear the expenses of the arbitrators and the AAA. Neither the Company nor the Director will be entitled to attorneys' fees, expert witness fees, or other expenses expended in the course of the arbitration or the enforcement of any award rendered through the arbitration.

(4) The arbitration will be held at the offices of the AAA in the Detroit Metropolitan area, Michigan or through video conferencing when appropriate in the circumstances and approved by the AAA.

(5) The arbitrator(s) will not have the jurisdiction or authority to change any of the provisions of this Plan by alteration of, addition to, or subtraction from the terms of the Plan. The arbitrator(s)' sole authority will be to apply any terms and conditions of this Plan. Since arbitration is the exclusive remedy with respect to any Grievance, no Director eligible to receive benefits provided under this Plan has the right to resort to any federal court, state court, local court, or administrative agency concerning breaches of any terms and provisions of the Plan, and the decision of the arbitrator(s) will be a complete defense to any suit, action, or proceeding instituted in any federal court, state court, local court or administrative agency by the Director or the Company with respect to any Grievance which is arbitrable under the Plan.

(6) The arbitration provisions will, with respect to any Grievance, survive the termination of this Plan.

(C) The obligation of the Company to deliver shares of Company Common Stock under the Plan is subject to all applicable laws, rules and regulations, including all applicable federal and state securities laws, and the obtaining of all approvals by governmental agencies as may be deemed necessary or appropriate by the Committee.

(D) If at any time the Committee determines, in its sole discretion, that the listing, registration or qualification of shares of Company Common Stock issuable under the Plan is required by any securities exchange or under any state or federal law, or the consent or approval of any governmental regulatory body is necessary or desirable as a condition of, or in connection with, the issuance of shares, no shares will be issued, in whole or in part, unless listing, registration,

qualification, consent or approval has been effected or obtained free of any conditions as acceptable to the Committee.

(E) In the event that the disposition of shares of Company Common Stock acquired under the Plan is not covered by a then current registration statement under the Securities Act of 1933 as amended (the "Securities Act"), and is not otherwise exempt from registration, the shares will be restricted against transfer to the extent required by the Securities Act or related regulations, and the Committee may require any individual receiving shares under the Plan, as a condition precedent to receipt of the shares, to represent to the Company in writing that the shares acquired by the individual are acquired for investment only and not with a view to distribution. The certificate for any shares acquired under the Plan will include any legend that the Committee deems appropriate to reflect any restrictions on transfer.

(F) No Director will be deemed for any purpose to be or to have the rights and privileges of the owner of Company Common Stock with respect to any hypothetical shares treated as allocated to the Director's deferred stock account unless and until the Director becomes the holder of the Company Common Stock upon its distribution under the Plan.

SECTION IX AMENDMENT OR TERMINATION OF PLAN

The Board may amend or terminate this Plan at any time. Any amendment or termination of this Plan will not affect the rights of participants or beneficiaries to the amounts in the Directors' deferred stock accounts at the time of the amendment or termination.

SECTION X APPLICABLE LAW

The provisions of this Plan are to be interpreted and construed in accordance with the laws of the State of Michigan.

SECTION XI SUCCESSORS

The Company will require any successor (whether direct or indirect, by purchase, merger, consolidation, reorganization or otherwise) to all or substantially all of the business or assets, or both, of the Company expressly to assume and to agree to perform this Plan in the same manner and to the same extent the Company would be required to perform if the succession had not taken place. This Plan is binding upon and inures to the benefit of the Company and any successor of or to the Company, including without limitation any persons acquiring directly or indirectly all or substantially all of the business or assets, or both, of the Company whether by sale, merger, consolidation, reorganization or otherwise (and the successor will be treated as the "Company" for the purposes of this Plan), and the heirs, executors and administrators of each Director.

SECTION XII EXECUTION

DTE Energy Company, as authorized by the resolutions of the Board, has caused this amended and restated Plan document to be executed in its name and by its Chief Executive Officer as of the 8th day of December, 2021.

DTE Energy Company

By: /s/Jerry Norcia
Jerry Norcia

THIRD AMENDMENT TO THE
DTE ENERGY COMPANY
SUPPLEMENTAL RETIREMENT PLAN
(Amended and Restated Effective January 1, 2005)

As authorized by resolutions adopted by the DTE Energy Benefit Plan Administration Committee on February 23, 2018, the DTE Energy Company Supplemental Retirement Plan (Amended and Restated Effective January 1, 2005), is amended as follows, effective January 1, 2018:

1. New Sections 2.4 and 2.5 are added as follows:

ARTICLE 2
Definitions

Section 2.4 Participant. "Participant" means an employee who satisfies the requirements of Article 5 for participating in the Plan

Section 2.5. Retirement Plan. "Retirement Plan" means the Qualified Plan or the DTE Gas Company Retirement Plan for Employees Covered by Collective Bargaining Agreements, as applicable with respect to an individual Participant.

2. Article 3 is amended to read as follows:

ARTICLE 3
Purpose

The principal purpose of the Plan is to provide for the payment of certain benefits that would not otherwise be payable under a Retirement Plan. Benefits payable under Section 6.1(a) are intended to be benefits payable under an "excess benefit plan" as described in Section 3(36) of ERISA. All other benefits payable under Article 6 are intended to be payable to a "select group of management or highly compensated employees" of the Company and any other corporation which is a Participating Employer under the Qualified Plan that also elects to participate in this Plan.

It is intended that this Plan be exempt from the provisions of Parts 2, 3, and 4 of Title I of ERISA by only providing benefits under an "excess benefit plan" within the meaning of Section 3(36) of ERISA or to a "select group of management or highly compensated employees" within the meaning of Sections 201, 301 and 401 of ERISA.

3. Sections 5.1(b) and (c) are amended to read as follows:

ARTICLE 5
Eligibility

Section 5.1. Participants.

(b) 415 Limits. An employee whose benefits under a Retirement Plan are limited because of the limitation on benefits and contributions under Section 415 of the Code is eligible for the benefits provided by Section 6.1(a) of this Plan. An employee described in this Section 5.1(b) who is not also designated as eligible for participation under Section 5.2 is not eligible for any other Plan benefits.

(c) Retirement Plan Eligibility. Notwithstanding the foregoing:

(1) No employee is eligible for benefits provided under Section 6.1(a) until the employee has satisfied the eligibility requirements of the applicable Retirement Plan; and

(2) No employee is eligible for benefits provided under Section 6.1(b) or (c) or Section 6.2 until the employee has satisfied the eligibility requirements of the Qualified Plan.

4. Section 6.1 is amended to read as follows:

ARTICLE 6
Employers' Obligation

Section 6.1. Qualified Plan Benefit.

(a) DTE Energy Corporate Services, LLC will pay under this Plan any amount that a Participant would have been entitled to receive under a Retirement Plan but for the limitation on benefits and contributions under Section 415 of the Code.

(b) DTE Energy Corporate Services, LLC will pay under this Plan any amount that a Participant would have been entitled to receive under the Qualified Plan but for the limitation on compensation under Section 401(a)(17) of the Code and any other provision of the Code or other law that the Committee hereafter designates.

(c) DTE Energy Corporate Services, LLC will pay under this Plan any amount that a Participant would have been entitled to receive under the Qualified Plan but for the exclusion of deferrals under the DTE Energy Company Supplemental Savings Plan and the DTE Energy Company Executive Deferred Compensation Plan from the definition of compensation under the option of the Qualified Plan applicable to such Participant.

5. The first sentence of Section 7.1(b)(1) is amended by replacing "Qualified Plan" with "Retirement Plan."

6. The first and fourth sentences of Section 7.3 are amended by replacing "Qualified Plan" with "Retirement Plan."

7. Both sentences of Section 7.6 are amended by replacing "Qualified Plan" with "Retirement Plan."

This Amendment is executed on behalf of the Committee by its Chairperson, as authorized by the Committee's resolution.

Dated: February 23, 2018

/s/Diane M. Antishin

Diane M. Antishin
Vice President, Human Resources Operations
Committee Chairperson

FOURTH AMENDMENT TO THE
DTE ENERGY COMPANY
SUPPLEMENTAL RETIREMENT PLAN
(Amended and Restated Effective January 1, 2005)

As authorized by resolutions adopted by the DTE Energy Benefit Plan Administration Committee on November 16, 2021, the DTE Energy Company Supplemental Retirement Plan (Amended and Restated Effective January 1, 2005), is amended as follows, effective November 16, 2021:

1. New Section 6.1(d) is added as follows:

ARTICLE 6
Employers' Obligation

Section 6.1 Qualified Plan Benefit.

(d) Any benefit calculated under this Section 6.1 as of a Participant's applicable date under Section 7.1 will not be reduced as a result of the recalculation of the Participant's Retirement Plan benefit under Section 6.21 of the Qualified Plan or under Section 4.24 of the DTE Gas Company Retirement Plan for Employees Covered by Collective Bargaining Agreements ("Gas Retirement Plan"). If any benefit calculated under Section 6.1 as of the Participant's applicable date under Section 7.1 is increased because of the recalculation of the Participant's Retirement Plan benefit under Section 6.21 of the Qualified Plan or Section 4.24 of the Gas Retirement Plan, the additional benefit will be paid as soon as administratively practicable after the recalculation under Section 6.21 of the Pension Plan or Section 4.24 of the Gas Retirement Plan has been completed.

This Amendment is executed on behalf of the Committee by its Chairperson, as authorized by the Committee's resolution.

Dated: November 16, 2021

/s/Diane M. Antishin
Diane M. Antishin
Vice President, Human Resources Operations
Committee Chairperson

Exhibit 21.1

SUBSIDIARIES OF DTE ENERGY COMPANY

DTE Energy Company's principal subsidiaries as of December 31, 2021 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 Electric Holdings, LLC	Michigan
3. DTE Energy Resources, LLC	Delaware
4. DTE Energy Trading, Inc.	Michigan
5. DTE Enterprises, Inc.	Michigan
6. DTE Gas Company	Michigan
7. DTE Gas Holdings, Inc.	Michigan

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-157769 and 333-230656) and Form S-8 (No. 333-202343, 333-199746, 333-225917 and 333-261804) of DTE Energy Company of our report dated February 10, 2022 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 10, 2022

Exhibit 23.2

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 10, 2022 relating to the financial statements and financial statement schedule, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 10, 2022

Exhibit 31.1

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 10, 2022

Gerardo Norcia
President and
Chief Executive Officer of DTE Energy Company

Exhibit 31.2

FORM 10-K CERTIFICATION

I, David Ruud, 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/ DAVID RUUD

Date: February 10, 2022

David Ruud
Senior Vice President and
Chief Financial Officer of DTE Energy Company

Exhibit 31.3

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 10, 2022

Gerardo Norcia
Chief Executive Officer of DTE Electric Company

Exhibit 31.4

FORM 10-K CERTIFICATION

I, David Ruud, 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/ DAVID RUUD

Date: February 10, 2022

David Ruud
Senior Vice President and
Chief Financial Officer of DTE Electric Company

Exhibit 32.1

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

In connection with the Annual Report on Form 10-K of DTE Energy Company for the year ended December 31, 2021, 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 10, 2022

/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.

Exhibit 32.2

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

In connection with the Annual Report on Form 10-K of DTE Energy Company for the year ended December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David Ruud, 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 10, 2022

/S/ DAVID RUUD

David Ruud
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.

Exhibit 32.3

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, 2021, 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 10, 2022

/S/ GERARDO NORCIA

Gerardo Norcia
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.

Exhibit 32.4

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, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David Ruud, 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 10, 2022

/S/ DAVID RUUD

David Ruud
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.