

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

DTE Energy (NYSE: DTE) is a diversified U.S. energy company with approximately \$14.2 billion in revenues for 2018. Our largest operating subsidiaries are DTE Electric Co., an electric utility, and DTE Gas Co., a natural gas utility. DTE Electric is a Michigan corporation organized in 1903 and is a public utility subject to regulation by the Michigan Public Service Commissions (MPSC) and the Federal Energy Regulatory Commission (FERC). DTE Electric is engaged in the generation, purchase, distribution and sale of electricity to approximately 2.1 million customers in southeastern Michigan. DTE Gas is a Michigan corporation organized in 1898 and is a public utility subject to regulation by the MPSC. DTE Gas is engaged in the purchase, storage, transmission, gathering, distribution and sale of natural gas to approximately 1.3 million customers throughout Michigan and the sale of storage and transportation capacity. Our other businesses are involved in 1) natural gas pipelines, gathering and storage; 2) power and industrial projects; and 3) energy marketing and trading operations. More information on DTE Energy can be found at DTEenergy.com and information on sustainability performance can be found at <https://empoweringmichigan.com/dte-impact/performance/>

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2018	December 31 2018	No	<Not Applicable>

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

- Electricity generation
- Distribution

Other divisions

- Gas storage, transmission and distribution

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	Our Chairman and CEO, together with other senior leaders of the company, exercise leadership in our sustainability initiatives. Through the Government Regulatory Committee, and Force for Growth Committee and other leadership committees, DTE Energy's senior management: • Executes the company's Environmental, Social, and Governance (ESG) strategy in consultation with the Board of Directors • Manages our environmental compliance processes and carbon reduction aspirations • Mobilizes our employees, resources and partner organizations to strengthen and promote prosperity in our communities • Reports to Board of Directors on outcomes of ESG initiatives • Manages risks associated with environmental and sustainability opportunities • Receives compensation tied to achievement of company goals, including ESG targets
Other, please specify (Lead Independent Director)	The Board continues to believe a good governance practice is to elect a Lead Independent Director. The Lead Independent Director will have such responsibilities as required under the NYSE listing standards, as well as such other responsibilities as determined by the Board, including approving the agenda for Board discussions of strategic issues (including climate-related issues) for the company.

C1.1b

(C1.1b) Provide further details on the board’s oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Climate-related issues impact all areas of DTE Energy's business and are therefore incorporated into the agenda at all Board meetings. Examples include obtaining approval from the Board for the company's 2050 carbon reduction goal announced in 2017 and updated in early 2019, long-term strategies and action plans to meet these goals, risks associated with meeting or not meeting these goals, capital expenditures necessary to meet these goals, and setting milestone targets to track and measure progress towards these goals. The Public Policy and Responsibility Committee (PPRC) of the DTE Energy Board of Directors is responsible for reviewing and advising the Board on emerging social, economic, political, reputational and environmental issues that could significantly affect the Company's business and performance in relation to the community, shareholders, customers and employees. The PPRC's responsibilities and duties include direct responsibility for climate change issues that affect the Company. The Committee met 5 times in 2018. The PPRC's Charter is available on our website and includes the following statements on Membership & Authority: 1. The Committee shall be composed of three or more directors as determined by the Board of Directors. Committee members are appointed for one-year terms and can be re-appointed for additional terms. 2. The Committee has the authority to perform the duties listed in this Charter, as it determines to be necessary and advisable from time to time in its business judgment. 3. The Committee shall meet as necessary, but no fewer than three times a year. The Committee shall keep minutes or other records of its meetings. 4. The Committee has the authority to retain independent outside professional advisors or experts as it deems advisable or necessary, including the sole authority to retain and terminate any such advisors or experts, to carry out its duties. The Committee shall have sole authority to approve related fees and retention terms.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other, please specify (Vice President Environmental)	Both assessing and managing climate-related risks and opportunities	Quarterly
Sustainability committee	Managing climate-related risks and opportunities	As important matters arise
Other, please specify (Force for Growth Committee)	Managing climate-related risks and opportunities	As important matters arise
Other committee, please specify (Government, Regulatory and Community Committee)	Both assessing and managing climate-related risks and opportunities	As important matters arise
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The VP-Environmental reports directly to the COO and oversees the company's ESG operations. This responsibility is given to the VP-Environmental so that a high-level executive position has the main responsibility of overseeing environmental operations under the direction of C-suite officers. In managing our sustainability initiatives, the VP-Environmental:

- Represents the company on environmental issues with the public and in environmental regulatory and legislative development
- Coordinates environmental studies and conducts environmental audits
- Supervises a department of approximately 75 people

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) TEAM

The cross-functional ESG Team was formed to coordinate and execute the company's multiple streams of ESG disclosure. The ESG team has members from legal, corporate communications, investor relations, environmental compliance, public affairs, and the corporate secretary's office. The team is given the responsibility of coordinating ESG disclosures because of the multiple disciplines and business units represented in the team, which allows them to make climate-related decisions beneficial for the entire company. The ESG team:

- Evaluates potential ESG disclosure platforms and templates, and makes recommendations to management
- Reviews peer company disclosures for best practices
- Collects internal ESG data and drafts disclosure documents in consultation with relevant business units
- Incorporates input from management and board reviewers
- Meets at least monthly

SENIOR MANAGEMENT — GOVERNMENT, REGULATORY AND COMMUNITY (GRC) AND FORCE FOR GROWTH (FFG) COMMITTEES

Our chairman and CEO, together with other senior leaders of the company, exercise leadership in our sustainability initiatives. The GRC and FFG committees include C-suite officers and other senior management as members. Through monthly meetings of the GRC, FFG, and other leadership committees, DTE Energy's senior management:

- Executes the company's ESG strategy in consultation with the Board of Directors
- Manages our environmental compliance processes and carbon reduction aspirations
- Mobilizes our employees, resources and partner organizations to strengthen and promote prosperity in our communities
- Reports to Board of Directors on outcomes of ESG initiatives
- Manages risks associated with environmental and sustainability opportunities
- Receives compensation tied to achievement of company goals, including ESG targets

Senior management is given these responsibilities in order to provide high-level direction toward climate-related initiatives for the rest of the company.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Our CEO received 67% of his 2018 total compensation in contingent, performance-based incentives that are focused on meeting our system of corporate priorities, including our target to reduce carbon emissions. For our other named executive officers, the average percentage of contingent, performance-based compensation was 57%. • Our short-term and long-term performance metrics all tie directly to our system of priorities. These are the same metrics that management uses to assess the Company's progress toward our aspiration of becoming the best-operated energy company in North America and a force for growth and prosperity in the communities where we live and serve.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Other, please specify (Corporate priority scorecards)

Comment

The company utilizes scorecards as a means to measure progress towards meeting company goals. The scorecards are utilized to assess annual incentive awards at the business unit level for all employees. Examples of corporate level priorities related to climate change that were tracked on scorecards at the business unit level in 2018 included the following: 1. Reduce carbon emissions 24% below 2005 (on way to 80% reduction by 2050) 2. Achieve annual customer electricity savings of 1.5% 3. Achieve annual customer gas savings of 1.0% 4. Drive 25% energy, water and waste reduction from 2016 levels by 2022

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Other, please specify (Alex Dow Award)

Comment

Alex Dow Award - The Alex Dow Award recognizes outstanding achievement related to the company's operation that is consistent with its responsibilities as an investor-owned utility and exemplifies DTE Energy's Core Values and incorporates the DTE Energy Operating System principles. Awards fall into the following categories: 1. Achievement or Innovation: An original achievement or innovation that has significant positive impact on corporate cost savings or increased revenues, gained outside recognition, and supports corporate strategies. 2. Emergency: An individual(s) taking extraordinary action in an emergency to prevent injury, loss of life, or damage to or loss of property. 3. Improved Operation: An outstanding individual(s) effort, beyond normal responsibilities, which significantly improved company-wide operations, greatly impacted the company's financial success and supported corporate strategies. 4. Human Relations: An outstanding, sustained individual effort that has had a significant impact on improving the quality of life in the Community or the Company. 5. Public Relations: An outstanding, sustained individual effort that has had a significant impact on improving the corporate service and awareness in the communities in which we serve 6. Above and Beyond: Exceptional, consistent, and sustained efforts to achieve business success that goes above and beyond and exceeds expectations. 7. Lifetime Achievement: Original achievements and innovations that have had a sustained impact on the corporation and gained outside recognition. The Alex Dow award is one of 3 established employee performance recognition programs. Although these programs do not specifically target management of climate change issues, recipients have been awarded this honor in the past who are instrumental in creating and sustaining many environmental initiatives.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Other, please specify (Sarah Sheridan Award)

Comment

Sarah Sheridan Award - The Sarah Sheridan award recognizes Customer Service and Customer Satisfaction efforts for our external and internal customers, and our community (including volunteerism). The Sarah Sheridan Award is one of 3 established employee performance recognition programs. Although these programs do not specifically target management of climate change issues, recipients have been rewarded for their work in climate change or related environmental issues.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Other non-monetary reward

Activity incentivized

Other, please specify (Walter J. McCarthy Award)

Comment

Walter J. McCarthy, Jr. Award - Through the Walter J. McCarthy Volunteer Leadership Individual Grant Program, the DTE Energy Foundation awards up to \$1,000 on behalf of its employees and retirees who volunteer personal time with eligible non-profit organizations in Michigan. The Walter J. McCarthy, Jr. Award is one of 3 established employee performance recognition programs. Although these programs do not specifically target management of climate change issues, recipients are often rewarded for their work in climate change or related environmental issues.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Other, please specify (Employee engagement to reduce emissions)

Comment

The EV Incentive program was planned and developed in this reporting year, in which eligible DTE Energy employees can receive a \$2,500 incentive for purchasing or leasing a new Electric Vehicle (EV) between May 1- September 30, 2019.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	5	Aligned with annual planning cycles and shorter term targets to reach performance goals.
Medium-term	5	15	Generally aligned with Integrated Resource Plan timeframe and other regulatory submittals and disclosures required by the Michigan Public Service Commission.
Long-term	15	30	Aligned with DTE Energy's goal to reduce carbon emissions more than 80% by 2050.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	DTE Energy's long-term planning, including management of climate-related risk, is guided by our commitment to reduce carbon emissions more than 80% by 2050 (upgraded in 2019 to 80% by 2040). Climate-related issues impact all areas of DTE Energy's business and are therefore incorporated into the agenda at all Board meetings. Examples include obtaining approval from the Board for the company's updated carbon reduction goal announced in early 2019, long-term strategies and action plans to meet these goals, risks associated with meeting or not meeting these goals, capital expenditures necessary to meet these goals, and setting milestone targets to track and measure progress towards these goals. The Public Policy and Responsibility Committee (PPRC) of the DTE Energy Board of Directors is responsible for addressing climate change issues that affect the Company. The PPRC Committee met 5 times in 2018.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

The Board receives, reviews and assesses reports from the Board Committees and from management relating to enterprise-level risks. Each Board Committee is

responsible for overseeing and considering risk issues relating to their respective Committee and reporting their assessments to the full Board at each regularly

scheduled Board meeting. When granting authority to management, approving strategies and receiving management reports, the Board and Committees consider, among other things, the risks we face. The following committees review management's assessment of risk for that Committee's respective area of responsibility:

- Audit Committee
- Finance Committee
- Organization and Compensation Committee
- Corporate Governance Committee
- Nuclear Review Committee
- Public Policy and Responsibility Committee

The charters for each of these committees are posted on the DTE Energy website. The Company also utilizes an internal Risk Management Committee, chaired by the Chairman, President and CEO and comprised of the Chief Financial Officer, Chief Risk Officer, General Counsel, General Auditor and other senior officers, that, among other things, directs the development and maintenance of comprehensive risk management policies and procedures, and sets, reviews and monitors risk limits on a regular basis for enterprise-level risks. The Company's Chief Risk Officer attends all Audit Committee meetings and meets annually with either the joint Audit Committee and Finance Committee or the full Board to update the members on the Company's enterprise-level risk management. The Chief Risk Officer also periodically meets with the other Board Committees and the full Board as may be required. These periodic meetings allow for two-way exchange of company and asset related risk, either from the business unit level that has identified an asset related risk, or from the Board Committee that may have a generally identified risk that could impact assets.

DTE defines substantive impact as a legislative, regulatory, or physical change in supply that would reduce our ability to produce adequate amount of electricity for our customers. Additionally, the definition extends to any financial and strategic impact that an investor would deem substantive, and DTE aims to maintain a reputation of sound risk assessment and management among its investors. For example, extreme weather conditions are identified as a risk in our 2018 10-K Annual Report, which we would consider a substantive financial or strategic impact if it caused damage to the electric distribution system infrastructure and power generation facilities. The 2019 Polar Vortex is an example of an event we would consider substantive; very cold-weather may impact normal daily operations or our facilities. Recovering from these setbacks would result in increased costs from unforeseen maintenance to our power generation facilities, therefore negatively impacting the financial performance of the company.

A brief explanation of the more significant risks associated with DTE Energy's businesses are provided in our 2018 Form 10-K annual report. Although we have tried to identify and discuss key risk factors, others could emerge in the future. Key risk factors related to climate change include the following:

- We are subject to rate regulation.
- Changes to Michigan's electric Customer Choice program could negatively impact our financial performance.
- Environmental laws and liability may be costly.
- Operation of a nuclear facility subjects us to risk.
- The supply and/or price of energy commodities and/or related services may impact our financial results.
- The supply and/or price of other industrial raw and finished inputs and/or related services may impact our financial results
- Construction and capital improvements to our power facilities, distribution systems and Gas Storage and Pipelines business subject us to risk.
- Our participation in energy trading markets subjects us to risk.
- DTE Energy's non-utility businesses may not perform to expectations.
- DTE Energy's participation in energy trading markets subjects it to risk.
- Our ability to utilize production tax credits may be limited.
- Weather significantly affects operations.
- Renewable portfolio standards and energy efficiency programs may affect our business.
- Unplanned power plant outages may be costly.
- Regional, national and international economic conditions can have an unfavorable impact on us.
- If DTE Energy's goodwill becomes impaired, it may be required to record a charge to earnings.
- We may not be fully covered by insurance.

Finally, long-range planning risks associated with the transition of DTE's generating fleet to less carbon-intensive technologies are addressed through the company's Integrated Resource Planning process. These risks include increasing pressure by investors and other stakeholders to conduct climate scenario analyses demonstrating the company's commitment to limiting global warming to less than 2-degrees C above pre-industrial levels.

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	An example of assessed current regulations are the U.S. EPA rules under the Clean Air Act that impose limits on air emissions, including greenhouse gases. U.S. EPA rules under the Clean Air Act requiring carbon performance standards for new and existing electric generating unit (EGU) sources of greenhouse gases under Sections 111(b) and 111(d) of the Clean Air Act were finalized in 2015. The 111(d) rule for existing sources, also known as the Clean Power Plan, was repealed in June 2019 and replaced with the Affordable Clean Energy Rule. Though now repealed, DTE Energy was able to assess this risk by engaging extensively with U.S. EPA on influencing a final rule for the Clean Power Plan that was reasonable and affordable for the electric power industry. DTE also assessed this regulation-related risk by determining how the Clean Power Plan, as proposed, could impact the reliability of the nation's electric grid; our CEO Gerry Anderson spoke on behalf of DTE and EEI on this topic in 2015. Our CEO (now Chairman) continues to influence the industry on climate related issues through his role as EEI Vice Chairman. Regulation pertaining to renewable energy and/or clean energy requirements is also considered. In late 2016, Michigan passed legislation requiring electricity providers to meet a 12.5% renewable portfolio standard by 2019 and 15% by 2021 and an energy optimization goal of meeting at least 35% of the State's electric needs through energy waste reduction and renewable energy by 2025. The Michigan energy legislation also requires periodic submittal of an Integrated Resource Plan (IRP) to the Michigan Public Service Commission. DTE Electric submitted its IRP in March 2019 and it includes an accelerated carbon reduction goal of 80% reduction from 2005 levels by 2040 and a 50% reduction by 2030. These goals exceed the requirements of the recently repealed Clean Power Plan.
Emerging regulation	Relevant, always included	Uncertainty around future environmental regulations creates difficulty planning long-term capital projects in our generation fleet and gas distribution businesses. These laws and regulations require us to seek a variety of environmental licenses, permits, inspections and other regulatory approvals. An example of a potential emerging regulation is the requirement to install expensive pollution control measures or limit or cease activities, including the retirement of certain generating plants, based on the outcome of future regulations. In addition, emerging state or local legislative and /or ballot initiatives focused on clean energy and reducing carbon emissions are considered in climate risk assessments.
Technology	Relevant, sometimes included	An example of key technology uncertainties that impact future planning risks is feasibility and cost of energy storage technologies. Utility-scale energy storage technologies (e.g. batteries) to store energy from intermittent renewable generation, which are currently not feasible for wide-scale deployment across our service territory. However, if costs of utility-scale storage decrease significantly, long-term generation planning could be impacted.
Legal	Relevant, always included	An example of a legal risk considered in climate-related risk assessments is the initiation of enforcement actions against DTE Electric Co. by the EPA and environmental groups alleging, among other things, that five DTE Electric power plants violated New Source Performance standards, Prevention of Significant Deterioration requirements, and operating permit requirements under the Clean Air Act. DTE Electric could be required to install additional pollution control equipment at some or all of the power plants in question, implement early retirement of facilities where control equipment is not economical, engage in supplemental environmental programs, and/or pay fines. Although we cannot predict the financial impact or outcome of this matter or the timing of its resolution, the company considers the above possible actions in its climate-related risk assessments.
Market	Relevant, sometimes included	An example of an assessed potential market risk is a carbon emission trading or similar program that could be required by future legislation or regulations, placing a price on the direct emissions of carbon. This could potentially impact the affordability of electricity to our customers.
Reputation	Relevant, always included	DTE Energy's aspiration is to be the best operated energy company in North America and a force for growth and opportunity in the communities where we live and serve. We are guided by our company's purpose, values and system of priorities to support our journey towards our aspiration. Risks that detract from achieving our aspiration would be considered reputational risks. An example of a reputational risk is repeated outages and reliability impacts from severe weather events. In January 2018, DTE Electric filed with the MPSC its five-year distribution operations investment and maintenance plan to improve system reliability. DTE Electric plans to seek regulatory approval for capital expenditures of \$4.6 billion for distribution infrastructure over the 2019-2023 period consistent with prior ratemaking treatment.
Acute physical	Relevant, always included	An example of acute physical risk is the increased frequency of severe storm events (e.g. severe thunderstorms, tornadoes, wind storms, and ice storms), which have an impact on the electrical transmission and distribution system infrastructure (e.g. poles and wires). DTE has a robust Storm Emergency Plan that is put into action during storm emergencies and reviewed for improvement in after action reviews after each storm.
Chronic physical	Relevant, sometimes included	An example of chronic physical risk is decreases or increases in Great Lakes water levels due to changes in precipitation and evaporation patterns, which could have a negative impact on the ability to utilize water for electric generation cooling purposes or in transporting fuel and other raw materials to our plants via water vessels. Warmer average summer and winter temperatures could potentially impact seasonal demand for electricity and natural gas.
Upstream	Relevant, always included	Our mid and long-term planning relies on replacement of our retiring coal generation with natural gas and renewable energy. This includes a reliable and affordable supply of natural gas. Volatility in natural gas prices is an example of an upstream risk related to the viability of future natural gas generation as part of a generation portfolio to meet carbon reduction goals. In addition, the responsible sourcing of natural gas, especially in regards to emissions of fugitive methane, is becoming a key issue for investors and stakeholders and DTE is working through the Edison Electric Institute and American Gas Association in addressing this issue through the Natural Gas Supplier Initiative.
Downstream	Relevant, sometimes included	Significant changes/disruptors in consumer demand for energy is an example of a downstream risk that could impact future planning to meet this demand. The increasing trend towards electrification, including the pace of penetration in the use of electric vehicles by our customers is one area that could significantly impact the demand for electricity on the grid.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

As explained in C2.2b, the Board receives, reviews and assesses reports from the Board Committees and from management relating to enterprise-level risks. Each Board Committee is responsible for overseeing and considering risk issues relating to their respective Committee and reporting their assessments to the full Board at each regularly scheduled Board meeting. When granting authority to management, approving strategies and receiving management reports, the Board and Committees consider, among other things, the risks we face.

The Company also utilizes an internal Risk Management Committee that, among other things, directs the development and maintenance of comprehensive risk management policies and procedures, and sets, reviews and monitors risk limits on a regular basis for enterprise-level risks. The Company's Chief Risk Officer attends all Audit Committee meetings and meets annually with either the joint Audit Committee and Finance Committee or the full Board to update the members on the Company's enterprise-level risk management. The Chief Risk Officer also periodically meets with the other Board Committees and the full Board as may be required. These periodic meetings allow for two-way exchange of company and asset related risk, either from the business unit level that has identified an asset related risk, or from the Board Committee that may have a generally identified risk that could impact assets.

DTE defines substantive impact as a legislative, regulatory, or physical change in supply that would reduce our ability to produce adequate amount of electricity for our customers. Additionally, the definition extends to any financial and strategic impact that an investor would deem substantive, and DTE aims to maintain a reputation of sound risk assessment and management among its investors. For example, extreme weather conditions are identified as a risk in our 2018 10-K Annual Report, which we would consider a substantive financial or strategic impact if it caused damage to the electric distribution system infrastructure and power generation facilities. The 2019 Polar Vortex is an example of an event we would consider substantive; very cold-weather may impact normal daily operations or our facilities. Recovering from these setbacks would result in increased costs from unforeseen maintenance to our power generation facilities, therefore negatively impacting the financial performance of the company.

DTE Energy has understood and evaluated climate-related risks for many years and in 2017 took action to put the company on a pathway to minimize this risk by announcing a commitment to reduce carbon emissions by more than 80 percent by 2050. After continued work on evaluating scenarios for the Integrated Resource Plan (IRP), DTE announced in March 2019 that we will accelerate this goal a full decade, pledging to reduce emissions 80 percent by 2040. DTE is strongly committed to sharply reducing carbon emissions in a manner that is safe, maintains reliability and affordability for our customers. We have invested substantial time and resources in building a strategy to address climate change, which our chairman and CEO, Gerry Anderson, has described as the defining policy issue of our era. Well before the August 2015 announcement of the U.S. Clean Power Plan and the December 2015 adoption of the Paris Agreement, DTE Energy had started its transition toward a lower carbon profile for our generation fleet. Since 2005, we have reduced our carbon dioxide emissions by approximately 21 percent. Our carbon reduction plan assumes a tighter reduction curve than those called for in the Clean Power Plan and the Paris Climate Agreement.

The feasibility of our carbon reduction plan has been confirmed in our 2019 IRP filed with the Michigan Public Service Commission (MPSC) by our electric utility. In the IRP, we analyzed multiple scenarios, including different sensitivities relating to gas prices and electricity market prices, as well as different cost and performance curves for renewable technologies. In evaluating these scenarios, it became clear that DTE Electric can achieve very robust carbon reduction targets in a way that ensures our energy sources remain reliable and the power they produce affordable.

We will achieve our commitment through aggressive investment in energy efficiency, renewables, a new state-of-the-art natural gas combined-cycle plant, our voluntary renewable programs and earlier coal plant retirements. The IRP focuses on the next five years and considers the most affordable and reliable mix of generation sources that are available today. We will continue to revisit and refine our plan as technology develops, customer desires and trends become more clear, and costs decline.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact

<Not Applicable>

Company- specific description

Pending or future legislation or other regulatory actions could have a material impact on DTE Electric's operations and financial position and the rates charged to its customers. Impacts include expenditures for environmental equipment beyond what is currently planned, financing costs related to additional capital expenditures, the purchase of emission credits from market sources, higher costs of purchased power, and the retirement of facilities where control equipment is not economical. DTE Electric would seek to recover these incremental costs through increased rates charged to its utility customers, as authorized by the MPSC. Increased costs for energy produced from traditional coal-based sources due to recent, pending, and future regulatory initiatives, could also increase the economic viability of energy produced from renewable, natural gas fueled generation, and/or nuclear sources, energy waste reduction initiatives, and the potential development of market-based trading of carbon instruments which could provide new business opportunities for DTE Energy's utility and nonutility 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. In June 2019, EPA finalized the Affordable Clean Energy (ACE) Rule to regulate emissions of carbon dioxide existing coal-fired power plants. The ACE Rule will impact at least two DTE Energy coal plants that will be operating beyond 2022 when the State of Michigan is required to submit its implementation plan to EPA. DTE is assembling a team to assess the emission reductions and energy efficiency opportunities that may be achieved at the emission units subject to the ACE Rule. DTE will then work with the Michigan Department of Environmental, Great Lakes and Energy (EGLE) to develop emission standards for units subject to the ACE Rule, based on the results of the company's assessment.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The Company cannot predict the financial impact of this risk at this time.

Management method

We manage these risks through the Board Committee structure described in our response to Question C1.1 and through our established long-term planning processes. We are actively involved in shaping and influencing proposed regulations at both the state and federal level through our involvement with industry groups. We advocate for environmental policy that proceeds in a manner that can be absorbed financially by our customer base.

Cost of management

0

Comment

No additional cost of management - these costs are integrated into existing budgets.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Technology: Costs to transition to lower emissions technology

Type of financial impact

<Not Applicable>

Company- specific description

We manage these risks through the Board Committee structure described in our response to Question C1.1 and through our established long-term planning processes, including the Integrated Resource Planning (IRP) process that is managed by the Michigan Public Service Commission (MPSC). We must seek approval from the MPSC for electric rate increases to support the capital costs of transitioning to a lower carbon supply of electricity.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

3800000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

DTE's recently filed IRP indicates that the cost to transition to lower carbon emitting sources of generation, including renewables, a natural gas plant, and upgrades to a pumped storage hydroelectric facility will be around \$3.8 billion over the next 5 years.

Management method

Actions being implemented to manage this risk include investing in technology and infrastructure with approval by the MPSC. The MPSC approved a \$273.3 million rate increase for DTE Energy in 2019 based upon the initial request of \$476.6 million in July of 2018. An example of technology investments include \$195 million of capital investments into its distribution system. This MPSC approved DTE Electric rate increase results in increased electric bills of residential customers by nearly 9%. Furthermore, DTE is investing \$1 billion in a natural gas plant, which will be the most efficient power plant in the state producing affordable and reliable low-emission electricity for 850,000 homes beginning in 2022. This was approved by the MPSC in early 2018. When it begins operations in 2022, Blue Water Energy Center will represent DTE's single largest step in reducing carbon emissions to date.

Cost of management

0

Comment

No additional cost of management - these costs are integrated into existing budgets.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Transition risk

Primary climate-related risk driver

Market: Increased cost of raw materials

Type of financial impact

<Not Applicable>

Company- specific description

Our mid and long-term planning relies on replacement of our retiring coal generation with natural gas and renewable energy. This includes a reliable and affordable supply of natural gas. Volatility in natural gas prices present a risk to the viability of future natural gas generation as part of a generation portfolio to meet carbon reduction goals.

Time horizon

Medium-term

Likelihood

Unlikely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The Company cannot predict the financial impact of this risk at this time.

Management method

The cost of fuel that we charge customers is managed through a Power Supply Cost Recovery mechanism authorized by the Michigan Public Service Commission that allows DTE Electric to recover through rates its fuel, fuel-related, purchased power costs. Changes in fuel prices, including gas price volatility, would be managed through this program. An action being implemented to mitigate this risk is DTE's diverse portfolio and investment in renewable energy infrastructure. For example, DTE Electric Company and Consumers Energy Company are applying for license renewal of the Ludington Pumped Storage Project. This extends its commitment in hydropower as an alternative energy source that is not dependent upon fuel, and therefore would not be affected by the increased cost of raw materials. DTE also invests in wind and solar renewable energy infrastructure to offset this potential risk. Renewable energy allows DTE to provide reliable energy to its customers with a decreased risk of cost increase due to fuel prices.

Cost of management

0

Comment

No additional cost of management - these costs are integrated into existing budgets.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Reputation: Increased stakeholder concern or negative stakeholder feedback

Type of financial impact

<Not Applicable>

Company- specific description

Incorrect or negative perceptions of the company's approach to addressing climate change may lead to shareholder resolutions requesting additional action from the company.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The estimated financial implications would vary depending on the scope of a proposed shareholder resolution. We cannot predict the financial impact of this risk at this time.

Management method

An action being implemented is the Company's active communication with its shareholders about a broad range of topics through published sustainability reports. For example, DTE voluntarily publishes an annual Environmental, Social, Governance, and Sustainability (ESG) Report. This includes the EEI/AGA Template that allows investors to compare environmental impacts and initiatives across companies within the electric utility and natural gas industries. Furthermore, DTE publishes an annual Corporate Citizenship Global Reporting Initiative (GRI) Report that is indexed to the GRI G4 standards. We respond to ESG stakeholder requests for information such as the CDP Carbon and CDP Water questionnaires. Our shareholder engagement efforts have generated valuable feedback related to renewable energy and sustainability, and we will continue to seek input from our shareholders around these issues.

Cost of management

0

Comment

We do not expect this risk to require an additional cost of management - these costs are integrated into existing budgets.

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact

Increased insurance claims liability arising from climate-related impacts

Company- specific description

Ice storms, wind storms, severe thunderstorms and tornadoes can damage the electric distribution system infrastructure and require us to perform emergency repairs and incur material unplanned expenses. The expenses of storm restoration efforts may not be fully recoverable through the regulatory process. The biggest financial implications associated with the identified risks are the severe weather events for which DTE Electric Co. already has an existing budgeting and planning process in place to manage.

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4600000000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

DTE Electric's capital investments over the 2019-2023 period are estimated at \$4.6 billion for distribution infrastructure which will strengthen the reliability and resiliency of the electric distribution infrastructure.

Management method

DTE Electric maintains a storm emergency and readiness center that is put into action when severe weather causes sudden increases in customer outages. The unpredictability of severe weather events makes it difficult to quantify the potential incremental cost of this risk that would be attributed to climate change. We don't expect physical risks from climate change to impact the company's storm emergency planning process in a way that would impact our normal long-range planning process. We cannot predict whether long term changes in frequency of severe weather events due to climate change will have more of an impact on the electric distribution infrastructure than normal year to year variations in severe weather events. In January 2018, DTE Electric filed with the Michigan Public Service Commission (MPSC) its five year distribution operations investment and maintenance plan to improve system reliability. DTE Electric plans to seek regulatory approval for capital expenditures consistent with prior ratemaking treatment.

Cost of management

0

Comment

No additional cost of management - these costs are integrated into existing budgets.

Identifier

Risk 6

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Rising mean temperatures

Type of financial impact

Reduced revenues from lower sales/output

Company- specific description

Year to year deviations from normal hot and cold weather conditions affect our earnings and cash flow. Warmer than normal winters reduce the need for natural gas for heating, resulting in lower gas sales to retail customers by DTE Gas. However, higher than normal summer temperatures increase electricity demand for residential and commercial air conditioning, and potentially increase peak demand days for DTE Electric.

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

We cannot predict whether long-term trends in average temperatures due to climate change will have more of an impact on the demand for electricity or natural gas than year to year variations from normal temperatures. We cannot predict the financial impacts of this risk at this time.

Management method

We don't expect physical risks from climate change to impact the company in a way that would impact our normal long-range planning process. Meeting customer demand for our products is part of our normal operational planning. We do not see any change as a result of increased temperatures impacting this process.

Cost of management

0

Comment

No additional cost of management - these costs are integrated into existing budgets.

Identifier

Risk 7

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Other

Type of financial impact

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description

Decreases (or increases) in Great Lakes water levels due to changes in precipitation and evaporation patterns could have a negative impact on the ability to utilize water for electric generation cooling purposes or in transporting fuel and other raw materials to our plants via water vessels.

Time horizon

Current

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Financial implications of Great Lakes water level changes could include capital costs to change cooling water intake structures and equipment, and costs to modify existing vessel unloading facilities. A longer shipping season on the Great Lakes due to warmer lake temperatures could have beneficial financial impacts due to a longer season for shipping coal and other commodities transported by ship. We cannot predict the financial impact of Great Lakes water level changes at this time.

Management method

We don't expect physical risks from climate change to impact the company in a way that would impact our normal long-range planning process. Over the past 100 years, Lake Erie and Lake Huron levels have fluctuated by almost 2 meters from highest levels to lowest levels. The company has planned around these fluctuations in the past and is not actively planning to manage or adapt to changes in Great Lakes water levels as a result of climate change.

Cost of management

0

Comment

No additional cost of management - these costs are integrated into existing budgets.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Type of financial impact

Returns on investment in low-emission technology

Company-specific description

Opportunities to invest in low emissions (renewable and natural gas) generation to replace retiring coal-fired units. DTE Electric's capital investments over the 2019-2023 period are estimated at \$2.7 billion for new generation. DTE Electric has retired four coal-fired generation units at the Trenton Channel, River Rouge, and St Clair facilities and has announced plans to retire its remaining thirteen coal-fired generating units. Seven of these coal fired generating units will be retired through 2023 at the Trenton Channel, River Rouge, and St. Clair facilities. The remaining coal-fired generating units at the Belle River and Monroe facilities are expected to be retired by 2040. The retired facilities will be replaced with renewables, energy waste reduction, demand response, and natural gas fueled generation. In April 2018, DTE Electric received approval from the MPSC to build a natural gas fueled combined cycle generation facility to provide approximately 1,100 megawatts of energy beginning in 2022. In August 2018, DTE Electric began construction on its natural gas fueled combined cycle generation facility. In March 2018, DTE Electric filed its 2018 Renewable Energy Plan with the MPSC proposing approximately 1,000 additional megawatts of energy from new wind and solar projects to be completed by 2022. The MPSC had previously approved 300 of the 1,000 additional megawatts for wind projects in an MPSC order received in September 2016. DTE Electric plans to seek regulatory approval for capital expenditures consistent with prior

ratemaking treatment. These opportunities are driven by DTE Energy's goal to reduce carbon emission 80 percent from 2005 levels by 2040 as committed to in the March 2019 Integrated Resource Plan submitted to the Michigan Public Service Commission.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The Michigan Public Service Commission issued an order in DTE Electric's rate case on April 19, 2018 that authorized DTE Electric to raise base rates by \$65 million annually and approved a return on equity of 10% for the company's capital investment of more than more than \$1.1 billion since the last general rate case to replace aging distribution system infrastructure and to invest in the Company's long-term generation assets, lower sales, inflation and working capital increases due primarily to changes in retiree benefit costs. A breakdown of the financial impacts related to the investment in lower emitting generation is not available.

Strategy to realize opportunity

DTE Electric's capital investments over the 2019-2023 period are estimated at \$2.7 billion for new generation. In April 2018, DTE Electric received approval from the MPSC to build a natural gas fueled combined cycle generation facility to provide approximately 1,100 megawatts of energy beginning in 2022. In March 2018, DTE Electric filed its 2018 Renewable Energy Plan with the MPSC proposing approximately 1,000 additional megawatts of energy from new wind and solar projects to be completed by 2022. DTE plans to purchase three new wind parks, two of which will be the largest clean energy projects in the state. The MPSC had previously approved 300 of the 1,000 additional megawatts for wind projects in an MPSC order received in September 2016.

Cost to realize opportunity

2700000000

Comment

DTE Electric's 2019 Integrated Resource Plan summary describes the Company's strategy and plan to transition to a lower carbon emitting generation fleet and to meet a carbon reduction goal of 80 percent below 2005 levels by 2040. The IRP Summary is available on our website: https://geg2a4cqgdz35lnem46az2tb-wpengine.netdna-ssl.com/wp-content/uploads/2019/03/IRP_Summary.pdf

Identifier

Opp2

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Increased customer participation in voluntary green power programs. Customers may opt-in to programs that allow them to buy all or part of their energy from renewable energy sources. DTE Energy currently offers the following voluntary green power programs to customers: 1) Introduced in 2017, MIGreenPower is a voluntary renewable energy program that provides DTE's residential and business customers with an easy and affordable way to reduce their carbon footprint by increasing the percentage of their energy use attributable to local wind and solar energy sources, up to 100 percent. MIGreenPower is available to business owners,

homeowners or renters to help them go green easily and affordably, without installing special equipment or making exterior alterations. Participating customers, who now number more than 5,000, see a slight increase in their monthly bill while supporting Michigan's clean energy future. DTE Electric's 2019 Integrated Resource Plan commits us to an expansion of 465 MW to 715 MW in the five years of our MIGreenPower program to our large business and industrial customers. We're expanding this voluntary initiative to meet the needs of our largest business and industrial customers who are working to meet their own sustainability goals, enabling them to invest in renewable energy. The program is designed to grow and represents a progressive approach to fill market demand. In fact, we've already partnered with Ford and GM to provide renewable energy to support their sustainability goals. Ford has committed to procuring 500,000 MW hours annually of wind energy to power several of its Michigan facilities, including the plant that makes its popular F-150 truck. GM has partnered with DTE to procure 300,000 MW hours annually of wind energy to power its technical center in Warren, Mich., and its headquarters in Detroit. DTE plans to actively market up to 715 MW of voluntary renewable energy programs in the next 5 years. MIGreenPower is Green-e Energy certified for businesses and for residential customers who subscribe at or above 25 percent, and meets the environmental and consumer protection standards set forth by the non-profit Center for Resource Solutions. 2) BioGreenGas is a voluntary residential program for DTE Gas customers which supports the local development of renewable natural gas by using the methane that arises naturally from landfills.

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The voluntary green power program and associated tariff are designed to grow with customer demand in phases. New assets will be added to ensure the program grows with our customers' needs. Initial program assets will be approved through the existing REP contract-approval process, ensuring fairness and cost competitiveness. Understanding that it would not be prudent to bring on excess resources without adequate demand, DTE aims to manage both forecasted demand and renewable energy construction timelines to ensure that there is no extended gap in program availability to new subscribers. The build plan is designed to be flexible and accommodate growing demand over time for DTE's voluntary green power programs.

Strategy to realize opportunity

The MIGreenPower and BioGreenGas programs are managed through established marketing and billing programs. Launched in April 2017, the MIGreenPower program provides interested customers with an easy and affordable way to reduce their carbon footprint by increasing the percentage of their energy usage that is attributed to DTE's newest renewable projects. Customers who subscribe to MIGreenPower can elect to increase the amount of renewable energy they use in 5 percent increments, up to 100 percent. DTE Gas Customers may elect to pay a premium of \$2.50 per month to support the development and advance the utilization of natural gas generated from biogas resources.

Cost to realize opportunity

0

Comment

The company cannot share the cost of these programs at this time.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Other

Type of financial impact

Other, please specify (Customer energy efficiency programs)

Company-specific description

DTE previously committed to increasing energy efficiency at a level equivalent to 1.5 percent of sales annually. Our efforts already have resulted in nearly 700 MW annually (equivalent to the capacity of one large power plant) of reduced energy demand since 2009 when energy efficiency requirements from Michigan Energy legislation went into effect. Improving energy efficiency also results in lower bills for customers; for every dollar invested in energy efficiency, customers save \$5. In DTE's 2019 Integrated Resource Plan, we're building on the success of these efforts by committing to a 1.75 percent annual reduction in energy usage through energy efficiency - 75 percent more than the level required by law. Improving energy efficiency will reduce our carbon emissions even further – meaning we need to generate even less energy. The expansion of those programs also will mean more jobs and business for the Michigan firms that support them. DTE also is a leader in demand response, rewarding residential and business customers who reduce or shift electricity usage during peak periods. We offer our customers the opportunity to reduce their energy use and lower their bills through multiple programs. Our demand-response program is in the top 25 percent nationwide and is the largest in Michigan, with more than 700 MW of program capacity.

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

In 2018, DTE Electric spent \$106.6 million compared to the planned \$105.2 million to implement the electric Energy Waste Reduction (EWR) program, whereas DTE Gas spent \$27.7 million compared to the planned \$26.4 million to implement the gas EWR program. The EWR Programs are paid for by all customers via a surcharge placed on their electric and natural gas bills.

Strategy to realize opportunity

DTE Energy EWR programs are funded through surcharges on customer energy bills that are approved by the Michigan Public Service commission.

Cost to realize opportunity

0

Comment

The annual results of DTE Energy's electric and gas energy waste reduction (EWR or efficiency) programs are submitted annually to the Michigan Public Service Commission.

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Renewable Gas Recovery — Power and Industrial Projects has ownership interests in, and operates, twenty-three gas recovery sites in nine different states. The sites recover methane from landfills and agricultural businesses and convert the gas to generate electricity, replace fossil fuels in industrial and manufacturing operations, or refine to pipeline-quality gas, which can then be used as vehicle fuel.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

We cannot disclose a financial impact figure related to renewable gas recovery activities by DTE power and industrial project operations.

Strategy to realize opportunity

Power and Industrial Projects will continue leveraging its energy-related operating experience and project management capability to develop and grow its varied business lines, including renewable energy businesses. Power and Industrial Projects anticipates building around its core strengths in the markets where it operates. In determining the markets in which to compete, Power and Industrial Projects examines closely the regulatory and competitive environment, new and pending legislation, the number of competitors, and its ability to achieve sustainable margins. Power and Industrial Projects plans to maximize the effectiveness of its related businesses as it expands. Power and Industrial Projects intends to focus on the following areas for growth: • Providing operating services to owners of on-site industrial power plants; • Acquiring and developing renewable gas recovery facilities, renewable energy projects, and other energy projects.

Cost to realize opportunity

1000000000

Comment

Power and Industrial Projects' capital investments over the 2019-2023 period are estimated at \$1.0 billion to \$1.4 billion for industrial energy services and renewable natural gas (RNG) projects.

Identifier

Opp5

Where in the value chain does the opportunity occur?

Investment chain

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Type of financial impact

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description

DTE Electric priced its inaugural offering of green bonds on April 30, 2018. The \$525 million in bonds will finance "green" investments, including low-carbon projects like renewable energy and energy efficiency. DTE is the fifth investment-grade energy company in the nation – and the first company in Michigan – to sell green bonds. With a maturity of 30 years at an annual fixed coupon of 4.05 percent, a DTE Electric green bond helps: •Fund the development and construction of solar arrays and wind farms, including the transmission infrastructure to support renewable energy facilities •Strengthen energy efficiency programs to help

Michigan residents and businesses save energy and reduce bills

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

525000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The inaugural offering of DTE Energy Green Bonds was \$525 million.

Strategy to realize opportunity

Green bonds will help finance our low-carbon investments, which will enable us to continue moving Michigan toward a cleaner, more sustainable energy future. This is a tangible way for investors to demonstrate their commitment to the environment, and is one of many steps in our aggressive plan to reduce carbon emissions by more than 80 percent by 2050. DTE is among the first energy companies to offer this green investment option DTE utilized an investment bank to help structure and launch the green bond offering.

Cost to realize opportunity

0

Comment

The cost to realize the Green Bond activity cannot be disclosed at this time.

Identifier

Opp5

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

In June, 2019 DTE announced the launch of its Charging Forward program to drive electric vehicle education, infrastructure and adoption. Adoption of electric vehicles (EVs) and deployment of charging infrastructure in Michigan lags that of other states. This inhibits the benefits EVs can provide to DTE customers, the grid, and Michigan Charging Forward will help to realize the following universal benefits through distinct but complementary program components: •Improved load factor and system efficiency through at home off peak charging •Downward pressure on rates by spreading utility fixed costs over a greater volume of sales •Minimize distribution system impact by partnering with site hosts for capacity conscious deployment DTE developed the Charging Forward program under the following guiding principles • Help customers realize the benefits of EVs • Efficiently integrate EV load with the DTE Electric distribution system • Reduce barriers to EV adoption • Participate in infrastructure deployment through thoughtful partnerships

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

We cannot disclose a financial impact figure related to the adoption of electric vehicles by our customers and the Charging Forward program.

Strategy to realize opportunity

The strategy consists of three components: 1. Customer Education and Outreach - Increase EV awareness, engage current EV drivers, and inform/recruit potential site hosts 2. Residential Smart Charger Support - Provide up to \$500 rebates to support installation of approximately 2,800 smart chargers 3. Charging Infrastructure Enablement - Utilize a make-ready model to support the deployment of approximately 32 DC fast chargers with a rebate of \$20,000 per charger and approximately 1,000 Level 2 ports with a rebate of \$2,500 per port. Also, support charging infrastructure for electrified fleets.

Cost to realize opportunity

13100000

Comment

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted	DTE Electric and DTE Gas are providing energy waste reduction services to customers in accordance with Michigan legislation and DTE Electric announced in its 2019 Integrated Resource Plan that it would increase its commitment to increase energy efficiency to 1.75 percent of annual sales, 75 percent more than the level required by law. We have also developed voluntary renewable energy programs for both DTE Electric and DTE Gas that customers may subscribe to in helping to meet customer's own renewable energy goals. DTE Power and Industrial Projects has ownership interests in, and operates, twenty-three gas recovery sites in nine different states. The sites recover methane from landfills and agricultural businesses and convert the gas to generate electricity, replace fossil fuels in industrial and manufacturing operations, or refine to pipeline-quality gas, which can then be used as vehicle fuel. Climate related risks are driving the transition of DTE Electric's generation fleet to cleaner alternatives and are moving DTE's gas operations to consider cleaner alternatives for supplying gas to our customers. These have a high impact on the types of products and services that we provide to our customers.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	The transition to other fuel sources directly impacts our supply chain. DTE is part of the Electric Utility Industry Sustainable Supply Chain Alliance (EUISSCA), an organization of utilities and suppliers collaborating to advance sustainability best practices in supply chain activities and supplier networks. The Company uses The Sustainability Project (TSP) supplier survey tool, which was launched in 2018, to assess suppliers' environmental impacts. Additionally, variations in weather can impact electricity demand among customers. For example, extremely high or extremely low temperatures can increase electricity demand. Extreme weather events can also interrupt operations, resulting in infrastructure damage and outages. Climate related risk has a high impact on our fuel supply chain as risks are driving the transition from higher emitting fuel sources like coal to low and zero emitting generation, such as renewables and natural gas.
Adaptation and mitigation activities	Not impacted	We have not identified impacts that are above or beyond normal fluctuations in physical risks and that are not already included in current business planning. We have a robust Storm Emergency Plan that is activated by DTE Electric to address customer outages caused by severe weather events.
Investment in R&D	Impacted for some suppliers, facilities, or product lines	We fund and participate in R&D programs and projects managed by the Electric Power Research Institute (EPRI), which helps to identify cost-effective strategies and evaluate alternatives for meeting future generation requirements, including environmental and climate related requirements. For example, EPRI's recent GHG Accounting methods review helped in confirming our climate reduction goals that are summarized in the IRP and that utilize net sales/purchases in addition to direct emissions from our power plants to calculate our goals. EPRI's support on understanding the development of 2-degree C climate scenarios and setting climate goals provides DTE with information to respond to stakeholders (e.g. shareholders, IRP intervenors) on how DTE Energy's carbon goals align with goals being advocated in the international policy community. Climate related risks have a medium impact on the company's investment in R&D depending on the nature of the climate-related issue that requires research.
Operations	Impacted	We have committed to a carbon reduction goal that will achieve a 32 percent reduction in CO2 emissions from 2005 levels by the early 2020s, a 50 percent reduction by 2030, an 80 percent reduction by 2040 and 80 percent or higher reduction by 2050. As explained in our publicly available IRP Summary, our response to C2.4a above and elsewhere in the questionnaire, these goals will be achieved through aggressive investment in energy efficiency, renewables, the Blue Water Energy Center natural gas plan, and our voluntary renewables programs, as well as through earlier coal retirements. While we reduce carbon emissions from our electric generation, DTE Gas has also committed to reduce emissions of methane by more than 80 percent by 2040. We're controlling methane leaks by replacing hundreds of miles of older natural gas pipelines with safer, air-tight materials and through maintenance upgrades at DTE natural gas compressor stations. Risks/opportunities have a high impact on the company's operations, as risks/opportunities are driving the transition to renewables and natural gas.
Other, please specify	Impacted	DTE Electric priced its inaugural offering of green bonds in April 2018. The \$525 million in bonds will finance "green" investments, including low-carbon projects like renewable energy and energy efficiency. DTE is the fifth investment-grade energy company in the nation – and the first company in Michigan – to sell green bonds. In February 2019, DTE Electric issued its second offering of green bonds in the amount of \$650 million.

C2.6

(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.

	Relevance	Description
Revenues	Impacted	DTE Energy must seek approval from the Michigan Public Service Commission to increase electricity rates charged to customer to fund capital expenditures, including new generation to replace retiring coal generation. In April 2018 an MPSC order authorized DTE Electric to raise base rates by \$65 million and approved a return on equity ("ROE") of 10%. This order responded to an April 2017 application filed by DTE requesting a general rate increase of approximately \$231 million. The need for the rate increase was driven primarily by the Company's capital investment of more than \$1.1 billion since the last general rate case to replace aging distribution system infrastructure and to invest in the Company's long-term generation assets. In July 2018, DTE submitted a new rate case request that determined the need for additional annual revenues in the amount of approximately \$328 million effective as early as June 6, 2019, in order to recover, among other things, capital costs associated with the addition of new generation. Revenues have a high impact on our financial planning process.
Operating costs	Not impacted	General operating costs are not specifically impacted by climate risks. For example, DTE Energy has a robust storm emergency plan in place that is activated for customer outages triggered by severe weather events. Climate related risks have little or no impact on the financial planning related to operating costs for storm emergencies in Michigan.
Capital expenditures / capital allocation	Impacted	In order to meet DTE Energy's commitment to carbon reductions and to replace retiring coal generation, the company needs to invest in cleaner replacement generation. The company filed an Integrated Resource Plan (IRP) in March 2019 that accelerates our carbon reduction goal to 80 percent below 2005 levels by 2040 and provides a pathway to meet this goal. The IRP indicates that DTE will invest in \$2 billion on renewable energy by 2024 and \$1 billion on the construction of the Blue Water Energy Center natural gas plant scheduled for initial operation in 2022. Funding for capital expenditures on renewables will be financed in part by Green Bonds that were issued by DTE Energy in April 2018 and again in February 2019. Capital expenditures to meet our climate targets have a high impact on our financial planning process.
Acquisitions and divestments	Impacted	Environmental and climate-related risks are evaluated during the due diligence process for proposed mergers and acquisitions of properties. For example, Appalachia Gathering System is a midstream natural gas asset located in Pennsylvania and West Virginia. DTE Energy purchased 100% of AGS in October 2016, Stonewall Gas Gathering is a midstream natural gas asset located in West Virginia. DTE Energy purchased 55% of SGG in October 2016. Both AGS and SGG are part of DTE Energy's Gas Storage and Pipelines segment. Gas Storage and Pipelines expects to continue its steady growth plan by expanding existing assets, acquiring and/or developing new assets that are typically supported with long-term customer commitments. The focus will be on opportunities in the Midwest to Northeast region to supply natural gas to meet growing demand and displace less attractive supply from certain regions in North America. Much of the growth in demand for natural gas is expected to occur in the eastern Canada and the northeast U.S. regions. Climate risks and opportunities are considered during the due diligence process and are a significant driver impacting mergers and acquisitions. The ability to proceed with proposed acquisitions and/or divestments plays a strong role in our financial planning process.
Access to capital	Impacted	DTE Energy must seek approval from the Michigan Public Service Commission to increase electricity rates charged to customer to fund capital expenditures, including new generation to replace retiring coal generation. In April 2018 an MPSC order authorized DTE Electric to raise base rates by \$65 million and approved a return on equity ("ROE") of 10%. This order responded to an April 2017 application filed by DTE requesting a general rate increase of approximately \$231 million. The need for the rate increase was driven primarily by the Company's capital investment of more than \$1.1 billion since the last general rate case to replace aging distribution system infrastructure and to invest in the Company's long-term generation assets, In July 2018, DTE submitted a new rate case request that determined the need for additional annual revenues in the amount of approximately \$328 million effective as early as June 6, 2019, in order to recover, among other things, capital costs associated with the addition of new generation. DTE Electric priced its inaugural offering of green bonds in May 2018. Proceeds from the \$525 million in green bonds will be used to finance expenditures for solar and wind energy, payments under power purchase agreements for solar and wind energy, and energy optimization programs. DTE is the fifth investment-grade energy company in the nation – and the first company in Michigan – to sell green bonds. Access to capital has a high impact on our financial planning process.
Assets	Impacted	The company is potentially impacted by regulatory risks associated with climate change issues that impact financial planning for construction of new assets (i.e. natural gas power plants, renewable generation, natural gas pipelines) and planning for retirement of existing assets. These risks are discussed in depth in the DTE Energy's 2018 10K. Climate-related risks and opportunities have a high impact on our financial planning for construction of new assets.
Liabilities	Impacted	The company is potentially impacted by regulatory uncertainty associated with climate change issues that create liabilities and potentially impact financial planning. If increased regulations of GHG emissions are implemented, the operations of DTE Electric's fossil-fueled generation assets may be significantly impacted. Since there can be no assurances that environmental costs may be recovered through the regulatory process, the Registrants' financial performance may be negatively impacted as a result of environmental matters. These risks are discussed in depth in the DTE Energy's 2018 10K. Climate risks related to regulatory uncertainty can highly impact financial planning.
Other	Please select	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative and quantitative

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

Yes

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

i. How the business strategy has been influenced.

Our CEO led the Edison Electric Institute and his peer electric utility executives in negotiations with the Environmental Protection Agency on development of the final federal Clean Power Plan rule that required states to implement plans to reduce carbon emissions from electric utilities by 2030. The Clean Power Plan was finalized in late 2015 but was stayed by the U.S. Supreme Court and repealed by the current EPA in June 2019. During negotiations on the final Clean Power Plan, our company ran many carbon reduction scenarios to 2030 and beyond. Recognizing that pressure to reduce carbon emissions from the electric utility sector will continue, the company's scenario planning exercise identified potential pathways for meeting an 80% reduction target by 2050.

Starting in 2018, DTE began reviewing the long-term generation strategy for DTE Electric and ran carbon reduction scenarios to 2040 for inclusion with DTE's Integrated Resource Plan (IRP) that was submitted to the Michigan Public Service Commission in March 2019. These scenarios helped develop achievable pathways to meet a carbon reduction goal of 80% below 2005 levels by 2040.

ii. An example of how the business strategy has been influenced.

DTE led the energy industry with our 2017 commitment to reduce carbon emissions by more than 80% by 2050. In our March 2019 IRP, we announced we are accelerating our goal by a full decade, pledging to reduce emissions by 80% by 2040, when we will retire our last coal plant. And in the near-term, we have committed to a 50% carbon reduction by 2030. In the IRP, we analyzed multiple scenarios, including different sensitivities relating to gas prices and electricity market prices, as well as different cost and performance curves for renewable technologies. In evaluating these scenarios, it became clear that our IRP can support very robust carbon reduction targets.

iii. What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy?

DTE Energy's industry-leading commitment to an 80% reduction in carbon emissions by 2040 was the most substantial business decision made in 2019 (with the process starting in 2018) that was influenced by climate related issues.

iv. What aspects of climate change have influenced the strategy (e.g. need for adaptation, regulatory changes, or opportunities to develop green business);

Expected continuation of regulatory, investor and other stakeholder pressure to reduce (mitigate) carbon emissions from the electric sector are the primary climate-related influences on our business strategy.

v. Climate change influences on short-term strategy.

DTE Electric's capital investments over the 2019-2023 period are estimated at \$2.7 billion for new generation. DTE Electric has retired three coal-fired generation units and has announced plans to retire an additional eight coal-fired generating units through 2023. These will be replaced with natural gas-fired generation and renewables (wind and solar).

vi. Climate change influences on long-term strategy.

Potential climate change policy and other regulatory pressures are factored into long-term planning and decisions for future investment needs within DTE Electric Co. and other business units. We will achieve our commitments to reduce carbon emissions through aggressive investment in energy efficiency, renewables, a new state-of-the-art natural gas combined-cycle plant, our voluntary renewable programs and earlier coal plant retirements. In our 2019 Integrated Resource Plan, we demonstrate we can do this in a way that ensures our energy sources remain reliable and the power they produce affordable. We will continue to revisit and refine our plan as technology develops, customer desires and trends become more clear, and costs decline.

vii. How we are gaining strategic advantages over competitors.

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. We do not expect significant competition for distribution to any group of customers in the near term. 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. Gas Storage and Pipelines has competition from other pipelines and storage providers. Operations are dependent upon a limited number of customers and the loss of any one or a few customers could have a material adverse effect on the results of Gas Storage and Pipelines. There are limited competitors for Power and Industrial Projects' existing disparate businesses who provide similar products and services. Power and Industrial Projects examines closely the regulatory and competitive environment, new and pending legislation, the number of competitors, and its ability to achieve sustainable margins.

viii. How the Paris Agreement has influenced the business strategy.

Policies (e.g. the Clean Power Plan) that are implemented to support GHG reduction commitments made by the U.S. under the Paris Agreement influence our business strategy. The uncertainty of these policies following the withdrawal of the U.S. from the Paris Agreement and the repeal of the Clean Power Plan has not changed DTE Energy's long-term carbon reduction strategy. DTE's carbon reduction goals exceed the reductions that would have been required by the Clean Power Plan and the Paris Agreement.

C3.1d

(C3.1d) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenarios	Details
Other, please specify (Climate scenarios to support integrated resource plan (IRP))	We use forward-looking scenario analyses to support our integrated resource plan (IRP) efforts for submittal to the Michigan Public Service Commission. These scenarios also assess the feasibility of reducing emissions from DTE Energy 80% by 2040. These scenarios provide DTE with achievable pathways for meeting carbon reduction targets that are aligned with a multitude of pathways that the scientific community has identified as capable of limiting global warming to less than 2-degrees C above pre-industrial levels. We have not followed prescribed methods for conducting climate scenario analyses. Marketed approaches for conducting climate scenario analyses (e.g. SBTi, Ceres, UNEP FI Pilot) have limited considerations of uncertainty with regards to pathways that are consistent with limiting warming to 2-degrees C. In addition, these approaches do not consider uncertainty in climate policy design that would drive countries, regions and/or sectors to implement mandatory carbon reduction programs. Company flexibility in GHG reduction levels is constrained or not considered in these approaches as well. Flexibility that allows coordination within or across sectors or an entire economy provides opportunities for more cost-effective solutions to society. For more information on the limitations of these approaches, please see: Rose, SK, M Scott, 2018. Grounding Decisions: A Scientific Foundation for Companies Considering Global Climate Scenarios and Greenhouse Gas Goals. EPRI, Palo Alto, CA. 3002014510. Available at: https://www.epri.com/#/pages/product/000000003002014510/?lang=en-US

C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e

(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e) Disclose details of your organization’s low-carbon transition plan.

Details of DTE Energy’s low-carbon transition plan have been discussed in the answers to Questions 3.1a through 3.1b above and elsewhere in our response to this questionnaire. In addition, we have publicly disclosed details of DTE’s low-carbon transition plan in our **2019 Integrated Resource Plan Summary** and our **2019 ESG and Sustainability Report**. Both reports are available at: <https://empoweringmichigan.com/dte-impact/performance/>

In summary, we will achieve our commitment through aggressive investment in energy efficiency, renewables, a new state-of-the-art natural gas combined-cycle plant, our voluntary renewable programs and earlier coal plant retirements. We will continue to revisit and refine our plan as technology develops, customer desires and trends become more clear, and costs decline.

Accelerating Coal Plant Retirements - In 2022, DTE will retire three aging power plants – River Rouge, St. Clair and Trenton Channel, which account for nearly 20% of our total generation – one

year earlier than we originally intended. We will phase out our last two coal plants over the next 20 years – Belle River will retire by 2030 and Monroe Power Plant by 2040.

Doubling Renewable Energy by 2024 - DTE is Michigan’s largest renewable-energy provider. By 2024, we will more than double our wind and solar energy, generating enough clean energy to

power 800,000 Michigan homes. By the time we remove all coal from our generation fleet in 2040, our renewable-energy portfolio will have quadrupled.

Combating climate change must be a cross-industry effort, so we’ve expanded our MIGreenPower voluntary renewables program to our large business and industrial customers who are working to meet

their own sustainability goals, enabling them to invest in renewable energy and help drive our state to an even cleaner future. We recently announced partnerships with Ford, General Motors and the

University of Michigan that will provide 1 million megawatt-hours (MWh) of renewable energy collectively for these three customers annually.

Increasing Energy Efficiency - When homes and businesses reduce their energy use, we can generate less electricity, benefiting both customers' pocketbooks and the environment. We have raised our commitment to increasing energy efficiency at a level equivalent to 1.75% of sales annually, 75% more than the level required by law, and up from our previous 1.5% commitment. Our efforts already have resulted in nearly 700 MW annually of reduced energy demand since 2009, equivalent to the energy produced by one large power plant.

Ensuring balanced and reliable energy - Natural gas will help us make the transition to renewables in a way that provides the reliability Michigan residents need, while significantly reducing our carbon footprint. Natural gas plants are a highly efficient, low-emission energy source that provide reliable, on-demand, 24/7 electricity. The Blue Water Energy Center (BWEC) will be a state-of-the-art, natural gas combined cycle plant and one of the most efficient plants in the United States. It will help to replace three retiring coal plants, allowing Michigan to have both a sharp reduction in carbon emissions

and an always-available energy source.

The Ludington Pumped Storage Power Plant, which DTE co-owns with Consumers Energy, is located on a 1,000-acre site on Lake Michigan in Mason County and is the second-largest pumped storage facility in the U.S. The plant generates hydroelectric power and supports our renewable generation because it acts like a giant battery that can be tapped when renewable output drops. The reversible turbines work as pumps when energy is plentiful and low-cost, such as when the sun is shining and the wind is blowing, and as power generators when demand is higher and renewable sources less abundant. An \$800 million upgrade project to replace each of the six turbines is on schedule to be completed in 2020.

DTE Gas Methane Reductions - While we reduce carbon emissions from our electric generation, DTE Gas also has committed to reduce emissions of another greenhouse gas - methane - by more than 80 percent by 2040. We're controlling methane leaks by replacing hundreds of miles of older natural gas pipelines with safer, air-tight material and through maintenance upgrades at DTE natural gas compression stations.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Scope

Scope 1

% emissions in Scope

94

Targeted % reduction from base year

80

Base year

2005

Start year

2017

Base year emissions covered by target (metric tons CO2e)

37700000

Target year

2040

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

26

Target status

Underway

Please explain

DTE Energy led the industry in setting an aggressive mid-century target in 2017. The 2017 carbon reduction commitment was 30 percent below 2005 levels by 2023, 45 percent by 2030, 75 percent by 2040, and more than 80 percent by 2050. In 2019, DTE accelerated this carbon reduction commitment in the Integrated Resource Plan (IRP) submitted to the Michigan Public Service Commission. The 2019 target is 32 percent below 2005 levels by 2023, 50 percent below by 2030, 80 percent below by 2040 and more than 80 percent below by 2050. Emissions in 2018 were 21 percent below 2005 levels, which represents 26 percent of the overall goal of 80 percent reduction.

Target reference number

Abs 2

Scope

Scope 1

% emissions in Scope

94

Targeted % reduction from base year

50

Base year

2005

Start year

2017

Base year emissions covered by target (metric tons CO2e)

37700000

Target year

2030

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

42

Target status

Underway

Please explain

DTE Energy led the industry in setting an aggressive mid-century target in 2017. The 2017 carbon reduction commitment was 30 percent below 2005 levels by 2023, 45 percent by 2030, 75 percent by 2040, and more than 80 percent by 2050. In 2019, DTE accelerated this carbon reduction commitment in the Integrated Resource Plan (IRP) submitted to the Michigan Public Service Commission. The 2019 target is 32 percent below 2005 levels by 2023, 50 percent below by 2030, 80 percent below by 2040 and

more than 80 percent below by 2050. Emissions in 2018 were 21 percent below 2005 levels, which represents 42 percent of the milestone goal of 50 percent reduction.

Target reference number

Abs 3

Scope

Scope 1

% emissions in Scope

94

Targeted % reduction from base year

32

Base year

2005

Start year

2017

Base year emissions covered by target (metric tons CO2e)

37700000

Target year

2023

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

66

Target status

Underway

Please explain

DTE Energy led the industry in setting an aggressive mid-century target in 2017. The 2017 carbon reduction commitment was 30 percent below 2005 levels by 2023, 45 percent by 2030, 75 percent by 2040, and more than 80 percent by 2050. In 2019, DTE accelerated this carbon reduction commitment in the Integrated Resource Plan (IRP) submitted to the Michigan Public Service Commission. The 2019 target is 32 percent below 2005 levels by 2023, 50 percent below by 2030, 80 percent below by 2040 and more than 80 percent below by 2050. Emissions in 2018 were 21 percent below 2005 levels, which represents 66 percent of the milestone goal of 32 percent reduction.

Target reference number

Abs 4

Scope

Scope 1

% emissions in Scope

1

Targeted % reduction from base year

80

Base year

2011

Start year

2018

Base year emissions covered by target (metric tons CO2e)

450300

Target year

2040

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

26

Target status

Underway

Please explain

DTE Gas has also committed to reduce emissions of methane by more than 80 percent by 2040. We're controlling methane leaks by replacing hundreds of miles of older natural gas pipelines with safer, air-tight materials and through maintenance upgrades at DTE natural gas compressor stations. In 2018 we achieved a 21 percent reduction from 2001 levels in our methane leak rate, which represents 26 percent of the total reduction goal of 80 percent below 2011 levels.

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.**Target**

Renewable electricity production

KPI – Metric numerator

25 percent renewable portfolio standard

KPI – Metric denominator (intensity targets only)

Not Applicable - Percentage-based target

Base year

2009

Start year

2008

Target year

2030

KPI in baseline year

1

KPI in target year

25

% achieved in reporting year

10

Target Status

Underway

Please explain

In May 2018, DTE Energy and Consumers Energy announced plans to produce cleaner energy in Michigan, targeting at least a 50 percent Clean Energy Goal by 2030— achieved through a combination of investments in at least 25 percent renewable energy, and the remaining through energy efficiency. DTE and Consumers Energy have both announced plans to reduce carbon emissions by more than 80 percent in the coming decades. Leveraging the already aggressive framework established in Michigan's 2016 bipartisan energy law, the state's two largest energy companies are advancing their plans to invest in Michigan in conjunction with an agreement by Clean Energy, Healthy Michigan (CEHM) to place aside a ballot proposal to increase the state's renewable portfolio standard. DTE Energy has also complied with all state-mandated targets for renewable energy. Previous legislation had required a 10 percent renewable standard by 2015, which we have met or exceeded each applicable year. The most recent energy legislation sets a 12.5 percent renewable energy target by 2019 and 15 percent by 2021. DTE Energy is well positioned to meet these future goals with the addition of new generation resources currently planned or under development. The commitment to a 25 percent renewable portfolio standard by 2030 as well as the state-mandated targets for renewables were incorporated into the Integrated Resource Plan submitted to the Michigan Public Service Commission in March 2019.

Part of emissions target

In 2019, DTE accelerated our carbon reduction commitment in the Integrated Resource Plan (IRP) submitted to the Michigan Public Service Commission. The 2019 target is 32 percent below 2005 levels by 2023, 50 percent below by 2030, 80 percent below by 2040 and more than 80 percent below by 2050. This renewable energy target will help the company meet the overall carbon reduction commitment.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Target

Energy usage

KPI – Metric numerator

1.0%, 1.5%, 1.625%, & 1.75% annual improvement in energy efficiency (reducing energy usage for electric utilities)

KPI – Metric denominator (intensity targets only)

Not Applicable - Percentage-based target

Base year

2009

Start year

2009

Target year

2021

KPI in baseline year

0.3

KPI in target year

1.75

% achieved in reporting year

1.55

Target Status

Underway

Please explain

Michigan's Energy Waste Reduction (EWR) standard, created under Public Act 295 of 2008 (PA 295 or the Act) as amended by PA 342 of 2016 (PA 342), requires all gas and electric utilities in the state to implement programs to reduce overall energy usage by specified targets, in order to reduce the future costs of gas and electric service to customers. Electric utilities were required to achieve 0.3 percent savings in 2009; 0.5 percent in 2010; 0.75 percent in 2011; and 1.0 percent in 2012 and each year thereafter until the end of 2021. Beyond 2021, the level of electric energy efficiency savings will be determined by the utility's Integrated Resource Plan. Performance Incentives are built into the 2016 Michigan Legislation to encourage utilities to go beyond the minimum required energy savings (i.e. 1.0 percent from 2012 to 2021). DTE's goals using Performance Incentives for this period are as follows: 2012-2016: 1.0% 2017-2019: 1.5% 2020: 1.625% 2021: 1.75%

Part of emissions target

In 2019, DTE accelerated our carbon reduction commitment in the Integrated Resource Plan (IRP) submitted to the Michigan Public Service Commission. The 2019 target is 32 percent below 2005 levels by 2023, 50 percent below by 2030, 80 percent below by 2040 and more than 80 percent below by 2050. DTE previously committed to increasing energy efficiency at a level equivalent to 1.5 percent of sales annually. These efforts already have resulted in nearly 700 MW annually of reduced energy demand since 2009, equivalent to the energy produced by one large power plant. With the 2019 IRP, we're building on the success of these efforts by committing to a 1.75 percent annual improvement in energy efficiency - 75 percent more than the level required by law. This energy efficiency target will help the company meet the overall carbon reduction commitment.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Target

Energy usage

KPI – Metric numerator

0.75% and 1% annual reduction in energy usage for natural gas utilities

KPI – Metric denominator (intensity targets only)

Not Applicable - Percentage-based target

Base year

2009

Start year

2009

Target year

2021

KPI in baseline year

0.1

KPI in target year

1

% achieved in reporting year

1.02

Target Status

Underway

Please explain

Michigan's Energy Waste Reduction (EWR) standard, created under Public Act 295 of 2008 (PA 295 or the Act) as amended by PA 342 of 2016 (PA 342), requires all gas and electric utilities in the state to implement programs to reduce overall energy usage by specified targets, in order to reduce the future costs of gas and electric service to customers. Natural gas utilities must achieve 0.1 percent savings in 2009 based on annual percentage of planned retail sales; 0.25 percent in 2010; 0.5 percent in 2011; and 0.75 percent in 2012 and each year thereafter. Performance Incentives are built into the 2016 Michigan Legislation to encourage utilities to go beyond the minimum required energy savings (i.e. 0.75 percent from 2012 to 2021 for natural gas utilities). DTE's natural gas energy savings goals using Performance Incentives for this period are as follows: 2012-2016: 0.75% 2017-2021: 1.0%

Part of emissions target

This goal is aligned with our commitment, including our methane reduction commitment, to reduce carbon emissions 80 percent by 2040,

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	3	16450
Implemented*	0	
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative type

Energy efficiency: Building services

Description of initiative

Other, please specify (A combination of lighting, HVAC and building management systems at DTE Gas facilities in 2018)

Estimated annual CO2e savings (metric tonnes CO2e)

1850

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

421880

Investment required (unit currency – as specified in C0.4)

700000

Payback period

1-3 years

Estimated lifetime of the initiative

<1 year

Comment

Lighting replacement, improvement and upgrades to DTE Gas facilities in 2018 resulted in estimated energy efficiency savings of 3,259,184 kWhr from all projects completed. The annual estimated savings from the projects in 2018 was \$421,879. Project cost is approximate and is based on investments in lighting fixtures less rebates received for energy efficiency upgrades.

Initiative type

Energy efficiency: Building services

Description of initiative

Other, please specify (Lighting, HVAC, window replacement, waste reduction and program management at DTE administrative offices, including headquarters, that are managed by DTE Facilities organization .)

Estimated annual CO2e savings (metric tonnes CO2e)

3100

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

12700000

Payback period

No payback

Estimated lifetime of the initiative

6-10 years

Comment

DTE Energy has committed to reducing its own utilization of energy 25% by 2022 at Company Headquarters and administrative offices managed by the DTE Corporate Facilities group. The proposed energy efficiency projects require capital funding of \$12.7 million and O&M funding of \$1.9 million through 2022. The net present value of energy efficiency savings for the period 2017-2027 varies from a net positive using commercial electric rates, to an equivalent net negative using the power supply cost recovery rates that DTE actually pays for electricity, which is why we are indicating zero payback. These energy efficiency projects are awaiting funding approval.

Initiative type

Fugitive emissions reductions

Description of initiative

Oil/natural gas methane leak capture/prevention

Estimated annual CO2e savings (metric tonnes CO2e)

11500

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

230000

Payback period

No payback

Estimated lifetime of the initiative

16-20 years

Comment

In 2018 DTE Gas committed to reduce methane emissions from its natural gas utility operations by more than 80 percent by 2040, part of a broad sustainability initiative the company has launched to reduce greenhouse gas emissions and address climate change while continuing to provide customers with reliable and affordable power. DTE is achieving these fugitive methane reductions by replacing steel and cast iron natural gas distribution pipelines at a more accelerated pace than recommended by the Environmental Protection Agency and by reducing equipment leaks at natural gas compressor stations. Funding for this initiative through 2023 has been approved by the Michigan Public Service Commission (MPSC). The estimated CO2-e savings are for 2018 only and may be higher or lower each year depending on the amount of pipeline replaced. The investment required is annual investment as proposed to the MPSC for the years 2021 through the end of the initiative.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Construction of renewable energy sources to meet a renewable portfolio standard, as well as programs to reduce demand through energy efficiency measures is required under Michigan Energy Legislation. Environmental regulations aimed at conventional pollutants such as sulfur dioxide, oxides of nitrogen, and mercury will drive emission reductions from coal-fired power plants that will also reduce emissions of greenhouse gases. Future compliance with federal greenhouse gas rules will drive additional curtailment of coal-fired generation and require investment in lower emitting generation sources such as renewables and natural gas fired power plants.
Partnering with governments on technology development	DTE's Smart Grid Investment initiative was funded in part by a grant from the U.S. Department of Energy. We have also applied for funding at the state level for research on electric vehicles and their impact on the electric power system.
Dedicated budget for energy efficiency	Building efficiency improvements described in our response to Question 4.3b are funded through dedicated energy efficiency budgets; however, payback amounts are challenging because DTE Electric's internal company rate is less than commercial rates charged to customers.
Employee engagement	DTE Energy is in the process of establishing and executing an employee communications and ambassador program, including change management strategies, to build awareness of and engagement in sustainability efforts. This includes a branding and communications campaign around environmental leadership, outlining launch of both internal and external campaigns and messaging.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

DTE Electric customer Energy Waste Reduction Program offerings

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (EPA Equivalency Calculator)

% revenue from low carbon product(s) in the reporting year

1.9

Comment

514,806 metric tons of CO2 emissions avoided in 2018 as a result of DTE Electric customer savings of 728 GWh. Revenues collected for DTE Electric EWR programs in 2018 were \$102.1 million which represents 1.9% of total DTE Electric operating revenues of \$5,298 million in 2018.

Level of aggregation

Group of products

Description of product/Group of products

DTE Gas customer Energy Waste Reduction Program offerings

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (EPA Equivalency Calculator)

% revenue from low carbon product(s) in the reporting year

1.7

Comment

96,404 metric tons of CO2 emissions avoided in 2018 as a result of 1,750 MMcf of DTE Gas customer savings. Revenues collected for DTE Gas EWR programs in 2018 were \$23.9 million which represents 1.7% of total DTE Gas operating revenues of \$1,436 million in 2018.

Level of aggregation

Product

Description of product/Group of products

Addressing climate change must be a cross-industry effort, so we've expanded our MIGreenPower program to our large business and industrial customers. Introduced in 2017, MIGreenPower is a voluntary renewable energy program that provides DTE's residential and business customers with an easy and affordable way to reduce their carbon footprint by increasing the percentage of their energy use attributable to local wind and solar energy sources, in 5 percent increments up to 100 percent. Participating customers – who now number more than 5,000 – see a slight increase in their monthly bill while knowing they're helping to support Michigan's clean energy future. We're expanding this voluntary initiative to meet the needs of our largest business and industrial customers who are working to meet their own sustainability goals, enabling them to invest in renewable energy, which will help drive our state toward an even cleaner future. The program is designed to grow and represents a progressive approach to fill market demand. We've already partnered with Ford and GM to provide renewable energy to support their sustainability goals. Ford has committed to procuring 500,000 MW hours annually of wind energy to power several of its Michigan facilities, including the plant that makes its popular F-150 truck. GM has partnered with DTE to procure 300,000 MW hours annually of wind energy to power its technical center in Warren, Mich., and its headquarters in Detroit. DTE also is exploring opportunities to expand its residential offerings to those interested in more local, community renewable energy.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (MiGreenPower is Green-e Energy Certified)

% revenue from low carbon product(s) in the reporting year

0

Comment

We cannot disclose the percent revenue attributed to the MiGreen Power program at this time.

Level of aggregation

Product

Description of product/Group of products

The DTE's BioGreen Gas program is a voluntary renewable energy program for DTE Gas Customers. Customers elect to pay a premium of \$2.50 per month to support the development and advance the utilization of natural gas generated from landfills and other biogas resources.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (EPA Landfill Methane Outreach Program)

% revenue from low carbon product(s) in the reporting year

0

Comment

We cannot disclose the percent revenue attributed to the BioGreen Gas program at this time.

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

DTE has been working with Edison Electric Institute (EEL) and American Gas Association (AGA) on the Natural Gas Sustainability Initiative and the voluntary reporting Environmental, Social and Governance (ESG) template of key sustainability metrics, including emissions of methane from our gas operations. DTE has also initiated efforts to influence DTE Gas' natural gas suppliers to reduce their emissions. We recently joined the Natural Gas Supply Collaborative (NGSC), a voluntary group of 13 natural gas purchasers promoting safe and responsible practices for natural gas supply

DTE Gas has adopted the NGSC's rating system to assess internally the efforts of our own suppliers, and intends to leverage our membership in the collaborative to strengthen their efforts to hold suppliers accountable for their methane emissions.

In 2018 DTE Gas committed to reduce emissions of methane by more than 80 percent by 2040. We're controlling methane leaks by replacing hundreds of miles of older natural gas pipelines with safer, air-tight material and through maintenance upgrades at DTE natural gas compression stations. DTE Gas is a member of the Environmental Protection Agency's Natural Gas STAR Methane Challenge Program. The Company has made the following commitments under the Methane Challenge Program which supports our commitment to 80% reduction by 2040:

1. Reducing leaks from gas compressor engines by implementing a rod packing leak rate testing and replacement program.
2. Replacing all existing cast iron and unprotected steel gas distribution mains over the next 20 years.

In 2018 DTE Energy issued a Methane Report on how the company is managing and mitigating its methane emissions. This report is available at: <https://geg2a4cqqdz35lnem46az2tb-wpengine.netdna-ssl.com/wp-content/uploads/2018/11/MethaneEmissionsReport.pdf>

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1 2005

Base year end

December 31 2005

Base year emissions (metric tons CO2e)

37722000

Comment

Scope 1 emissions from DTE Electric (formerly Detroit Edison) power plants only. This represents more than 90% of total CO2 emissions for DTE Energy in 2005.

Scope 2 (location-based)

Base year start

January 1 2006

Base year end

December 31 2006

Base year emissions (metric tons CO2e)

3600000

Comment

As reported to CDP for reporting year 2006.

Scope 2 (market-based)

Base year start**Base year end****Base year emissions (metric tons CO2e)****Comment**

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

US EPA Climate Leaders: Direct Emissions from Stationary Combustion

US EPA Climate Leaders: Direct Emissions from Mobile Combustion Sources

US EPA Mandatory Greenhouse Gas Reporting Rule

Other, please specify (US EPA eGRID Summary Tables 2016)

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

US EPA eGRID Summary Tables 2016 (Created 2/15/2018) - Table 1. Subregion Output Emission Rates - Subregion: RFC Michigan (RFCM)

US EPA Mandatory Greenhouse Gas Reporting Rule (40 CFR 98) Table A-1 to Subpart A - GWPs (published 11/29/2013 & effective 1/1/2014). Note these 100 year Global Warming Potentials align with the IPCC 4th Assessment Report (AR4).

U.S. EPA Center for Corporate Climate Leadership - Emission Factors for Greenhouse Gas Inventories (Last Modified 3/9/2018) - Tables: 1 - Stationary Combustion; 2 - Mobile Combustion CO₂; 8 - Business Travel & Employee Commuting; & 9 - Upstream Transportation and Distribution and Downstream Transportation and Distribution

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO₂e?

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

34246000

Start date

January 1 2018

End date

December 31 2018

Comment

Scope 1 emissions include emissions from the following business units: DTE Electric Company - stationary sources and fleet vehicles; DTE Gas Company - stationary sources, including fugitive emissions, and fleet vehicles; DTE Power and Industrial Projects - stationary sources; DTE Gas Storage and Pipelines - stationary sources, including fugitive emissions.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

1938000

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

January 1 2018

End date

December 31 2018

Comment

Scope 2 emissions are reported for transmission and distribution line losses for purchased power and internal use of power on the DTE Electric system. US EPA's eGRID2016 (location-based) emission factors were used to calculate these emissions.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Sources not subject to the US EPA's Greenhouse Gas Reporting rule under 40 CFR Part 98.

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

Relevance of location-based Scope 2 emissions from this source

No emissions excluded

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not evaluated

Explain why this source is excluded

Facilities not subject to Greenhouse Gas Reporting under 40 CFR Part 98 are considered minimal sources of greenhouse gas emissions (under 25,000 mt of CO2e). Emissions from these sources have not yet been calculated and are therefore not included in the Scope 1 emissions. Emissions from facilities only subject to state greenhouse gas reporting (such as Cal-eGGRT) are also not included in Scope 1 emissions. Scope 2 emissions are included for all DTE Electric Company facilities, regardless of whether they are subject to 40 CFR Part 98. See below for Scope 2 emissions from other business divisions.

Source

Scope 2 emissions from the following business divisions: DTE Gas Company, DTE Gas Storage and Pipelines, and DTE Power and Industrial Projects

Relevance of Scope 1 emissions from this source

No emissions excluded

Relevance of location-based Scope 2 emissions from this source

Emissions are relevant but not yet calculated

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not evaluated

Explain why this source is excluded

DTE Electric Company accounts for the majority of DTE Energy purchased energy emissions. Scope 2 emissions (purchased power) from DTE Gas Company, DTE Gas Storage and Pipelines, and DTE Power and Industrial Projects have not yet been calculated.

Source

Mobile sources from DTE Gas Storage and Pipelines and DTE Power and Industrial Projects (e.g. company owned/controlled fleet vehicles and heavy mobile equipment onsite).

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why this source is excluded

DTE Electric Company and DTE Gas Company account for the majority of fleet vehicles. Scope 1 mobile source emissions from DTE Gas Storage and Pipelines and DTE Power and Industrial Projects have not yet been calculated.

Source

Greenhouse gases other than CO₂, CH₄, N₂O, biogenic CO₂, and CO₂e.

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why this source is excluded

Greenhouse gases other than CO₂, CH₄, N₂O, biogenic CO₂, and CO₂e are considered minimal or zero (e.g. SF₆). Therefore, they are not included.

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.**Purchased goods and services****Evaluation status**

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE Energy purchases significant amounts of goods and services to maintain business unit operations, especially for the utility operations of DTE Electric Company and DTE Gas Company. DTE spent \$1.7 billion in 2018 with Michigan businesses, which is 70% of DTE's supplier spending. Since 2010, DTE has spent >\$9.2 billion with Michigan-based suppliers of goods and services. Purchasing goods and services locally reduces upstream CO₂e emissions by reducing the length of transportation (i.e., goods travel significantly fewer miles than if purchased overseas) and minimizing or eliminating business travel associated with purchased services (i.e., reduced flying and driving for the companies providing services to DTE). Emissions from these purchases have not been calculated.

Capital goods

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE Energy invests in capital goods to grow and maintain business unit operations. DTE Energy's utility businesses require significant capital investments to maintain and improve the electric generation and electric/natural gas distribution infrastructure and to comply with environmental regulations and renewable energy requirements. Capital spending for utility operations often involves purchasing new equipment (such as heaters, generators or engines) to replace aging infrastructure. New equipment is typically more efficient (i.e., utilizes less fuel and has more efficient air emission control equipment) and has lower emissions. Additionally, DTE invested in compressed natural gas (CNG) vehicles to replace gasoline and diesel vehicles in the DTE Gas Company fleet. Emissions for the fleet vehicles are captured in Scope 1. It should be noted that mobile emissions from CNG are significantly less (10.21 kg CO₂/gallon with gasoline versus 0.054444 kg CO₂/gallon of CNG). With transitioning fuel types from traditional gasoline and diesel, this increases the demand for CNG, which has lower CO₂-to-energy content than both diesel and gasoline. This results in reducing upstream emissions from fuel producers and suppliers. Lastly, in remodeling office space, DTE invested in capital goods that reduce both upstream and downstream emissions. For example, Haworth Zody Chairs (used at workstations in remodeled office spaces) are assembled using 100% renewable power, contain up to 51% recycled content, and are up to 98% recyclable. Emissions from capital goods have not been calculated.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4262184

Emissions calculation methodology

Emissions were calculated from eGRID2016 (Created February 15, 2018) using the total output emission rate (lb/MWh) for CO₂e in subregion RFC Michigan.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Emissions are calculated from total purchased power (less interconnection sales). DTE strives to reduce energy consumption through established conservation and efficiency initiatives. In 2018, these efforts resulted in a reduction of energy usage by 1.55 million kilowatt-hours at DTE Energy facilities.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

741371

Emissions calculation methodology

Emissions are calculated by multiplying the coal burned (short tons) per coal source (e.g. Low Sulfur Western, High Sulfur Eastern) by the route distance (in miles) per coal source and transport type (i.e., rail vs. vessel). Then, the total ton-miles for each facility (including all coal sources) is multiplied by the respective CO₂, CH₄, and N₂O emission factors for either rail or waterborne craft. The emissions are then multiplied by the respective GWP per pollutant to calculate CO₂e. CO₂e is added for all facilities and transport types to calculate total CO₂e for coal transportation. Emission factors for Rail and Waterborne Craft were utilized from Table 9 - Upstream Transportation and Distribution and Downstream Transportation and Distribution of Emission Factors for GHG Inventories.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Emissions are calculated for upstream transportation of coal from mines to power plants via rail and vessel.

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE reduces downstream CO₂e emissions by: 1) producing less waste; and 2) recycling or reusing waste generated. This reduces CO₂ and CH₄ emissions that would otherwise be produced by landfills. DTE's pollution prevention programs were established to minimize environmental impacts and conserve resources through reducing waste that would otherwise be disposed of in landfills. DTE also recovers used oil for energy across our gas and electric utilities. In addition, DTE captured the food and paper wastes at its Detroit headquarters campus, diverting these waste streams from landfills. Lastly, DTE limits generation of universal waste (e.g., light bulbs, batteries, etc.) and hazardous waste, and properly stores and disposes of this waste. The total emissions avoided from these recycling, energy recovery, composting, and beneficial use activities have not been calculated; however, tonnage per product are provided below. 647,601 tons (54%) of coal combustion products (CCPs) including fly ash, bottom ash, boiler slag, flue gas desulfurization materials, and scrubber by-products were managed as beneficial use by-products (including being sold) and were diverted from the landfill in 2018. This includes 203,702 tons (27%) of coal ash and 443,899 tons of gypsum (100%). In addition, 12,214 tons of materials were also recycled during 2018, including but not limited to: 2,582 tons of steel/ferrous from electric operations, 501 tons of steel/ferrous from gas operations, 2,764 tons of non-ferrous/transformers, 347 tons of non-ferrous/wire bundles, 483 tons of copper, 366 tons of lead, 265 tons of aluminum, 1,366 tons of miscellaneous metals, 60 tons of electric meters, 358 tons of gas meters, 1,841 tons of outage materials (e.g. poles, wires, & equipment from catastrophic storms), 25 tons of plastic (HDPE), 12 tons of scrap electronics, 312 tons (83,260 gallons) of transformer oil, 217 tons of cardboard, 447 tons of wood (e.g. poles, pallets), and 268 tons of paper. Of the food and paper wastes from the Detroit headquarters office, 31.6 tons were composted and 344 tons were converted to energy through incineration. 199,401 gallons of used oil were recovered for energy across gas and electric utilities.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

3937

Emissions calculation methodology

These emissions are based on employee business miles traveled in personal vehicles while on company business. Miles are claimed by each employee and recorded in a central database. Emission factors for Passenger Car and Light-Duty Truck were utilized from Table 8 - Business Travel and Employee Commuting of Emission Factors for GHG Inventories.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Emissions related to business travel are currently only calculated for employee-owned vehicles (for which mileage was reimbursed). Air, rental vehicles, bus, motorcycle, and rail business travel are not accounted for. Note that emissions from company-owned vehicles are included in Scope 1.

Employee commuting

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE has approximately 10,600 employees. Employee commuting has not yet been calculated.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE does not have any upstream leased assets.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

Downstream emissions from natural gas deliveries are reported separately under Use of Sold Products of Scope 3 emissions. Indirect emissions from line losses on the electric distribution system are included in the Scope 2 emissions.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE Energy's largest businesses are the utilities of DTE Electric Company and DTE Gas Company. The products sold for these utilities are electricity and natural gas. These products are used to provide energy to customers and are generally not processed or reprocessed into other materials.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

11973500

Emissions calculation methodology

This value is determined in accordance with the requirements of 40 CFR Part 98 Subpart NN and therefore does not include emissions from deliveries to customers whose meters register an annual volume greater than 460,000 Mscf of natural gas deliveries.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Emissions reported represent what would result from the combustion of complete oxidation of natural gas delivered by local distribution companies (LDCs) owned by DTE Energy (DTE Gas Company and Citizens Gas Fuel Company).

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE Energy's largest businesses are the utilities DTE Electric Company and DTE Gas Company. The products sold for these utilities are electricity and natural gas. Once consumed, there is no end of life of these sold energy products.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE does not have any downstream leased assets.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE does not own any franchises.

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE does not have investments that contribute to CO2e emissions (other than company-owned assets, whose emissions are already accounted for under Scope 1).

Other (upstream)

Evaluation status

Relevant, calculated

Metric tonnes CO2e

408783

Emissions calculation methodology

Upstream transmission and distribution (T&D) line loss are accounted for using DTE's internal T&D line loss rate for the year (7.63% in 2018) multiplied by DTE's total purchased power (including interconnect sales). Emissions are calculated using eGRID2016's (Created February 15, 2018) total output emission rate (lb/MWh) for CO2e in subregion RFC Michigan.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Emissions represent the estimated transmission and distribution line losses that occur upstream before DTE Electric receives purchased power for distribution. Emissions also account for transmission and distribution line losses for electricity provided via interconnect sales.

Other (downstream)

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Explanation

DTE offers more than 20 energy waste reduction (EWR) programs for its customers to increase energy efficiency and optimization (e.g. insulation, LED light bulbs, pipe wrap, faucet aerators, higher efficiency appliances, etc.). This results in a decrease in downstream energy consumption and emissions. Part of this program includes recycling of customers' appliances. This removes less energy efficient appliances from DTE's service territory and minimizes landfill waste. Additionally, DTE offers a voluntary renewables program (MiGreenPower) whereby its customers can opt to purchase energy (0-100%) from renewable resources, such as wind and solar, with 0 carbon emissions. This reduces or completely eliminates downstream emissions from residential and commercial customers.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO2.

Row 1

Emissions from biologically sequestered carbon (metric tons CO2)

321168

Comment

Emissions reflect CO2 from biogenic materials. Specifically, this is from the combustion of Wood and Wood Residuals and Solid Byproducts, as reported to US EPA in eGGRT under 40 CFR Part 98 Subpart C. In 2018, DTE owns and operates 1 facility that emits biogenic CO2: Mobile Energy Services Co., LLC. Any CH4 or N2O from biologically sequestered carbon is included under Scope 1 emissions (along with non-biogenic CO2 from this source).

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0025

Metric numerator (Gross global combined Scope 1 and 2 emissions)

36183609

Metric denominator

unit total revenue

Metric denominator: Unit total

1421200000

Scope 2 figure used

Location-based

% change from previous year

4.39

Direction of change

Decreased

Reason for change

The change can be attributed to an increase in emissions (7.78%) with a significant increase in company operating revenue (12.73%).

Intensity figure

3414

Metric numerator (Gross global combined Scope 1 and 2 emissions)

36183609

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

10600

Scope 2 figure used

Location-based

% change from previous year

3.71

Direction of change

Increased

Reason for change

The change can be attributed to an increase in emissions (7.78%) and a hiring increase (the total # of employees grew by 3.92%).

Intensity figure

0.8608

Metric numerator (Gross global combined Scope 1 and 2 emissions)

34244268

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

39782148

Scope 2 figure used

Location-based

% change from previous year

6.34

Direction of change

Increased

Reason for change

The change can be attributed to an increase in emissions from DTE Electric Company (7.95%) due to increased operations of DTE's fossil fuel plants and a reduction in generation from DTE's nuclear power plant, resulting in a very slight increase in total generation (1.51%).

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	33422977	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	665864	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	157159	IPCC Fourth Assessment Report (AR4 - 100 year)
Other, please specify (CO2e)	34246000	IPCC Fourth Assessment Report (AR4 - 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	0	0	
Combustion (Electric utilities)	32065772	3529	0	32306659	The Total CO2e emissions include 152,653 metric tons of N2O as CO2e
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)	0	0	0	0	
Emissions not elsewhere classified	0	0	0	0	

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	34246000

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

By facility

By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
DTE Electric Company	32306659
DTE Gas Company	606610
Gas Storage and Processing	546033
Power and Industrial Projects	786698

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Belle River Power Plant	7842855	42.774371	-82.495482
Greenwood Energy Center	497283	43.105526	-82.697386
Monroe Power Plant	16404748	41.890749	-83.34523
River Rouge Power Plant	830677	42.273764	-83.112412
St. Clair Power Plant	4762483	42.763663	-82.472341
Trenton Channel Power Plant	1212049	42.122172	-83.181271
Delray	10490	42.294976	-83.102101
DTE East China (Dean Peakers)	174810	42.774417	-82.481913
Renaissance Power	546515	43.186187	-84.842994
Belle River Mills Compressor Station	51974	42.788333	-82.530827
Taggart (Six Lakes) Compressor Station	28604	43.44356	-85.142801
Washington 10 Compressor Station	33449	42.767854	-83.005993
Citizens Gas Fuel Company	0	41.899792	-84.036195
DTE Energy MichCon LDC	478800	42.33375	-83.057636
Bluestone Gathering System	188623	41.821671	-75.685817
Susquehanna Gathering Company, LLC	262289	41.821671	-75.685817
DTE Appalachia Gathering, LLC	95121	39.683178	-79.92475
DTE Calvert City, LLC	199128	37.048101	-88.353361
EES Coke Battery	277429	42.281083	-83.111722
Mobile Energy Services, LLC	199707	30.73691	-88.050194
Procter & Gamble Company - Ivorydale	110434	39.175091	-84.500819
Enrico Fermi II Nuclear Power Plant	1046	41.962868	-83.25762
Non-Stationary sources (DTE Electric Company)	23703		
Non-Stationary sources (DTE Gas Company)	13783		

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Stationary Sources (Combustion and Fugitives)	34197000
Mobile Combustion Sources (Vehicles)	49085

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	32306659	<Not Applicable>	Emissions for DTE Electric facilities only.
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	1938000			

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

- By business division
- By activity

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
DTE Electric Company	1938000	

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Company Use and Transmission and Distribution Line Losses	1938000	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	No change in renewable energy consumption.
Other emissions reduction activities	11500	Decreased	0.03	Pipeline replacement (replacing cast iron and unprotected steel with protected steel and PVC piping) on main and distribution lines in RY2018 reduced the amount of leaks associated with gas distribution, which led to a decrease in Scope 1 direct emissions from DTE Gas Company (LDC). Through these activities, emissions were reduced by 11,500 tons CO2e. The total Scope 1 and Scope 2 emissions in the previous year (2017) was 33,577,591 tons CO2e. Therefore, we arrived at -0.28% through $(-11,500/33,577,591) * 100 = -0.03\%$ (i.e. a 0.03% decrease in Scope 1 and 2 emissions).577
Divestment		<Not Applicable>		No Change
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		No Change
Change in output	2610770	Increased	7.78	DTE Electric Company experienced an increase in electricity from market demand (e.g. Fossil /Peaker Generation MWh increased 6.7% in RY2018) leading to an increase in Scope 1 direct emissions from stationary sources. Further, a significant amount of equipment and facilities purchased in RY2017 experienced their first full year of operation in RY2018 for DTE Gas Storage and Pipelines (Midstream). In addition, there was a significant increase in annual natural gas throughput in RY2018. Both of these resulted in an increase in Scope 1 direct emissions from stationary sources (GSP). DTE Electric Company consumed more energy, in correlation with an increase in load of the power plants and peaking facilities. Therefore, Scope 2 indirect emissions for DTE Electric Company increased. MESC ceased firing biomass in 2018 and switched to using 100% natural gas. Burning more natural gas led to an increase in emissions. EES Coke had an increase in production in 2018, as well as an increase in flaring of coke oven gas (due to less coke oven gas accepted by its customers). Both of these factors contributed to an increase in emissions. Through these activities, emissions increased by 2,610,770 tons CO2e. The total Scope 1 and Scope 2 emissions in the previous year (2017) was 33,577,591 tons CO2e. Therefore, we arrived at 7.78% through $(2,610,770/33,577,591) * 100 = 7.78\%$ (i.e. a 7.78% increase in Scope 1 and 2 emissions).
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		No Change
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other	5439	Increased	0.02	More accurate accounting for Scope 1 direct, mobile emissions from DTE Gas Company (specifically with tracking fleet vehicle fuel usage). Through this, emissions increased by 5,439 tons CO2e. The total Scope 1 and Scope 2 emissions in the previous year (2017) was 33,577,591 tons CO2e. Therefore, we arrived at 0.02% through $(5,439/33,577,591) * 100 = 0.02\%$ (i.e. a 0.02% increase in Scope 1 and 2 emissions).

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 65% but less than or equal to 70%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	No
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	1791749	106587904	108379653
Consumption of purchased or acquired electricity	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	1791749	106587904	108379653

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Bituminous Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

8195401

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Subbituminous Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

81562938

MWh fuel consumed for self-generation of electricity

2905474

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

2,905,474 is the MWh consumed for electricity generation.

Fuels (excluding feedstocks)

Petroleum Coke

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

2854160

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Fuel Oil Number 2

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

254031

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

108190

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

The MWh fuel consumed for self-generation of heat is for transportation (vehicles/heavy machinery).

Fuels (excluding feedstocks)

Fuel Oil Number 6

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

251

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

11074925

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Coke Oven Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

2342277

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Blast Furnace Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

104875

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Solid Biomass Waste

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

236277

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Wood

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

1555472

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

90443

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

The MWh fuel consumed for self-generation of heat is for transportation (vehicles/heavy machinery).

Fuels (excluding feedstocks)

Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

The MWh fuel consumed for self-generation of heat is for transportation (vehicles/heavy machinery).

Fuels (excluding feedstocks)

Bioethanol

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

407

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

The MWh fuel consumed for self-generation of heat is for transportation (vehicles/heavy machinery).

Fuels (excluding feedstocks)

Compressed Natural Gas (CNG)

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

7

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

The MWh fuel consumed for self-generation of heat is for transportation (vehicles/heavy machinery).

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Bioethanol

Emission factor

68.44

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Ethanol

Comment

1.1 g CH4/MMBtu and 0.11 g N2O/MMBtu used as well to calculate total CO2e emissions.

Bituminous Coal

Emission factor

93.28

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Bituminous Coal

Comment

11 g CH4/MMBtu and 1.6 g N2O/MMBtu used as well to calculate total CO2e emissions.

Blast Furnace Gas

Emission factor

274.32

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Blast Furnace Gas

Comment

0.022 g CH4/MMBtu and 0.10 g N2O/MMBtu used as well to calculate total CO2e emissions.

Coke Oven Gas

Emission factor

46.85

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Coke Oven Gas

Comment

0.48 g CH4/MMBtu and 0.10 g N2O/MMBtu used as well to calculate total CO2e emissions.

Compressed Natural Gas (CNG)

Emission factor

53.06

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Natural Gas Converted from MMBtu/scf to MMBtu/gallon

Comment

1.0 g CH4/MMBtu and 0.10 g N2O/MMBtu used as well to calculate total CO2e emissions.

Fuel Oil Number 2

Emission factor

73.96

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion CO2 - Distillate Fuel Oil No. 2

Comment

3.0 g CH4/MMBtu and 0.60 g N2O/MMBtu used as well to calculate total CO2e emissions.

Fuel Oil Number 6

Emission factor

75.1

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Residual Fuel Oil No. 6

Comment

3.0 g CH4/MMBtu and 0.60 g N2O/MMBtu used as well to calculate total CO2e emissions.

Kerosene

Emission factor

75.2

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion CO2 - Kerosene

Comment

3.0 g CH4/MMBtu and 0.60 g N2O/MMBtu used as well to calculate total CO2e emissions.

Motor Gasoline

Emission factor

70.22

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion CO2 - Motor Gasoline

Comment

3.0 g CH4/MMBtu and 0.60 g N2O/MMBtu used as well to calculate total CO2e emissions.

Natural Gas

Emission factor

53.06

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Natural Gas

Comment

1.0 g CH4/MMBtu and 0.10 g N2O/MMBtu used as well to calculate total CO2e emissions.

Petroleum Coke

Emission factor

102.41

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Petroleum Coke (Solid)

Comment

32 g CH4/MMBtu and 4.2 g N2O/MMBtu used as well to calculate total CO2e emissions.

Solid Biomass Waste

Emission factor

105.51

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Solid Byproducts

Comment

32 g CH4/MMBtu and 4.2 g N2O/MMBtu used as well to calculate total CO2e emissions.

Subbituminous Coal

Emission factor

97.17

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Sub-bituminous Coal

Comment

11 g CH4/MMBtu and 1.6 g N2O/MMBtu used as well to calculate total CO2e emissions.

Wood

Emission factor

93.8

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors - Emission Factors for GHG Inventories - (Last Modified 3/9/2018) Table 1 - Stationary Combustion - Wood and Wood Residuals

Comment

7.2 g CH4/MMBtu and 3.6 g N2O/MMBtu used as well to calculate total CO2e emissions.

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	43086708	2905474	1939890	0
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C-EU8.2e

(C-EU8.2e) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

6687

Gross electricity generation (GWh)

32887

Net electricity generation (GWh)

30437

Absolute scope 1 emissions (metric tons CO2e)

31064406

Scope 1 emissions intensity (metric tons CO2e per GWh)

1020.62

Comment

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not Applicable

Oil

Nameplate capacity (MW)

313

Gross electricity generation (GWh)

7

Net electricity generation (GWh)

4

Absolute scope 1 emissions (metric tons CO2e)

63916

Scope 1 emissions intensity (metric tons CO2e per GWh)

9999

Comment

Scope 1 emissions intensity was out of range and could therefore not be entered. Actual Scope 1 emissions intensity is 18,106.49 metric tons CO2e per GWh.

Gas

Nameplate capacity (MW)

2857

Gross electricity generation (GWh)

2818

Net electricity generation (GWh)

2719

Absolute scope 1 emissions (metric tons CO2e)

1504339

Scope 1 emissions intensity (metric tons CO2e per GWh)

553.28

Comment

Biomass

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Waste (non-biomass)

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Nuclear

Nameplate capacity (MW)

1217

Gross electricity generation (GWh)

7774

Net electricity generation (GWh)

7412

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

There are zero emissions from the nuclear power plant. Therefore Scope 1 emissions intensity is 0 metric tons CO2e per GWh.

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Hydroelectric

Nameplate capacity (MW)

989

Gross electricity generation (GWh)

976

Net electricity generation (GWh)

976

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

There are zero emissions from the Ludington Pumped Storage Facility. Therefore Scope 1 emissions intensity is 0 metric tons CO2e per GWh.

Wind

Nameplate capacity (MW)

611

Gross electricity generation (GWh)

1853

Net electricity generation (GWh)

1853

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

There are zero emissions from wind energy sources. Therefore Scope 1 emissions intensity is 0 metric tons CO2e per GWh.

Solar

Nameplate capacity (MW)

54

Gross electricity generation (GWh)

87

Net electricity generation (GWh)

87

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

There are zero emissions from solar energy sources. Therefore Scope 1 emissions intensity is 0 metric tons CO2e per GWh.

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not Applicable

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not Applicable

Total

Nameplate capacity (MW)

12727

Gross electricity generation (GWh)

43486

Net electricity generation (GWh)

43487

Absolute scope 1 emissions (metric tons CO2e)

32632661

Scope 1 emissions intensity (metric tons CO2e per GWh)

750

Comment

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region

United States of America

Voltage level

Distribution (low voltage)

Annual load (GWh)

47129

Scope 2 emissions (basis)

Location-based

Scope 2 emissions (metric tons CO2e)

1938000

Annual energy losses (% of annual load)

7.63

Length of network (km)

46233

Number of connections

2200000

Area covered (km2)

52616

Comment

DTE Electric Company has approximately 2.2 million residential, commercial, and industrial customers in southeastern Michigan.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Waste

Metric value

Metric numerator

30% reduction in waste by 2022 from DTE facilities

Metric denominator (intensity metric only)

% change from previous year

Direction of change

<Not Applicable>

Please explain

Description

Other, please specify (Water usage reduction)

Metric value

Metric numerator

35% reduction in municipal water use by 2022

Metric denominator (intensity metric only)

% change from previous year

Direction of change

<Not Applicable>

Please explain

C-EU9.5a

(C-EU9.5a) Break down, by source, your total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Gas	1000000000	37	2023	DTE Electric's capital investments over the 2019-2023 period are estimated at \$11.3 billion comprised of \$4.0 billion for capital replacements and other projects, \$4.6 billion for distribution infrastructure, and \$2.7 billion for new generation.
Other renewable	1700000000	73	2023	DTE Electric's capital investments over the 2019-2023 period are estimated at \$11.3 billion comprised of \$4.0 billion for capital replacements and other projects, \$4.6 billion for distribution infrastructure, and \$2.7 billion for new generation.

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
-----------------------	--------------------------------	-----------------------------------	---	------------------------

(C-CO9.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

High assurance

Attach the statement

2018 ECMPS Submission Summary.pdf

Page/ section reference

All pages: Summary of 2018 required submissions to U.S. Environmental Protection Agency for reporting of emissions from continuous emission monitors (CEMs) for each DTE Electric fossil generation unit required to install a CEM system under 40 CFR Part 75. These electronic submissions include a summary of emissions, required monitoring plans, and quality assurance certifications. These submissions are signed off by the Vice President of Fossil Generation, DTE's Designated Representative.

Relevant standard

Certified emissions measurement and reduction scheme (CEMARS)

Proportion of reported emissions verified (%)

90

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Other, please specify (Integrated Resource Plan scenario planning)

GHG Scope

Scope 1

Application

We use carbon price sensitivities in carbon reduction scenarios that are used to inform our long-term business strategy as laid out in the Integrated Resource Plan. Sensitivities, as compared to scenarios, are generally designed to test one specific uncertainty. The Michigan IRP Parameters of 2016 PA 341 required sensitivities. Each scenario has a starting point with no sensitivities applied. Then, each sensitivity is applied to the appropriate scenarios. One sensitivity is carbon price as described below. Carbon Price: The Reference scenario's starting point has a \$5/ton price for carbon in 2025, which reaches \$10/ton in 2040 (real \$2017). The Business as Usual (BAU), Emerging Technology (ET) and Environmental Policy (EP) scenarios' starting points have a constant \$0/ton carbon price across all years. There was a carbon-price sensitivity on the EP scenario to achieve 50 percent carbon reduction by 2030. This sensitivity applied a \$20/ton carbon price in 2030.

Actual price(s) used (Currency /metric ton)

5

Variance of price(s) used

We use a range of prices depending upon the scenario and/or sensitivities being modeled, for example the IRP sensitivity analysis applied prices from \$5/ton to \$20/ton.

Type of internal carbon price

Shadow price

Impact & implication

Carbon prices may be applied to achieve a desired carbon reduction goal, such as the carbon sensitivity on the Emerging Technology scenario in the Integrated Resource plant that applied a \$20/ton carbon price in 2030 to achieve a 50 percent carbon reduction.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

25

% total procurement spend (direct and indirect)

25

% Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

The proportion of suppliers that receive surveys corresponds to approximately 25% of total procurement spend. Suppliers are selected for engagement based on the following criteria: If the supplier has a DTE Supplier Performance Management (SPM) scorecard, if they are a top 100 supplier for DTE spend, or if a DTE sustainability team member's business unit requests that the supplier take the survey. Suppliers are requested to report on energy use and emission information to measure success of actions and identify areas of improvement throughout DTE's supply chain.

Impact of engagement, including measures of success

DTE is part of the Electric Utility Industry Sustainable Supply Chain Alliance (EUISSCA), an organization of utilities and suppliers collaborating to advance sustainability best practices in supply chain activities and supplier networks. Energy use and emissions for suppliers are self-reported via The Sustainability Project (TSP) supplier survey tool, which was launched in 2018. Success is measured through changes in energy use and emissions reported by the supplier.

Comment

We do not calculate Scope 3 emissions for purchased goods and services as indicated in our response to Question C6.5.

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

35

% Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

DTE Energy engages DTE Electric customers on reducing GHG emissions and related climate issues by offering numerous programs to help customers save energy and purchase clean energy. Methods for reaching customers include direct advertising, website offerings, e-mails, social media, bill inserts, event sponsorships, and free subscriptions to tailored energy publications, among others. Programs that enable customers to improve energy efficiency and reduce energy receive priority as they support energy efficiency goals mandated by state legislation. DTE's Energy Waste Reduction programs are designed to help reduce customers' energy use by increasing customer awareness of energy saving possibilities, and providing products and services such as rebates, tips, tools, strategies and energy efficiency education to help customers make informed energy saving decisions. Many of the programs in 2018 were continuations of programs launched in 2009, although some minor program adjustments were implemented. DTE continually works to offer EWR programs that assure all customer segments are encouraged to participate. Programs are designed to capture both electric and natural gas savings.

Impact of engagement, including measures of success

The success of DTE's programs are measured by verified energy savings reported annually to the Michigan Public Service Commission. In 2018 the DTE Electric EWR programs produced verified net energy savings of 728 GWh electricity and 1,750 MMcf of natural gas through the various program offerings. These savings were well above the minimum required by Michigan's Clean,

Renewable and Efficient Energy Act, also known as Public Act 295 (PA 295), as amended by Public Act 342 of 2016. In 2018 774,321 residential and commercial and industrial customers out of an approximate total of 2.2 million customers participated in the DTE Electric EWR program, or about 35 percent of DTE Electric customers. We do not report emissions avoided as a result of our EWR programs as Scope 3 emissions in C6.5. These EWR programs help to reduce Scope 1 emissions for DTE Electric.

Type of engagement

Collaboration & innovation

Details of engagement

Other – please provide information in column 5

% of customers by number

0.18

% Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

As described in our response to Question 2.4a, DTE Energy offers clean energy (renewable) products to both electric and gas customers: MIGreenPower is DTE Energy's voluntary renewable energy program. Customers that enroll in MIGreenPower support the generation of electricity from Michigan-based, renewable energy sources. MIGreenPower is a Green-e Energy certified renewable energy program. Green-e Energy™ is the nation's leading independent certification and verification program for renewable energy and greenhouse gas emission reductions in the retail market.

Impact of engagement, including measures of success

Enrollment in MIGreen Power at the end 2018 was 4,050 out of 2.2 million customers representing 21,000 MWh of renewable generation.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

52

% Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

DTE Energy engages DTE Gas customers on reducing GHG emissions and related climate issues by offering numerous programs to help customers save energy and purchase clean energy. Methods for reaching customers include direct advertising, website offerings, e-mails, social media, bill inserts, event sponsorships, and free subscriptions to tailored energy publications, among others. Programs that enable customers to improve energy efficiency and reduce energy receive priority as they support energy efficiency goals mandated by state legislation. DTE's Energy Waste Reduction programs are designed to help reduce customers' energy use by increasing customer awareness of energy saving possibilities, and providing products and services such as rebates, tips, tools, strategies and energy efficiency education to help customers make informed energy saving decisions. Many of the programs in 2018 were continuations of programs launched in 2009, although some minor program adjustments were implemented. DTE continually works to offer EWR programs that assure all customer segments are encouraged to participate. Programs are designed to capture both electric and natural gas savings.

Impact of engagement, including measures of success

The success of DTE's programs are measured by verified energy savings reported annually to the Michigan Public Service Commission. In 2018 the DTE Energy EWR programs produced verified net energy savings of 728 GWh electricity and 1,750 MMcf of natural gas through the various program offerings. These savings were well above the minimum required by Michigan's Clean, Renewable and Efficient Energy Act, also known as Public Act 295 (PA 295), as amended by Public Act 342 of 2016. In 2018 676,767 residential and commercial and industrial customers out of an approximate total of 1.3 million customers participated in the DTE Gas EWR program, or about 52 percent of DTE Gas customers. We report Scope 3 emissions of gas deliveries to our customers in C6.5, but do not account for the reductions due to gas EWR programs.

Type of engagement

Collaboration & innovation

Details of engagement

Other – please provide information in column 5

% of customers by number

0.15

% Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

As described in our response to Question 2.4a, DTE Energy offers clean energy (renewable) products to both electric and gas customers. The BioGreenGas Program for DTE Gas customers is a voluntary residential program which supports the local development of renewable natural gas by using the methane that arises naturally from landfills.

Impact of engagement, including measures of success

Enrollment in BioGreen Gas at the end of 2018 was 1,960 contract accounts out of an approximate total of 1.3 million customers. We report Scope 3 emissions of gas deliveries to our customers in C6.5, but do not account for the reductions due to BioGreen Gas subscribers.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

0.02

% Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

Integrated Resource Plan Public Outreach The Company conducted an Integrated Resource Plan stakeholder outreach process consisting of public open houses and technical workshops. The intent was to implement a comprehensive, transparent, and participatory stakeholder engagement process. The Company hosted four technical workshops for stakeholders involved in the IRP's technical aspects and regulatory process, and three public open houses to serve customers and the general public. These events provided stakeholders with various opportunities to provide input on how to meet Michigan's future energy and capacity needs, including reviewing and commenting on IRP inputs, sensitivities, and technology options. The four technical workshops were held between June 2018 and January 2019. The technical presentations included information about the IRP process and timeline assumptions, scenarios and sensitivities analyzed to develop our plan, a review of the IRP models and how to interpret results, and the sharing of modeling results across a broad range of scenarios and sensitivities. The workshop format allowed all participants to hear each other's questions and obtain answers from subject matter experts at the same time. This approach created consistency in sharing information, open dialogue, and the exchange of diverse ideas. Common themes heard from participants at the technical meetings included questions and input on the modeling assumptions for Energy Waste Reduction (EWR), renewable energy, and load forecasting . The open houses were publicized through Company newsroom postings, emailing stakeholders in advance of the 1 events, and social media. an IRP landing page on our blog site. Common themes from the public open houses included increasing levels of EWR, renewable energy, public outreach, and working towards a clean energy future. In addition to the three IRP public open houses, a Blue Water Energy Center open house was held near the site of the project for the local community to learn about the project. The Company has also communicated key aspects of the IRP with communities, employees, stakeholder organizations (e.g., MPSC, MISO, ITC), investors, and local, state and federal leaders.

Impact of engagement, including measures of success

452 people in total attended the 4 open houses and 4 technical workshops. This represents approximately less than 0.1 percent of DTE Electric's customers, but is not considered to be a meaningful metric for the success of this engagement effort. The IRP stakeholder outreach effort helped to inform DTE's analysis and development of the Integrated Resource Plan submitted to the Michigan Public Service Commission in 2019. Scope 3 emissions associated with this outreach event are not relevant and are not reported in C6.5.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (Cap and Trade)	Support with minor exceptions	DTE Energy participated in advocacy related to cap-and-trade legislation before the U.S. Congress in 2009 and 2010. Legislative initiatives to reduce greenhouse gases gave way to Executive Branch proposals under the Obama Administration. Many of the Obama era rules are now being considered for repeal or replacement by the Trump Administration.	DTE generally supports national policy to address the nation's energy future. This can be achieved in different ways, the details of the approach being key. The policy must provide a reasonable timeframe for transition of existing generation fleets and assure a reasonable cost on customers. It should also provide flexibility to various regions of the U.S. allowing for particular differences.
Carbon tax	Neutral	DTE Energy has tracked and monitored executive branch-level discussions as well as learning sessions by some members of Congress on the potential for a carbon tax. DTE Energy has also tracked the various proposals that have emanated from research organizations. The company will continue to be engaged as new Congressional and other proposals are presented.	DTE generally supports national policy to address the nation's energy future. This can be achieved in different ways, the details of the approach being key. The policy must provide a reasonable timeframe for transition of existing generation fleets and assure a reasonable cost on customers. It should also provide flexibility to various regions of the U.S. allowing for particular differences.
Energy efficiency	Support	DTE Energy has closely tracked energy efficiency legislation at the federal level and supports energy conservation measures. DTE Energy also monitors the research and development of efficiency technologies.	DTE generally supports national policy to address the nation's energy future. This can be achieved in different ways, the details of the approach being key. The policy must provide a reasonable timeframe for transition of existing generation fleets and assure a reasonable cost on customers. It should also provide flexibility to various regions of the U.S. allowing for particular differences.
Energy efficiency	Support	DTE Energy supported Michigan Public Act (PA) 342 of 2016, that continues the energy waste reduction requirements for electric and gas providers in Michigan that began in 2009. The standards went into effect in 2009, and ramped up gradually to the current level. The standards will remain at this level in perpetuity unless superseded by future legislation, or suspended by the Michigan Public Service Commission.	The 2016 legislation requires electric providers to achieve incremental energy savings of 1.0% to total electricity sales through 2021. Natural gas providers must achieve incremental energy savings of 0.75% per year. The policy must provide a reasonable timeframe for transition of existing fleets and assure a reasonable cost on customers.
Clean energy generation	Support with minor exceptions	DTE Energy is supportive of a national clean or renewable energy standard, as long as it allows for flexibility to match a state's renewable and clean energy potential. DTE Energy believes that renewable energy is a vital part of the energy mix to meet Michigan's future energy needs and DTE Energy has been investing in renewables to benefit DTE Energy's customers and the environment.	States are better suited to enact clean energy legislation due to state and regional differences in the availability of clean energy resources. GHG policies are still under development. DTE generally supports national policy to address the nation's energy future. This can be achieved in different ways, the details of the approach being key. The policy must provide a reasonable timeframe for transition of existing generation fleets and assure a reasonable cost on customers. It should also provide flexibility to various regions of the U.S. allowing for particular differences.
Clean energy generation	Support	DTE Energy supported Michigan Public Act (PA) 342 of 2016, that requires the Company to obtain 15 percent of our retail sales from qualifying renewable resources by 2021. DTE Energy has already met the requirement to meet the current 10 percent renewable standard.	DTE generally prefers state clean energy policy solutions over national policy to address the nation's energy future. This can be achieved in different ways, the details of the approach being key. The state policy must provide a reasonable time frame for transition of existing generation fleets and assure a reasonable cost on customers. State policies provide flexibility to various regions of the U.S. allowing for particular differences.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Edison Electric Institute

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

EEl member companies are committed to addressing the challenge of climate change and support an 80-percent reduction in greenhouse gas emissions by 2050. As the Executive Administration works to address this issue, it is essential to include effective consumer-protection measures that help to reduce price increases for consumers and avoid harm to U.S. industry and the economy. An EEl CEO group has also launched a Natural Gas Supplier Initiative - an overarching framework to recognize and advance the innovative, voluntary sustainability programs for natural gas from the wellhead to the burner tip. NGSI enables the natural gas industry to measure, disclose, and recognize industry-wide progress and innovation on key sustainability metrics.

How have you influenced, or are you attempting to influence their position?

DTE Energy tracks the activities of all of the associations of which the company is a member. Further, we work to provide input to align trade association positions with DTE Energy's position, and we participate in their advocacy to policy makers to the extent possible.

Trade association

American Gas Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The American Gas Association encourages the use of lower carbon emitting fossil fuels. AGA submitted comments to the Senate Energy and Natural Resources Committee in the past urging that any clean energy standard include natural gas, that energy efficiency be included as a compliance path in any standard, and that policy makers recognize the even cleaner path of encouraging the direct use of natural gas. In addition, AGA has partnered with EEl on the Natural Gas Sustainability Initiative that enables the natural gas industry to measure, disclose, and recognize industry-wide progress and innovation on key sustainability metrics.

How have you influenced, or are you attempting to influence their position?

DTE Energy tracks the activities of all of the associations of which the company is a member. Further, we work to provide input to align trade association positions with DTE Energy's position, and we participate in their advocacy to policy makers to the extent possible.

Trade association

Nuclear Energy Institute

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

NEI serves as a unified industry voice before the U.S. Congress, executive branch agencies and federal regulators, as well as international organizations and venues. NEI also provides a forum to resolve technical and business issues for the industry. Federal, state and local policymakers increasingly recognize nuclear energy's zero carbon emissions footprint and its contribution to meeting growing electricity demand while reducing greenhouse-gas emissions.

How have you influenced, or are you attempting to influence their position?

DTE Energy tracks the activities of all of the associations of which the company is a member. Further, we work to provide input to align trade association positions with DTE Energy's position, and we participate in their advocacy to policy makers to the extent possible.

Trade association

Interstate Natural Gas Association of America

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Increased use of natural gas is helping to combat climate change by lowering carbon dioxide emissions. While U.S. gas production is up 37 percent since 1990, greenhouse gas emissions are down 17 percent. The natural gas pipeline industry is tackling methane emissions by "tightening up" its system. In the past 30 years, the industry has reduced the number of pipeline leaks by 94 percent through pipeline integrity and maintenance programs and continued investment in new pipeline facilities. Natural gas has an important role in helping the nation become a larger user of renewable energy, like wind and solar in electric generation. It is the

number one “back stop” to ensure we continue to have electricity even when the sun isn’t shining or the wind isn’t blowing. INGAA has focused more recently on influencing oil and gas regulations related to emissions of methane than on climate legislation. and in 2018 published its Methane Emissions Commitments by its members that focus on developing and sharing effective practices to minimize emissions from interstate pipeline components including pipelines, pneumatic controllers, natural gas storage wells and compressor stations.

How have you influenced, or are you attempting to influence their position?

DTE Energy tracks the activities of all of the associations of which the company is a member. Further, we work to provide input to align trade association positions with DTE Energy’s position, and we participate in their advocacy to policy makers to the extent possible.

Trade association

CEO Climate Dialogue The CEO Climate Dialogue (CEO Dialogue) is a group of U.S. and Global Fortune 500 corporations or their subsidiaries and leading environmental nonprofit organizations that are committed to advancing climate action and durable federal climate policy in the U.S. Congress. The goal of the group is to urge the President and Congress to enact a market-based approach to climate change in accordance with a set of six Guiding Principles for climate legislation. We believe it is urgent that the President and Congress put in place a long-term federal policy as soon as possible to protect against the worst impacts of climate change. Acting sooner rather than later allows us to meet the climate challenge at the least possible cost and put the required investments in place in time to meet the necessary emissions targets.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

Adherence to the full set of the following six principles can help ensure success: 1. Significantly reduce U.S. greenhouse gas emissions so that the U.S. is demonstrably a leader on global efforts to effectively limit climate change. Specifically, U.S. policy should ensure the country is on a path to achieve economy-wide emissions reductions of 80% or more by 2050 with aggressive near and mid-term emission reductions commensurate with this goal. 2. Effective: A key test of any climate policy is whether it will deliver timely emissions reductions across the economy and includes mechanisms that provide certainty that emission goals are met. The timeline for reductions must allow capital intensive industries to adjust in an economically rational manner. Policies must encourage investment and planning decisions consistent with the timeframes needed. Policies must focus on emissions reductions outcomes, not specific resources or technologies. 3. Market-based: An economy-wide price on carbon is the best way to use the power of the market to achieve carbon reduction goals, in a simple, coherent and efficient manner. We desire to do this at the least cost to the economy and households. Markets will also spur innovation, and create and preserve quality jobs in a growing low-carbon economy. 4. Durable and responsive: Well-designed and stable policies will deliver predictable results and increase public support over time, providing durability across time and political cycles. Policies should be adaptive over time in terms of pace and scope of reductions as our understanding of climate change, policy impact, and technological changes evolves. 5. Do no harm: Policies must support the competitiveness of the U.S. economy. Policies must address emissions leakage that can undermine climate objectives. Policies must also safeguard against negative impacts on biodiversity, land and water. 6. Promote equity: Unabated climate change is a major threat to the U.S. economy. Therefore, policies to address climate change, which may also entail some cost, must provide transparency and promote affordability while distributing costs and benefits in such a way that promotes equity. Policies must include mechanisms to invest in American workers, and in disadvantaged communities that have the least resources to manage the costs of climate change.

How have you influenced, or are you attempting to influence their position?

DTE Energy’s CEO has been involved since the inception of the CEO Climate Dialogue and worked to influence the six guiding principles.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

DTE Energy is a member of the Midcontinent Power Sector Collaborative, run by the Great Plains Institute, which consists of state officials, investor-owned utilities, generation and transmission cooperatives, merchant generators, public power producers and environmental organizations from the Midwest or with a significant Midwestern presence. Over the past four years, the Collaborative has discussed ways that the U.S. Environmental Protection Agency (EPA) and the states could devise guidelines and state plans reducing carbon emissions from existing power plants under section 111(d) of the Clean Air Act (EPA's Clean Power Plan). In response to efforts by the new EPA Administration to repeal or replace Obama era climate regulations, the Collaborative is now evaluating pathways for achieving mid-century decarbonization, including pathways for power sector, electric vehicles and the building sector. DTE participated in the development of whitepapers developed by the Midcontinent Power Sector Collaborative that are available at: www.betterenergy.org.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Climate change policy, initiatives, and mandatory requirements are managed by the Vice President, Environmental. The VP, Environmental reports on key environmental issues to the DTE Energy President and Chief Executive Officer (CEO) during monthly meetings of the Government, Regulatory, and Community (GRC) Committee. Major recommendations related to corporate environmental strategies, including climate change, are developed by this Committee. Direct and indirect activities with trade organizations, research groups, and other stakeholders that influence policy are taken into account in developing recommendations by the GRC.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Complete

Attach the document

2019-EEI-AGA-ESG-Report.pdf

Page/Section reference

The entire document contains information pertaining to governance, strategy, risks & opportunities, emissions figures, emissions targets, and other metrics.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

The attached document is the EEI/AGA ESG Sustainability Report.

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

2017-Global-Reporting-Initiative-Report-FINAL.pdf

Page/Section reference

Pages 50-58 provide environmental figures and targets, including data for energy, water, biodiversity, emissions, effluents & waste, and environmental compliance. Governance and strategy information is included in the GRI 102: GENERAL DISCLOSURES section.

Content elements

Governance
Strategy
Emissions figures
Emission targets
Other metrics

Comment

At the time of submission, the Corporate Citizenship Report for 2018-2019 was not yet finalized and published on the DTE website. The 2017-2018 Corporate Citizenship Report is attached for reference.

Publication

In other regulatory filings

Status

Complete

Attach the document

IRP_Summary.pdf

Page/Section reference

Governance, strategy, risks & opportunities, emissions targets, and other metrics are included throughout the entire document.

Content elements

Governance
Strategy
Risks & opportunities
Emission targets
Other metrics

Comment

The attached document is the 2019 Integrated Resource Plan (IRP) Summary.

Publication

In mainstream reports

Status

Complete

Attach the document

DTEEnergyCompany_10K_20190207.pdf

Page/Section reference

The entire document contains information about governance, strategy, risks & opportunities, emissions figures, and emissions targets.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

The attached document is the United States Securities and Exchange Commission Form 10-K.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

MethaneEmissionsReport.pdf

Page/Section reference

Entire report

Content elements

Strategy

Emissions figures

Other metrics

Comment

The attached document is the DTE 2018 Methane Emissions Report.

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Vice President, Environmental Management and Resources	Other, please specify (Vice President - Environment/Sustainability)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

DTE Energy provides electricity and natural gas to customers in our DTE Electric and DTE Gas service territories in Michigan. The annual average GHG emissions per KWh of electricity or per standard cubic feet (scf) of natural gas can be calculated by customers using emission factors provided by EPA. DTE Electric also provides an estimate of GHG intensity of electricity delivered to our customers in the EEI Template of our company's ESG Report: <https://empoweringmichigan.com/dte-impact/performance/>

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	14212000000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	2333311072

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	DTE Energy provides two commodities to customers: Electricity and Natural Gas. Emissions from customer energy use can be calculated by applying emission factors to each customer's total energy usage. We do not see a need at this time to allocate emissions to customers when estimated emissions can be calculated by the customer.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

DTE Energy provides electricity and gas to our customers. The GHG emissions from the electricity delivered by DTE Electric to our customers can be calculated using EPA's e-GRID emission factors for electricity purchased off of the energy grid or by using an estimate of GHG intensity of electricity delivered to our customers in the EEI Template of our company's ESG Report located at: <https://empoweringmichigan.com/dte-impact/performance/>, or based on contracts and/or bilateral agreements with electricity providers such as renewable or other low-carbon energy providers.

Customers can calculate emissions from DTE Gas deliveries using the volume of gas delivered and billed by DTE Gas times an emission factor for natural gas provided by EPA or other sources.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

Yes

SC2.2a

(SC2.2a) Specify the requesting member(s) that have driven organizational-level emissions reduction initiatives, and provide information on the initiatives.

Requesting member

General Motors Company

Initiative ID

2018-ID1

Group type of project

Other, please specify (Renewable Energy Procurement)

Type of project

Other, please specify (Investment in renewable energy generation)

Description of the reduction initiative

Addressing climate change must be a cross-industry effort, so we've expanded our MIGreenPower program to our large business and industrial customers. Introduced in 2017, MIGreenPower is a voluntary renewable energy program that provides DTE's residential and business customers with an easy and affordable way to reduce their carbon footprint by increasing the percentage of their energy use attributable to local wind and solar energy sources, up to 100 percent. Participating customers see a slight increase in their monthly bill while knowing they're helping to support Michigan's clean energy future. DTE announced with our 2019 Integrated Resource Plan that we're expanding this voluntary initiative to meet the needs of our largest business and industrial customers who are working to meet their own sustainability goals, enabling them to invest in renewable energy, which will help drive our state toward an even cleaner future. The program is designed to grow and represents a progressive approach to fill market demand. We've already partnered GM to provide renewable energy to support their sustainability goals. GM has partnered with DTE to procure 300,000 MW hours annually of wind energy to power its technical center in Warren, Mich., and its headquarters in Detroit.

Emissions reduction for the reporting year in metric tons of CO2e

0

Did you identify this opportunity as part of the CDP supply chain Action Exchange?

No

Would you be happy for CDP supply chain members to highlight this work in their external communication?

Yes

SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms