

Module: Introduction**Page: Introduction**

CC0.1**Introduction**

Please give a general description and introduction to your organization.

DTE Energy (NYSE: DTE) is a diversified U.S. energy company with approximately \$10.6 billion in revenues for 2016. 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, including our Corporate Citizenship Report, can be found at: <https://www.newlook.dteenergy.com/wps/wcm/connect/dte-web/home>

CC0.2**Reporting Year**

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed

Fri 01 Jan 2016 - Sat 31 Dec 2016

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country

United States of America

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD(\$)

CC0.6

Modules

As part of the request for information on behalf of investors, companies in the electric utility sector, companies in the automobile and auto component manufacturing sector, companies in the oil and gas sector, companies in the information and communications technology sector (ICT) and companies in the food, beverage and tobacco sector (FBT) should complete supplementary questions in addition to the core questionnaire.

If you are in these sector groupings, the corresponding sector modules will not appear among the options of question CC0.6 but will automatically appear in the ORS navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below in CC0.6.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

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 PPRC's Charter is attached 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.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
All employees	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency project Efficiency target	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.
All employees	Recognition (non-monetary)	Emissions reduction project Emissions reduction	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.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
		target Energy reduction project Energy reduction target Efficiency project Efficiency target Other: Behaviour change related indicator	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.
All employees	Other non-monetary reward	Behavior change related indicator	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 nonprofit 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.

Further Information

Attachments

<https://www.cdp.net/sites/2017/21/5021/Climate Change 2017/Shared Documents/Attachments/ClimateChange2017/CC1.Governance/DTE Energy PublicPolicyCharter.pdf>

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Annually	Board or individual/sub-set of the Board or committee appointed by the Board	U.S.	> 6 years	Board Committees meet no less frequent than annually, some meet more frequently (e.g. quarterly).

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

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 web-site.

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.

CC2.1c

How do you prioritize the risks and opportunities identified?

There are various risks associated with the operations of DTE Energy's utility and non-utility businesses. To provide a framework to understand the operating environment of DTE Energy, a brief explanation of the more significant risks associated with our businesses are provided in our 2016 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.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
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CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

i. How the business strategy has been influenced.

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 meetings of the Government, Regulatory, and Community (GRC) Committee. The Public Policy and Responsibility Committee (PPRC) of the DTE Energy Board of Directors has oversight for corporate environmental issues, including climate change. An annual or more frequent update on the climate change issue is provided to the Public Responsibility Committee by the Vice President, Environmental with support from the COO and CEO.

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

Following approval by the Board, DTE Energy announced a mid-century carbon reduction strategy in May 2016.

iii. What climate change aspects have influenced the strategy.

Uncertainty around the fate of the Clean Power Plan following the stay by the Supreme Court in early 2016 and the transition to the Trump EPA in 2017. Michigan Energy legislation that was passed in December 2016. The economics of natural gas and renewables.

iv. Climate change influences on short-term strategy.

DTE Electric's capital investments over the 2017-2021 period are estimated at \$2.0 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.

v. 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. In response to expected climate related policies, over the next fifteen years, DTE Electric expects to retire additional coal-fired generation and to increase the proportion of its generation mix attributable to natural gas-fired generation and renewables.

In May 2015, DTE Energy received approval from the Nuclear Regulatory Commission (NRC) for a license to construct and operate a new nuclear energy facility on the site of the existing Fermi 2 Nuclear Power Plant in Newport, Mich. The company has not committed to building the new plant, but will keep the option open for long-term planning purposes.

vi. 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.

vii. Most substantial business decision made during 2016 that are influenced by climate change strategy.

DTE Electric announced plans to retire an additional eight coal-fired generating units through 2023. DTE Electric plans to build natural gas turbine plants to provide approximately 1,000 megawatts of energy between 2021 and 2023. In September 2016, DTE Electric received an order from the MPSC in its amended Renewable Energy Plan approving two 150 megawatt wind projects expected to be constructed and in service between 2018 and 2020 and 25 megawatts of company-owned solar projects which will be constructed and in service between 2019 and 2020. DTE Electric is also currently constructing 50 megawatts of solar generation expected to be in service mid-2017.

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 has not changed DTE Energy's long-term carbon reduction strategy.

ix. Use of forward-looking scenario analyses, including 2 degree scenario, to inform strategy/planning.

We use forward-looking scenario analyses to assess the feasibility of reducing emissions from DTE Energy more than 80% by 2050, which is the level that the scientific community agrees is necessary to limit global warming to less than 2 degrees C.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price on carbon?

Yes

CC2.2d

Please provide details and examples of how your company uses an internal price on carbon

We use a carbon price in carbon reduction scenarios that are used to inform our long-term business strategy.

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
 Trade associations
 Funding research organizations
 Other

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
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 think tank 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. percent of retail sales for natural gas utilities in 2012, and each year thereafter. The standards went into effect in 2009, and ramped up gradually to the current level. The standards will	The 2016 legislation require 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.

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
		remain at this level in perpetuity unless superseded by future legislation, or suspended by the Michigan Public Service Commission.	
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 wind energy is a vital part of the energy mix to meet Michigan's future energy needs and DTE Energy has been harnessing wind 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 this 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 timeframe 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.

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Edison Electric Institute	Consistent	EEI 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.	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.
American Gas Association	Consistent	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.	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.
National Association of Manufacturers	Mixed	The NAM and its member companies are committed to protecting the environment through greater environmental sustainability, increased energy efficiency and conservation and reducing greenhouse gas emissions believed to be associated with global climate change. Their position is that the U.S. cannot solve the climate change issue alone. The establishment of federal climate change policies to reduce greenhouse gas emissions, whether legislative or regulatory, must be done in a thoughtful, deliberative and transparent process that ensures a competitive level playing field for U.S. companies in the global marketplace. The NAM opposes any federal or state government actions regarding climate change that could adversely affect the international competitiveness of the U.S. marketplace economy. Any climate change policies should focus on cost-effective reductions, be implemented in concert with all major emitting nations, and take into account all greenhouse sources and sinks. The NAM believes that federal climate policies generally should pre-empt state policies.	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.
Nuclear Energy Institute	Consistent	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	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	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
		carbon emissions footprint and it's contribution to meeting growing electricity demand while reducing greenhouse-gas emissions.	
Interstate Natural Gas Association of America	Consistent	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.	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.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

No

CC2.3e

Please 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 evaluating pathways for achieving mid-century decarbonization.

CC2.3f**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?**

As explained in our response to Question 2.2a above, 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.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

Absolute target
Renewable energy consumption and/or production target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
Abs1	Scope 1	91%	20%	2010	39700000	2020	Yes, but this target has not been approved as science-based by the Science Based Targets initiative	This goal was established in 2014 to prepare for expected carbon reductions required under EPA's Clean Power Plan. In 2017, DTE Energy developed a goal to reduce GHG emissions from generation by more than 80% by 2050 from a baseline of 2005. This new goal includes milestones of 30% by the early 2020s, 45% by 2030 and 75% by 2040. We consider this a science based target because it meets the requirement of reducing power sector emissions by 80% by 2050 which the scientific community supports as necessary to limit global warming to less than 2 degrees C.

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
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CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
RE1	Electricity production	2015	4200000	10%	2021	15%	The renewable energy requirement was amended by Michigan Public Act 342 in December 2016 to extend the current renewable energy standard of 10% of electricity provided through 2018, achieve 12.5% of electricity provided in 2019 and at least 15% renewable by the end of 2021.

CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Abs1	60%	100%	We met the 20% reduction goal in 2016 due in part to an unplanned curtailment of coal-fired generation after a fire in August 2016 at our St. Clair Power Plant.
RE1	100%	100%	

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

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

CC3.2a

Please 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	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Group of products	DTE Electric Energy Optimization program offerings	Avoided emissions	Other: EPA Equivalency Calculator			444,000 metric tons of CO2 emissions avoided in 2016 as a result of DTE Electric Energy Optimization programs.
Group of products	DTE Gas Energy Optimization program offerings	Avoided emissions	Other: EPA Equivalency Calculator			88,600 metric tons of CO2 emissions avoided in 2016 as a result of DTE Gas Energy Optimization programs.
Product	DTE Electric Green Currents	Low carbon product	Other: Green-e Energy			GreenCurrentsSM is a voluntary renewable energy program that enables DTE Electric customers to support electricity generation from Michigan-based, renewable energy sources. DTE electric customers can utilize two options: 1) Purchase a "block" of 100 kilowatt-hours of renewable energy for \$2.50 per month in addition to normal monthly electric charges, or 2) match 100 percent of monthly electric consumption for 2 cents per kilowatt-hour (kWh) more than the standard rate.
Product	DTE Gas BioGreen Gas	Low carbon product				The DTE Gas 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.
Product	Sales of compressed natural gas (CNG) to 3rd parties for transportation fuel	Avoided emissions	Other: Avoided emissions calculator			Sales of CNG to 3rd parties for use as transportation fuel resulted in approximately 2,500 metric tons of avoided emissions assuming a 25% improvement in emissions intensity for CNG compared to gasoline for vehicles.

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

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO₂e savings

Stage of development	Number of projects	Total estimated annual CO₂e savings in metric tonnes CO₂e (only for rows marked *)
Under investigation	3	
To be implemented*		
Implementation commenced*		
Implemented*	2	3005
Not to be implemented		

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Building services	Lighting replacement, improvement and upgrades to DTE Energy Gas facilities.	1890	Scope 2 (location-based)	Voluntary	338000	597000	1-3 years	Ongoing	Focus is primarily on lighting improvements over the last 5 years at DTE Gas facilities.
Energy efficiency: Building services	DTE Energy Headquarters energy efficiency improvements.	1115	Scope 2 (location-based)	Voluntary	117000	1184000	4-10 years	Ongoing	LED lighting, automated air supply dampers to reduce AC use, and installation of variable frequency drives on domestic and cooling tower water pumps.

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Installation 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.
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

Method	Comment
	branding and communications campaign around environmental leadership, outlining launch of both internal and external campaigns and messaging.
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 3.3b are funded through dedicated energy efficiency budgets.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Additional Information on Projects Under Investigation in Question CC3.3a: 1. Energy efficiency improvements at power generation facilities 2. Energy efficiency improvements at DTE Energy facilities in Michigan outside of power plants. 3. Reduce fleet vehicle idling time

Page: CC4. Communication

CC4.1

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	Status	Page/Section reference	Attach the document	Comment
In voluntary communications	Complete	Climate Change pp. 46-57, Performance Data pp. 92-93	https://www.cdp.net/sites/2017/21/5021/Climate Change 2017/Shared Documents/Attachments/CC4.1/DTE_CCR_PDF_digital.pdf	DTE Energy 2016-2017 Corporate Citizenship Report available on-line at www.dtecitizenship.com
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	Page 18, 19, 30, 33, 115	https://www.cdp.net/sites/2017/21/5021/Climate Change 2017/Shared Documents/Attachments/CC4.1/DTEEnergyCompany_10K_20170209.pdf	DTE Energy 2016 10K available on-line at http://ir.dteenergy.com/phoenix.zhtml?c=68233&p=irol-sec

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Risks driven by changes in regulation
- Risks driven by changes in physical climate parameters
- Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Air pollution limits	DTE Electric is subject to U.S. EPA rules under the Clean Air Act that impose limits on air emissions. These rules have led to additional emission controls on fossil-fueled power plants to reduce nitrogen oxide, sulfur dioxide, mercury and other emissions. These reductions also have the effect of reducing carbon dioxide emissions because less coal is burned for generation. U.S. EPA rules under the Clean Air Act requiring carbon performance standards for new and existing electric generating	Increased capital cost	3 to 6 years	Direct	Very likely	High	Financial implications of new source performance standards for emissions of GHGs from electric utility generation units may include increased capital and O&M costs for new or modified electric generation sources.	We manage these risks through the Board Committee structure described in our response to Question 2.1 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.	No additional cost - these costs are integrated into existing budgets.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>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, has been stayed by the U.S. Supreme Court and the Trump EPA is in the process of repealing and replacing the rule. Despite these regulatory uncertainties over the fate of U.S. carbon rules, DTE Electric will retire additional coal-fired generation and increase the proportion of its generation mix attributable to natural gas-fired generation and renewables over the next fifteen years.</p>								

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Uncertainty surrounding new regulation	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. We could be required to install expensive pollution control measures or limit or cease activities, including the retirement of certain generating plants, based on these regulations.	Increased operational cost	3 to 6 years	Direct	Likely	Unknown	Financial implications that could be expected under future but uncertain air regulations to reduce emissions of air pollutants and greenhouse gases could involve the costs to emit under an emission trading program, e.g. under a carbon tax or carbon cap and trade system. Potential financial impacts include expenditures for capital equipment beyond what is currently planned, financing costs related to additional capital expenditures, and the retirement of facilities where control equipment is not economical.	We manage these risks through the Board Committee structure described in our response to Question 2.1 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.	No additional cost - these costs are integrated into existing budgets
Other regulatory drivers	EPA and environmental groups have initiated enforcement	Increased capital cost	1 to 3 years	Direct	Unknown	Unknown	Depending upon the outcome of discussions with the EPA regarding these enforcement	This risk is being managed by the company's Legal Department.	The Company cannot predict the financial impact or outcome of

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	actions against DTE Electric Co. 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. .						actions, DTE Electric could be required to install additional pollution control equipment at some or all of the power plants in question, implement retirement of facilities where control equipment is not economical, engage in supplemental environmental programs, and/or pay fines		this matter, or the timing of its resolution.
Renewable energy regulation	We are subject to existing Michigan and potential future federal legislation and regulation requiring us to secure sources of renewable energy. Federal legislation regarding renewable power mandates are less likely than state legislation at this time.	Increased capital cost	1 to 3 years	Direct	Very likely	Unknown	Future mandates for renewable generation at the state or federal level would likely require significant investment in renewable energy generation sources by DTE Energy	We are actively engaged in developing renewable energy projects and identifying third party projects in which we can invest.	No additional cost - these costs are integrated into existing budgets.

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Induced changes in natural resources	Decreases 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.	Reduction/disruption in production capacity	Unknown	Direct	Unknown	Unknown	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 don't expect physical risks from climate change to impact the company in a way that would impact our normal long-range planning process. The company is not actively planning to manage or adapt to changes in Great Lakes water levels or temperatures.	No additional cost - these costs are integrated into existing budgets.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	Warmer average summer and winter temperatures could potentially impact seasonal demand for electricity and natural gas.	Other: Increased or reduced demand for product.	Unknown	Indirect (Client)	Unknown	Unknown	Year to year deviations from normal hot and cold weather conditions affect our earnings and cash flow. Higher than normal summer temperatures increase electricity demand for residential and commercial air conditioning, and potentially increase peak demand days for DTE Electric. Warmer than normal winters reduce the need for natural gas for heating, resulting in lower gas sales to retail customers.	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.	No additional cost - these costs are integrated into existing budgets
Other physical climate drivers	Increased frequency of severe storm events (e.g. severe thunderstorms, tornadoes, wind	Increased operational cost	Unknown	Direct	Unknown	Unknown	Ice storms, wind storms, severe thunderstorms and tornadoes can damage the electric distribution	DTE Electric maintains a storm emergency and readiness center that is put into action when	No additional cost - these costs are integrated into existing budgets.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	storms, and ice storms) would have an impact on the electrical transmission and distribution system infrastructure (e.g. poles and wires).						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.	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	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								an impact on the electric distribution infrastructure than normal year to year variations in severe weather events	

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Incorrect or negative perceptions of the company's approach to addressing climate change may lead to shareholder resolutions requesting additional action from the company.	Other: Increased operational and/or capital costs.	Unknown	Direct	Likely	Unknown	The estimated financial implications would vary depending on the scope of a proposed shareholder resolution that passed by a majority vote of shareholders. In 2017 a shareholder proposal requested that DTE Energy, with board oversight, publish an assessment of the	The Company actively communicates with its shareholders about a broad range of topics. 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. We	No additional cost - these costs are integrated into existing budgets.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							long term impacts on the company's portfolio, of public policies and technological advances that are consistent with limiting global warming to no more than two degrees Celsius over pre-industrial levels. The proposal was defeated by a vote of shareholders.	publish an annual Corporate Citizenship report that is indexed to the GRI G4 standards. We respond to ESG organization requests for information such as the CDP Carbon and CDP Water questionnaires. In 2017 DTE Energy announced a long-term goal to reduce carbon emissions from 2005 levels by more than 80% by 2050, with interim milestones for the 2020s, 2030, and 2040. This announcement is also expected to address DTE Energy's approach to addressing climate change.	

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation

Opportunities driven by changes in physical climate parameters

Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Renewable energy regulation	Michigan Energy legislation that mandates a renewable portfolio standard and energy optimization requirements creates opportunities for the company to meet these mandates.	Investment opportunities	1 to 3 years	Direct	Virtually certain	Medium-high	Financial implications associated with the opportunities from Michigan Public Act 342 of 2016 include the costs to build renewable energy capacity to meet renewable energy requirements. DTE Energy has invested approximately \$1 billion in renewable energy since 2008 and has spurred an additional \$1 billion in third party renewable energy investment. DTE Electric recovers costs through regulatory proceedings in general rate	DTE manages compliance with renewable energy requirements in accordance with the 2008 PA 295 Amended Renewable Energy Plan that has been approved by the Michigan Public Service Commission (MPSC).	DTE Energy must submit an annual report to the Michigan Public Service Commission on the Renewable Energy Plan reconciliation. The cost to manage this plan is built into existing budgets.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							case filings and renewable energy plan filings for capital expenditures consistent with prior ratemaking treatment.		
Cap and trade schemes	Opportunities to participate in carbon trading programs are written into the EPA's Clean Power Plan rule that was finalized in 2015. The fate of the Clean Power Plan is currently uncertain due to the current EPA's plan to repeal the rule and the outstanding litigation of the rule. However, we expect that opportunities for states to participate in carbon trading	Reduced operational costs	3 to 6 years	Direct	About as likely as not	Unknown	Economic analyses of participation in carbon trading programs that addressed the Clean Power Plan indicated that participation in multi-state trading programs lowers overall costs to comply with emission reduction targets. The amount of savings depends on the number of states that participate in the trading program. In	DTE Energy Trading manages opportunities for trading emission allowances and offsets. In addition DTE Biomass provides carbon credit and offset services for the voluntary capture and destruction of landfill methane.	Costs associated with existing trading actions are confidential. Costs associated with management of a carbon trading program to comply with the federal or regional trading programs would be built into our existing budget for managing existing allowance trading programs, such as under the Acid Rain

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	programs will continue to emerge. In addition, there are opportunities to purchase and/or sell emissions offsets under existing regional cap and trade programs, or under a potential future regional or nationwide cap and trade program.						addition, opportunities include the creation, purchase or sale of GHG emission offsets from landfill gas to energy projects operated by DTE Biomass under existing cap and trade programs, such as the California Cap & Trade Program.		Program and the Cross State Air Pollution Rule.
Emission reporting obligations	Reporting of GHG Emissions under EPA's mandatory GHG reporting rule identifies opportunities for reduction of emissions.	Reduced operational costs	1 to 3 years	Direct	Likely	Unknown	Mandatory monitoring and reporting of GHG emissions may identify unusually high or excessive emissions (e.g. fugitive leaks from natural gas pipelines and equipment) that can be reduced through repair and	The emission monitoring and reporting obligations are documented in the required GHG Monitoring Plan. Annual reporting of GHG emissions are signed by a Designated Representative who has responsibility for the monitored	The direct costs related to compliance with EPA's GHG reporting rule cannot be quantified at this time but include personnel to manage the fugitive leak testing, data management and reporting obligations of

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							maintenance activities and result in fuel savings or related GHG reduction savings.	facilities and who will be informed of GHG reduction opportunities.	the rule; equipment costs; and costs associated with maintaining a data information system.
General environmental regulations, including planning	Regulation that drives increased investment in low carbon energy sources, such as renewables, natural gas generation or nuclear power. Despite uncertainty with regard to federal environmental regulations under the current EPA, including the fate of the Clean Power Plan, we expect that environmental regulations will continue to	Investment opportunities	3 to 6 years	Direct	Likely	Medium-high	It is not possible to determine the potential impact of future regulations on existing sources at this time. Pending or future legislation or other regulatory actions could have a material impact on our operations and financial position and the rates we charge our customers. Impacts include expenditures for environmental equipment beyond what is	We would seek to recover these incremental costs through increased rates charged to our utility customers as authorized by the Michigan Public Service Commission (MPSC).	The direct costs related to compliance with environmental regulations, cannot be quantified at this time.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	play a role in driving coal plant retirements and the need for investment in new sources of generation.						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.		
Fuel/energy taxes and regulations	Regulatory and investment opportunities in biomass power.	Investment opportunities	1 to 3 years	Direct	Very likely	Unknown	Environmental and economic trends are creating growth opportunities for biomass as a fuel.	The increasing number of states with renewable portfolio standards and energy efficiency mandates provides investment opportunity in biomass power generation. Power and Industrial	The costs associated with these actions are confidential.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>Projects holds ownership interests in, and operates, four renewable generating plants with a capacity of 191 MWs. The electric output is sold under long-term power purchase agreements. Power and Industrial Projects also develops landfill gas recovery systems that capture the gas and provide local utilities, industries, and consumers with an opportunity to use a competitive, renewable source of energy, in addition to providing environmental benefits by reducing GHG emissions.</p>	

CC6.1b

Please describe your inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) temperature	Warmer average summer and winter temperatures could potentially increase seasonal demand for electricity and natural gas for generation.	Increased demand for existing products/services	Unknown	Indirect (Client)	About as likely as not	Unknown	Increased electricity demand for air conditioning load in the residential and commercial sectors will mean increased sales; however, mandatory energy efficiency requirements could offset this increase in demand.	This opportunity would be managed through our normal planning process for maintenance and upgrades for the electric distribution system.	The costs to manage these increases are already included in existing processes. The increased revenue and costs from increased energy delivery due to climate change effects is difficult to separate from other factors influencing energy delivery such as general economic activity and growth and normal variations in weather.

CC6.1c

Please describe your inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other drivers	Deployment of advance metering infrastructure (AMI) for electric and gas customers. In 2016, we reached the milestone of 3 million advanced meters installed. Our goal is to convert all DTE Electric meters by the end of 2017, and all DTE Gas meters by the end of 2022.	Reduced operational costs	3 to 6 years	Indirect (Client)	Virtually certain	Unknown	In April 2010, the Company signed an agreement with the U.S. Department of Energy for a grant of approximately \$84 million in matching funds on total anticipated spending of approximately \$168 million related to the accelerated deployment of smart grid technology,	This opportunity is being managed by DTE Energy marketing and distribution system personnel to oversee the installation of nearly 4 million DTE Energy customer meters	The cost to manage this opportunity is built into existing operating budgets.
Changing consumer behavior	Increased utilization of plug-in electric vehicles	Increased demand for existing products/services	Unknown	Direct	About as likely as not	Unknown	As plug-in electric vehicles penetrate the market, opportunities to sell additional electricity to displace petroleum consumption in the transportation sector will increase, especially during	In 2009, DTE Energy joined the Edison Electric Institute (EEI) in an industry-wide plug-in vehicle market readiness pledge that includes five areas of focus: Infrastructure, Customer Support, Customer and	The cost to manage this opportunity is built into existing operating budgets.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							traditional off-peak electric consumption periods (i.e. overnight).	Stakeholder Education, Vehicle and Infrastructure Incentives, and Utility Fleets. DTE Electric Co. has also begun to offer competitive rates for plug-in electric vehicles including incentives for off-peak charging.	
Changing consumer behavior	Increased customer participation in voluntary renewable programs	Premium price opportunities	1 to 3 years	Indirect (Client)	Virtually certain	Low-medium	GreenCurrents SM is DTE Energy's voluntary renewable energy program. Customers that enroll in GreenCurrents SM are supporting the generation of electricity from Michigan-based, renewable energy sources. In addition, BioGreenGas is a voluntary residential program for DTE Gas customers which supports the local development of renewable natural gas by using the	The GreenCurrents SM and BioGreenGas programs are managed through established marketing and billing programs. o DTE Electric customers have two options for participating in GreenCurrent SM : (1) Purchase a "block" of 100 kilowatt-hours of renewable energy for \$2.50 per month, up to 10 individual blocks. This monthly cost is in addition to normal monthly electric charges.	The cost to manage this opportunity is built into existing operating budgets.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							methane that arises naturally from landfills.	(2) Match 100 percent of monthly electric consumption for 2 cents per kilowatt-hour (kWh). The monthly cost is based on the amount of kilowatt-hours used each month, and is in addition to normal monthly electric charges. o 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.	

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Sun 01 Jan 2006 - Sun 31 Dec 2006	38600000
Scope 2 (location-based)	Sun 01 Jan 2006 - Sun 31 Dec 2006	3600000
Scope 2 (market-based)		

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
US EPA Mandatory Greenhouse Gas Reporting Rule
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

n/a

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	Other: EPA Mandatory GHG Reporting Rule - Table A-1, 40 CFR 98 Subpart A
CH4	Other: EPA Mandatory GHG Reporting Rule - Table A-1, 40 CFR 98 Subpart A
N2O	Other: EPA Mandatory GHG Reporting Rule - Table A-1, 40 CFR 98 Subpart A
SF6	Other: EPA Mandatory GHG Reporting Rule - Table A-1, 40 CFR 98 Subpart A

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference

Further Information

Attachments

[https://www.cdp.net/sites/2017/21/5021/Climate Change 2017/Shared Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/Q7.4 EF Table.xlsx](https://www.cdp.net/sites/2017/21/5021/Climate%20Change%202017/Shared%20Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/Q7.4%20EF%20Table.xlsx)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Equity share

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO₂e

32000000

CC8.3

Please describe your approach to reporting Scope 2 emissions

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure		

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO₂e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
2100000		Our reported Scope 2 emissions are for transmission and distribution line losses for purchased power and internal use of power on the DTE Electric system. We use EPA's eGRID (a location-based emission factor) to calculate these emissions.

CC8.4

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

CC8.4a

Please 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	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Sources emitting less than 25,000 metric tons of GHGs per year	Emissions are not relevant	Emissions are not evaluated	Emissions are not evaluated	These sources are exempt from monitoring and reporting under EPA's mandatory GHG reporting rule (40 CFR 98)
Electricity purchased by DTE Energy businesses and facilities.	Emissions are not evaluated	Emissions are not relevant	Emissions are not evaluated	The amount of electricity purchased by DTE Energy businesses and facilities is insignificant compared to the Scope 1 Direct Emissions produced by the company to generate electricity.

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Biomass emissions	Emissions are relevant and calculated, but not disclosed	Emissions are not evaluated	Emissions are not evaluated	CO2 emitted from the burning of biomass fuels is not required to be reported under EPA's mandatory GHG reporting rule (40 CFR 98). The emissions from the burning of biomass fuels are provided in the answer to 8.9a below.

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 5% but less than or equal to 10%	Data Gaps Assumptions Extrapolation Metering/ Measurement Constraints Sampling	Carbon dioxide emission from DTE Electric Co. power plants are measured by Continuous Emission Monitoring Systems (CEMS). The CEMS instrumentation and data are quality assured and calibrated in accordance with rigorous measures required under U.S. EPA's Acid Rain Program (40 CFR 75). CEMS measured emissions from DTE Electric Co. power plants account for more than 90% of total DTE Energy greenhouse gas emissions and the main sources of uncertainty are due to data gaps, (i.e. during occasional CEM downtime), metering/measurement constraints (i.e. daily auto-calibrations, calibration errors), and sampling (i.e. representativeness of samples pulled from flue gas stack). For DTE Gas Co. sources, a component of scope 1 emissions are fugitive natural gas leaks. These leaks occur at compressor stations, metering and regulating stations, and transmission and distribution pipelines. Due to the dispersed nature of the gas leaks it is difficult to directly measure all of the emissions. Instead, periodic leak surveys are performed that attempt to quantify the amount of gas lost to the atmosphere. The main sources of uncertainty for DTE Gas Co. facilities are data gaps (e.g. not all leaks are measured), assumptions (i.e. using standard emission factors for leaking components, and

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
			extrapolation (i.e. applying known leak rates or emission factors to similar components of facilities where the leak rate has not been measured).
Scope 2 (location-based)	More than 5% but less than or equal to 10%	Assumptions	According to the U.S. Energy Information Administration (EIA) data, national, annual electricity transmission and distribution losses averaged about 5% of the electricity that was transmitted in the United States between 2011 and 2015. DTE Energy reported annual line loss was 7% for 2016. The value represents the difference between total electric sales and total system output (including purchased power) and assumes that the difference accounts for line losses and internal (i.e. auxiliary power) use.
Scope 2 (market-based)			

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

No third party verification or assurance – regulatory CEMS required

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
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CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emission Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission
CFR 40 Part 75	93	Fri 01 Jan 2016 - Sat 31 Dec 2016	https://www.cdp.net/sites/2017/21/5021/Climate Change 2017/Shared Documents/Attachments/CC8.6b/ECMPS Submission Summary 2016.pdf

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

No third party verification or assurance

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
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CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Other: Carbon offset Credits	DTE Electric Co. has been one of five financial supporters for a deforestation and conservation project on the Rio Bravo Conservation and Management Area. The project was established in 1996 as a means to create carbon offsets in anticipation of a federal climate program. In 2014, the project offsets were validated and certified according to the Voluntary Carbon Standard ("VCS"). As part of a commitment to the ongoing sustainability of the project, all financial supporters donated a portion of their carbon offsets to the Nature Conservancy and the Programme for Belize. The offsets are currently available for purchase.

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Yes

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

1222000

Further Information

Biomass emissions from units owned/operated by DTE Power and Industrial Projects.

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

No

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division
By facility

By GHG type
By activity

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)
DTE Electric Company	29188000
DTE Gas Company	1265000
Gas Storage and Processing	39000
Power and Industrial Projects	1515000

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Belle River Power Plant	6820000	42.772537	-82.512287
Delray Peaking Facility	19000	42.296312	-83.104348
Greenwood Energy Center	339000	43.118746	-82.699338
Hancock Peaking Facility	3000	42.549012	-83.438778
Monroe Power Plant	14011000	41.892188	-83.351507
River Rouge Power Plant	1265000	42.270541	-83.124536
St. Clair Power Plant	3892000	42.760065	-82.476004

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Trenton Channel Power Plant	2001000	42.124468	-83.182181
Belle River Mills Compressor Station	50000	42.787031	-82.528585
Washington 10 Compressor Station	47000	42.767423	-83.005333
DTE Gas Distribution System	1138000		
Bluestone Gathering System	39000		
Calvert City	213000	37.032707	-88.350334
East China (Dean) Peaking Facility	189000	42.776094	-82.475334
EES Coke	46000	42.292335	-83.111504
MESCO	706000	30.732479	-88.077065
Tuscola	170	39.791669	-88.353843
P&G Ivoydale	8000	39.170961	-84.507224
Shenango	11000	40.495872	-80.077394
Taggart Compressor Station	23000	43.447704	-85.143875
Renaissance LLC	626000	43.18518	-84.84631

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	30648000
CH4	609000
N2O	148000

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Stationary Sources	31964000
Mobile Sources	42000

Further Information

The DTE Gas Distribution System runs throughout the State of Michigan, therefore we are unable to pin-point a specific Latitude and/or Longitude. Similarly, the Bluestone Gathering System runs throughout Pennsylvania and West Virginia, and we are also unable to pin-point a specific Latitude and/or Longitude.

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

No

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes 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)
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CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
DTE Electric Company	2100000	

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
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CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
----------	--	--

Further Information

Scope 2 emissions are based on transmission and distribution line losses for purchased power and internal use on the DTE Electric system.

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 60% but less than or equal to 65%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Heat	0
Steam	0
Cooling	0

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

92400000

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Bituminous coal	73400000
Coke oven gas	1947000
Distillate fuel oil No 2	217000
Distillate fuel oil No 6	600
Motor gasoline	600
Natural gas	11516000
Sub bituminous coal	9005000

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Emissions factor (in units of metric tonnes CO2e per MWh)	Comment
Other			DTE Energy purchases low carbon energy (e.g. Renewable Energy Certificates) for sale to our customers. Purchased power emissions are reported as Scope 3 emissions for the electric utility.

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
3029000	687000	41226000	1738000		

Further Information

Page: **CC12. Emissions Performance**

CC12.1

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

Decreased

CC12.1a

Please 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

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities			
Divestment			
Acquisitions	0.1	Increase	Acquired natural gas storage and processing facilities and pipelines in West Virginia. Emissions from the new assets account for 0.1% overall increase in emissions from 2015.
Mergers			
Change in output			
Change in methodology			
Change in boundary			
Change in physical operating conditions	6.0	Decrease	Emissions have decreased 6% due to large emission reductions at Monroe, St. Clair, River Rouge and Trenton Channel Power Plants which have all decreased production, including shutting down some large units due to retirement and a large fire at St. Clair Power Plant. This was slightly offset by increased emissions at Industrial Projects, DTE Gas Company, and DTE Electric Company's other facilities which were then increasing output to make up for decreased output in line with emission decreases. DTE Electric Facilities fulfilling demand in lieu of power plant units are generally fueled by diesel or natural gas which have less GHG emissions per MWh.
Unidentified			
Other			

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
3210	metric tonnes CO2e	10630	Location-based	8.5	Decrease	An overall decrease of 5.9% in emission, mainly due to decreased generation at coal-fired plants, and a 2.8% increase in revenue equate to a 8.5% overall decrease in financial intensity.

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
3413	metric tonnes CO2e	full time equivalent (FTE) employee	10000		5.9	Decrease	An overall decrease of 5.9% in emission, mainly due to decreased generation at coal-fired plants, and no change in the number of employees equate to a 5.9% overall decrease in employee intensity.
0.7076	metric tonnes CO2e	megawatt hour (MWh)	41250900		7.5	Decrease	An overall decrease of 5.9% in emission, mainly due to decreased generation at coal-fired plants, and a 0.6% increase in output equate to a 7.5% overall decrease in output intensity.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

Yes

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
Regional Greenhouse Gas Initiative	Fri 01 Jan 2016 - Sat 31 Dec 2016				Other: DTE Trading participates in this trading scheme but does not own or operate any facilities.
California's Greenhouse Gas Cap and Trade Program	Fri 01 Jan 2016 - Sat 31 Dec 2016				Other: DTE Trading participates in this trading scheme but does not own or operate any facilities.

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

In the absence of mandatory cap and trade programs for CO2 emissions, DTE Trading is participating in the California and RGGI both as a business endeavor and to gain experience in the carbon markets, if and when a federally mandated cap and trade program comes to fruition.

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

No

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits canceled	Purpose, e.g. compliance
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Further Information

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization’s Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, not yet calculated				DTE Energy purchases significant amounts of goods and services to maintain business unit operations, especially for the utility operations DTE Electric and DTE Gas. The total Scope 3 emissions from these purchases has not been calculated.
Capital goods	Relevant, not yet calculated				DTE Energy invests in capital goods to grow and maintain business unit operations. DTE Energy's utility businesses require significant

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					capital investments to maintain and improve the electric generation and electric and natural gas distribution infrastructure and to comply with environmental regulations and renewable energy requirements. The total Scope 3 emissions from these purchases has not been calculated.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	5931000	Calculated using emission rates from eGRID 9th Edition Annual Total Output Emission Rates for RFC Michigan	0.00%	Calculated emissions from total purchased power, not including interconnection sales.
Upstream transportation and distribution	Relevant, calculated	444000	Estimated emissions from the transportation of coal. Emission factors used are from EPA Climate Leaders GHG Inventory Protocol for rail product transport. Total ton-miles of coal transport based on two standard route distances.	0.00%	
Waste generated in operations	Relevant, not yet calculated				DTE Energy recycled 186,000 tons of ash generated as a byproduct of coal that is burned. This accounted for a 25% recycling rate of ash in 2015. In addition to ash recycling DTE Energy recycled 100% of gypsum (by-product from our FGD equipment) which amounted to 360,000 tons of gypsum. The total emissions avoided from these recycling activities combined with total emissions for additional waste disposal has not been calculated.
Business travel	Not relevant, calculated	4000	Based on employee business miles travelled that are in addition to commuting. Miles are	100.00%	

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			claimed by each employee and recorded in a central database. The calculation uses emission factors from EPA Climate Leaders guidance and does not account for air travel.		
Employee commuting	Not evaluated				Not expected to be a significant source of Scope 3 emissions for DTE Energy.
Upstream leased assets	Not evaluated				Not expected to be a significant source of Scope 3 emissions for DTE Energy.
Downstream transportation and distribution	Not relevant, explanation provided				Downstream emissions from natural gas deliveries are reported separately as Scope 3 emissions. Indirect emissions from line losses on the electric distribution system are included in our Scope 2 totals.
Processing of sold products	Not relevant, explanation provided				DTE Energy's largest businesses are the utilities of DTE Electric and DTE Gas. The products sold for these utilities is 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	Relevant, calculated	10485000	This value represents the CO2 equivalent emissions that would result from the combustion of complete oxidation of natural gas delivered by local distribution companies owned by DTE Energy (e.g. DTE Gas Co.). The value is determined in accordance with the requirements of Subpart NN of EPA's mandatory GHG reporting rule (40 CFR 98), and therefore does not include emissions from deliveries to customers whose meter register		

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			an annual volume of natural gas deliveries of greater than 460,000 Mscf.		
End of life treatment of sold products	Not relevant, explanation provided				DTE Energy's largest businesses are the utilities DTE Electric Co. and DTE Gas Co. The products sold for these utilities is electricity and natural gas. Once consumed, there is no end of life of these sold energy products.
Downstream leased assets	Not relevant, explanation provided				Not expected to be a significant source of Scope 3 emissions for DTE Energy.
Franchises	Not relevant, explanation provided				Not expected to be a significant source of Scope 3 emissions for DTE Energy.
Investments	Not evaluated				
Other (upstream)	Relevant, calculated	505000	This value represents the estimated transmission and distribution (T&D) line losses that occur upstream before DTE Electric receives purchased power for distribution by DTE Electric. We assume an upstream T&D line loss that is equivalent to DTE Electric's internal T&D line loss of 6.94%.	100.00%	
Other (downstream)	Not evaluated				

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

No third party verification or assurance

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Unidentified	93	Increase	Purchase power increased by 18% while interconnect sales decreased by 67%
Upstream transportation & distribution	Change in physical operating conditions	17	Decrease	Less coal usage
Business travel	Unidentified	7	Decrease	Normal fluctuation in employee miles driven.
Use of sold products	Other: Decrease in gas sold	21	Decrease	Normal fluctuation in demand for natural gas due to weather and other conditions.
Other (upstream)	Other: Increase in purchased power	5	Increase	Increase in power purchased.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our customers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

DTE Energy engages 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 Optimization programs (described in more detail in the response to Question 3.2a) 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 2016 were continuations of programs launched in 2009, although some minor program adjustments were implemented. DTE continually works to offer EO programs that assure all customer segments are encouraged to participate. Programs are designed to capture both electric and natural gas savings. The success of these programs are measured by verified energy savings reported annually to the

Michigan Public Service Commission. In 2016 the DTE Energy EO programs produced verified net energy savings of 631 GWh electricity and 1,620 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) of 2008.

Also, as described in our response to Question 6.1f, DTE Energy offers clean energy (renewable) products to both electric and gas customers:

(i) GreenCurrentsSM is Michigan's voluntary renewable energy program. Customers that enroll in GreenCurrentsSM support the generation of electricity from Michigan-based, renewable energy sources. GreenCurrents 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.

(ii) 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.

Finally, DTE Insight is a mobile app that provides customers with real-time home energy usage data by connecting their home's smart electric meter to their smartphone. Our customers can use this data to inform their decisions about home energy use from heating and cooling, to the use of appliances and even home weatherization. The app can help customers save energy (reduce GHG emissions) and reduce their bills.

Since the DTE Insight App became available to iPhone and Android users in summer 2014, more than 115,000 households have downloaded it onto 245,000 devices. The number of residential customers using it in 2016 doubled from the previous year.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Type of engagement	Number of suppliers	% of total spend (direct and indirect)	Impact of engagement
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CC14.4c

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Gregory L. Ryan	Manager Environmental Sustainability and Climate Change	Environment/Sustainability manager

Further Information

Module: Electric utilities

Page: EU0. Reference Dates

EU0.1

Please enter the dates for the periods for which you will be providing data. The years given as column headings in subsequent tables correspond to the "year ending" dates selected below. It is requested that you report emissions for: (i) the current reporting year; (ii) one other year of historical data (i.e. before the current reporting year); and, (iii) one year of forecasted data (beyond 2021 if possible).

Year ending	Date range
2015	Thu 01 Jan 2015 - Thu 31 Dec 2015

Year ending	Date range
2016	Fri 01 Jan 2016 - Sat 31 Dec 2016
2017	Sun 01 Jan 2017 - Sun 31 Dec 2017

Further Information

Page: EU1. Global Totals by Year

EU1.1

In each column, please give a total figure for all the countries for which you will be providing data for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emission intensity (metric tonnes CO2e/MWh)
2015	13100	40830	31813000	0.78
2016	12640	38710	29153000	0.75
2017	11302	42700	31267000	0.73

Further Information

Page: EU2. Individual Country Profiles - United States of America

EU2.1

Please select the energy sources/fuels that you use to generate electricity in this country

Coal - hard
Oil & gas (excluding CCGT)
Nuclear
Other renewables

EU2.1a

Coal - hard

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO ₂ e)	Emissions intensity (metric tonnes CO ₂ e/MWh)
2015	7388	31820	31342000	0.99
2016	7546	25960	27929000	1.08
2017	5348	31870	30795000	0.97

EU2.1b

Lignite

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
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EU2.1c

Oil & gas (excluding CCGT)

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2015	3083	734	471000	0.64
2016	3413	2272	1224000	0.54
2017	3038	790	472000	0.6

EU2.1d

CCGT

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
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EU2.1e**Nuclear**

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)
2015	1217	7331
2016	1217	9147
2017	1217	8469

EU2.1f**Waste**

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO ₂ e)	Emissions intensity (metric tonnes CO ₂ e/MWh)
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EU2.1g**Hydro**

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)

EU2.1h

Other renewables

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)
2015	410	1357
2016	464	1337
2017	515	1565

EU2.1i

Other

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO ₂ e)	Emissions intensity (metric tonnes CO ₂ e/MWh)

EU2.1j**Solid biomass**

Please complete for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)

EU2.1k**Total thermal including solid biomass**

Please complete for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2015	11688	39885	31813000	0.80
2016	12176	37376	29153000	0.78
2017	10787	41132	31267000	0.76

EU2.1l

Total figures for this country

Please enter total figures for this country for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2015	13100	40830	31813000	0.78
2016	12640	38710	29153000	0.75
2017	11302	42700	31267000	0.73

Further Information

Page: EU3. Renewable Electricity Sourcing Regulations

EU3.1

In certain countries, e.g. Italy, the UK, the USA, electricity suppliers are required by regulation to incorporate a certain amount of renewable electricity in their energy mix. Is your organization subject to such regulatory requirements?

Yes

EU3.1a

Please provide the scheme name, the regulatory obligation in terms of the percentage of renewable electricity sourced (both current and future obligations) and give your position in relation to meeting the required percentages

Scheme name	Current % obligation	Future % obligation	Date of future obligation	Position in relation to meeting obligations
USA state scheme – Michigan	10%	15%	2021	In compliance with state-mandated targets, by the end of 2016, DTE Energy met the 10 percent renewable energy standard based on retail sales. This was accomplished by retiring 4.24 million certified Renewable Energy Credits (RECs) and other eligible credits that equated to 10 percent of our total 2014 sales of 42.4 million MWh. Each REC represents one MWh of renewable energy generated by DTE or purchased from third-party renewable sources. New energy legislation was signed into law by the Governor at the end of 2016 that requires utilities in Michigan to meet a 15% renewable energy standard in 2021.

Further Information

Page: EU4. Renewable Electricity Development

EU4.1

Please give the contribution of renewable electricity to your organization's EBITDA (Earnings Before Interest, Tax, Depreciation and Amortization) in the current reporting year in either monetary terms or as a percentage

Please give:	Monetary figure	%	Comment
Renewable electricity's contribution to EBITDA			We don't disclose EBITDA or the contribution of renewable electricity to EBITDA.

EU4.2

Please give the projected contribution of renewable electricity to your organization's EBITDA at a given point in the future in either monetary terms or as a percentage

Please give:	Monetary figure	%	Year ending	Comment
Renewable electricity's contribution to EBITDA				We don't disclose EBITDA or the contribution of renewable electricity to EBITDA.

EU4.3

Please give the capital expenditure (capex) planned for the development of renewable electricity capacity in monetary terms and as a percentage of total capex planned for power generation in the current capex plan

Please give:	Monetary figure	%	End year of capex plan	Comment
Capex planned for renewable electricity development	2000000000	24.00%	2021	2017-2021 DTE Electric capex plan for renewable energy and new generation.

Further Information

CDP 2017 Climate Change 2017 Information Request