

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

DTE Energy (NYSE: DTE) is a diversified U.S. energy company with approximately \$12.6 billion in revenues for 2017. 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: DTEenergy.com

W-EU0.1a

(W-EU0.1a) Which activities in the electric utilities sector does your organization engage in?

Electricity generation
Distribution

W-EU0.1b

(W-EU0.1b) For your electricity generation activities, provide details of your nameplate capacity and the generation for each power source.

	Nameplate capacity (MW)	% of total nameplate capacity	Gross generation (MWh)
Coal – hard	6178	49.56	26559727
Lignite	0	0	0
Oil	325	2.61	80188
Gas	2957	23.72	2230042
Biomass	321	2.58	529414
Waste (non-biomass)	0	0	0
Nuclear	1161	9.31	9565994
Geothermal	0	0	0
Hydroelectric	1019	8.17	56841
Wind	449	3.6	3008572
Solar	56	0.45	82204
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	12466	100	42112982

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	January 1 2017	December 31 2017

W0.3

(W0.3) Select the countries/regions for which you will be supplying data.

United States of America

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

USD

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups in which an equity share is held

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Electric Distribution Operations	DTE Energy is focusing on the company's largest sources of water withdrawal and use; namely, our steam electric power generating stations. These generating stations operate under the authority of National Pollutant Discharge Elimination System (NPDES) permits, and local sanitary sewer permits, where applicable to industrial wastewater. The company does not track all types of water inputs and outputs for its electric distribution centers. In addition, the company does not report water discharged from its electrical manholes and vaults. The water use at these types of facilities is significantly less than that of the steam electric power generating stations.
Gas Distribution, Transmission and Storage Operations	DTE Energy is focusing on the company's largest sources of water withdrawal and use; namely, our steam electric power generating stations. These generating stations operate under the authority of NPDES permits, and local sanitary sewer permits, where applicable to industrial wastewater. The company does not track all types of water inputs and outputs for its gas distribution, transmission and storage operations. The water use at these types of facilities is significantly less than that of the steam electric power generating stations. The one exception to this exclusion is in regards to our Taggart Compressor Station. This facility holds a NPDES Permit and therefore is included in the disclosure.
Service Centers, Call Centers and Office Buildings	DTE Energy is focusing on the company's largest sources of water withdrawal and use; namely, our steam electric power generating stations. These generating stations operate under the authority of NPDES permits, and local sanitary sewer permits, where applicable to industrial wastewater. The company does not track all types of water inputs and outputs for its service centers, call centers and office buildings. The water use at these types of facilities is significantly less than that of the steam electric power generating stations. In general, the source of water at these facilities is purchased from local municipalities. The one exception to this exclusion is the water use information at the corporate headquarters in Detroit, MI.
Non Utility Operations	DTE Energy is focusing on the company's largest sources of water withdrawal and use; namely, our steam electric power generating stations. These generating stations operate under the authority of NPDES permits, and local sanitary sewer permits, where applicable to industrial wastewater. The company does not track all types of water inputs and outputs for its non utility operations such as power & industrial projects and energy trading services.
Utility Operations	DTE Energy is minority owner of a pumped storage facility in Michigan; this plant generates electricity and is regulated. Operations and water reporting for this facility is performed by the majority owner, therefore it is excluded from this questionnaire.

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	Direct: Sufficient amounts of good quality freshwater are absolutely vital for non-contact cooling at our steam electric generating plants. We could not supply electricity, an essential product for customers, without this resource. Indirect: Sufficient amounts of good quality freshwater are required at facilities throughout the DTE Energy organization. Municipal water supply for employee use is necessary to support all of our operations.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Neutral	Direct: Sufficient amounts of recycled water are required for non-contact cooling at two of our steam electric generating plants (Fermi 2 and Greenwood). These two plants represent approximately 18% of DTE Electric's generating capability. Indirect: Although the indirect use of recycled, brackish and/or produced water has not been formally evaluated, it is estimated that this water input is not a significant part of the value chain for DTE.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	76-99	The vast majority of withdrawals are in the form of noncontact cooling water for our electric generating facilities. These fresh water withdrawals are measured and monitored for the purpose of monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations.
Water withdrawals – volumes from water stressed areas	Not relevant	The vast majority of withdrawals are not from water stressed areas.
Water withdrawals – volumes by source	76-99	The vast majority of withdrawals are in the form of noncontact cooling water for our electric generating facilities. These fresh water withdrawals are measured and monitored for the purpose of monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations. Other surface water withdrawals are made for dust control purposes, primarily at electric generation and coal processing facilities. These withdrawals are typically not measured or monitored. Other withdrawals are from ground water, rainwater and municipal water supplies; these withdrawals may not be measured, and account for <1% of the total.
Produced water associated with your metals & mining sector activities - total volumes	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes	<Not Applicable>	<Not Applicable>
Water withdrawals quality	76-99	We monitor water withdrawal quality at the facility level for the purpose of monthly NPDES reporting.
Water discharges – total volumes	76-99	The vast majority of discharges are in the form of noncontact cooling water from our electric generating facilities. These discharges are measured and monitored for the purpose of monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations.
Water discharges – volumes by destination	76-99	The vast majority of discharges are in the form of noncontact cooling water from our electric generating facilities to surface waters. These discharges are returned to surface waters, and are measured and monitored for the purpose of monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations. Other discharges are to ground water and municipal water treatment plants; these discharges may not be measured, and account for <1% of the total.
Water discharges – volumes by treatment method	76-99	On Site Treatment: The vast majority of discharges are associated with our electric generating facilities, and are treated on site with various methods (e.g. chemical clarification, plain clarification, oil/water separation). These discharges are returned to surface waters, and are measured and monitored for the purpose of monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations. Off Site Treatment: The remaining discharges are largely associated with the potable water needs or our facilities, and are treated off site via municipal treatment plants or private treatment storage & disposal facilities (TSDf). These discharges are returned to surface waters in most cases, and are measured/monitored by the off site facility.
Water discharge quality – by standard effluent parameters	76-99	On Site Treatment: Water quality standards for the vast majority of discharges are provided in the NPDES permits associated with our electric generating facilities. The NPDES program is administered by the State of Michigan where the majority of discharges take place. Off Site Treatment: Water quality standards for the remaining discharges are governed by the permits associated with the municipal treatment plants or private TSDf's. These facilities have NPDES permits of their own in most cases.
Water discharge quality – temperature	76-99	The vast majority of discharges are in the form of noncontact cooling water from our electric generating facilities. Temperatures of these discharges are measured and monitored for the purpose of monthly NPDES reporting, as well as the calculation of the thermal discharge. These reports are required by federal and state regulations.
Water consumption – total volume	76-99	The vast majority of consumption is calculated for our electric generating facilities and reported annually to the State of Michigan. Consumption for these operations are neither measured nor monitored directly. However, measured and monitored data is used in the formulas for calculating water consumption, which is accepted industry practice. The balance of consumption is associated with other operations such as potable water needs, groundwater withdrawal/discharges, and dust control.
Water recycled/reused	1-25	Cooling water is recycled at two of our steam electric generating plants (Fermi 2 and Greenwood). These two plants represent approximately 18% of DTE Electric's generating capability.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Fully functioning Water Supply, Adequate Sanitation and Hygiene (WASH) is provided for all workers throughout the organization. Our operations are located in well-developed areas with modern facilities where WASH is readily available. WASH services are widely measured and monitored for billing purposes, which are mainly provided by local municipalities.

W-EU1.2a

(W-EU1.2a) For your hydroelectric operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations measured and monitored	Please explain
Fulfillment of downstream environmental flows	Not monitored	DTE Energy is minority owner of a pumped storage facility in Michigan; this plant generates electricity and is regulated. Operations and water reporting for this facility is performed by the majority owner, therefore it is excluded from this questionnaire.
Sediment loading	Not monitored	DTE Energy is minority owner of a pumped storage facility in Michigan; this plant generates electricity and is regulated. Operations and water reporting for this facility is performed by the majority owner, therefore it is excluded from this questionnaire.
Other, please specify	Not monitored	DTE Energy is minority owner of a pumped storage facility in Michigan; this plant generates electricity and is regulated. Operations and water reporting for this facility is performed by the majority owner, therefore it is excluded from this questionnaire.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	4098319	About the same	The amount of withdrawal in 2017 was approximately 0.23% higher than in 2016 (4,088,746 ML)
Total discharges	4025951	About the same	The amount of discharge in 2017 was approximately 0.20% higher than in 2016 (4,017,721 ML)
Total consumption	73667	Please select	The amount of consumption in 2017 was approximately 2% higher than in 2016 (72,161 ML)

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	4096104	About the same	The amount of withdrawal in 2017 was approximately 0.23% higher than in 2016 (4,086,533 ML)
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Brackish surface water/seawater is not withdrawn as part of our operations.
Groundwater – renewable	Relevant	2022	About the same	One facility (Sibley Quarry) withdraws groundwater that is formally accounted for and reported. Groundwater removed for other purposes (e.g. dewatering for pipeline projects) is typically not measured or reported. The amount of withdrawal in 2017 was approximately 1.5% higher than in 2016 (1,992ML)
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	Groundwater – non-renewable as a source of withdrawal is not accounted for as part of our operations.
Produced water	Not relevant	<Not Applicable>	<Not Applicable>	Produced/process as a source of withdrawal is not accounted for as part of our operations.
Third party sources	Relevant	193	Please select	Two facilities are accounted for withdrawals from municipal supply: Greenwood Energy Center (Facility 4) and the Company Headquarters (Facility 13). The amount of municipal supply withdrawal reported in 2017 is 16.4% lower than the amount withdrew in 2016 (231 ML). During most of 2017 the fountain was not operational due to repairs that were conducted on it.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	4025773	About the same	The amount of discharge in 2017 was approximately 0.2% higher than in 2016 (4,017,721).
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Discharge to brackish surface water/seawater is not part of our operations.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	Discharge to groundwater is not accounted for as part of our operations.
Third-party destinations	Relevant	178	Lower	Three facilities are accounted for discharge to municipal/industrial wastewater treatment plants: Fermi 2 Power Plant (27 ML, Facility 3), River Rouge Power Plant (1 ML) and the Company Headquarters (Facility 13). The amount of discharge reported in 2017 is x% higher or lower than the amount discharged in 2016 (231 ML).

W1.2j

(W1.2j) What proportion of your total water use do you recycle or reuse?

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	26-50	About the same	Water is being recycled and reused at Fermi 2 and Greenwood. In 2017 41% of the water withdrawn was recycled, 2% lower than in 2016 (43%).

W-EU1.3

(W-EU1.3) Do you calculate water intensity for your electricity generation activities?

No, but we intend to do so within the next two years

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

Row 1

% of suppliers by number

1-25%

% of total procurement spend

1-25

Rationale for this coverage

The proportion of suppliers that receive surveys corresponds to approximately 25% of total procurement spend.

Impact of the engagement and measures of success

Our participation rate in the survey continues to increase annually.

Comment

W1.4b

(W1.4b) Provide details of any other water-related supplier engagement activity.

Type of engagement

Incentivizing for improved water management and stewardship

Details of engagement

Offer financial incentives to suppliers reducing your operational water impacts through the products they supply to you

% of suppliers by number

1-25

% of total procurement spend

1-25

Rationale for the coverage of your engagement

Best practice and aligns with our FFG initiatives.

Impact of the engagement and measures of success

Comment

W1.4c

(W1.4c) What is your organization's rationale and strategy for prioritizing engagements with customers or other partners in its value chain?

Our rationale is to engage suppliers that support our values. Environmental sustainability is a part of our FFG.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

Yes

W2.1a

(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and total financial impact.

Country/Region

United States of America

River basin

St. Lawrence

Type of impact driver

Regulatory

Primary impact driver

Tighter regulatory standards

Primary impact

Increased compliance costs

Description of impact

Revised Effluent Limitation Guidelines (ELGs) for steam electric plants were finalized on 9/30/2015. New limits imposed a significant financial burden to the company, and were one of many contributing factors to several plant closures. The most significant changes were the requirements to cease discharge of bottom ash transport water (BATW) and fly ash transport water and perform enhanced treatment of flue gas de-sulfurization (FGD) wastewater. Closing plants required the company to invest in new base load generation. The revised ELGs will only impact plants that will continue to operate beyond the latest compliance date. The impact will be in the form of both capital and operation/maintenance costs. Recent development: In late 2017, a new ELG rule was issued that resulted in the postponement of compliance dates for BATW and FGD waste water until new requirements can be developed and issued. the postponement lends uncertainty to the company's strategy for complying with the ELGs as we currently do not know what the new requirements for BATW and FGD waste water will be. Fly ash transport water requirements from the 2015 Rule are still in effect.

Primary response

Engage with regulators/policymakers

In addition to engaging with regulatory policy makers: Engagement with community Engagement with customers Engagement with public policy makers Engagement with other stakeholders in the river basin Engagement with suppliers Infrastructure investment Increased capital expenditure Increased investment in new technology

Total financial impact

Description of response

For fly ash transport water, compliance with ELG requirements begins as early as 11/1/2018, but no later than 12/31/2023. However, the costs for compliance have already begun in the form of technology evaluations, testing and engineering. With the postponement in place as previously described, the length of impact for BATW and FGD wastewater is uncertain. The exact financial impact is unknown. The Company is currently evaluating a suite of technologies that would give us compliance with the ELGs.

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

Yes, fines

W2.2a

(W2.2a) Provide the total number and financial value of all water-related fines.

Row 1

Total number of fines

4

Total value of fines

1250

% of total facilities/operations associated

17

Number of fines compared to previous reporting year

Higher

Comment

In 2017 there were 4 Notice of Violations related to water issues received by DTE. Three of them were for STCPP (Facility #9) and one for MONPP (Facility #7).

W2.2b

(W2.2b) Provide details for all significant fines, enforcement orders, and/or penalties for water-related regulatory violations in the reporting year, and your plans for resolving them.

Type of penalty

Fine

Financial impact

250

Country/Region

United States of America

River basin

St. Lawrence

Type of incident

Spillage, leakage or discharge of potential water pollutant

Description of penalty, incident, regulatory violation, significance, and resolution

Notice of Violation 00384105 - DTE Energy STCPP (Facility #9) (\$250) St. Clair Power Plant was the source of an estimated 1 gallon of oil discharged to the St. Clair River on July 11th 2017 that resulted in sheen on the water's surface. The source of the oil release appears to have been from a 30-gallon drum located in our #1 Screenhouse that was positioned in such a way that water spray could move residual oils into our water intake sump and ultimately out to the St. Clair River. This drum has been placed inside secondary containment and moved to a different location away from water spray, thereby preventing reoccurrence. Additionally, signage was installed in all of our screenhouses to ensure drums and containers of oil are properly stored away from the inlet water sump.

Type of penalty

Fine

Financial impact

250

Country/Region

United States of America

River basin

St. Lawrence

Type of incident

Spillage, leakage or discharge of potential water pollutant

Description of penalty, incident, regulatory violation, significance, and resolution

Notice of Violation 00384105 - DTE Energy St. Clair Power Plant (Facility #9) (\$250) STCPP was the source of an oil discharge to the St. Clair River on 10/9/2017 that resulted in sheen on the water's surface. Approximately 2 gallons of Shell Turbo 32 hydraulic

oil leaked from a failed flange on a turbine steam control valve. The oil fell through the 2nd floor grating and into the 1st floor condenser outlet that feeds straight into the river via the overflow canal. The shutdown process was promptly initiated for the Unit 3 turbine. Absorbents were placed under the control valve and absorbent booms were placed at the outfall to collect and contain the oil sheen. The root cause was determined to be a combination of a poorly cut flange gasket and two loose flange bolts. A new gasket was properly cut and installed. Taps were installed on the flange bolts to prevent loosening and then properly torqued.

Type of penalty

Fine

Financial impact

250

Country/Region

United States of America

River basin

St. Lawrence

Type of incident

Spillage, leakage or discharge of potential water pollutant

Description of penalty, incident, regulatory violation, significance, and resolution

Notice of Violation 00385161 - DTE Energy St. Clair Power Plant (Facility #9) (\$250) On 12/4/2017 DTE noticed oil blossoms appearing at the main outfall in the St. Clair River. Operations initiated a comprehensive investigation, including shutting down equipment to eliminate the source of the oil sheen, and deployed booms at the outfall to collect and corral as much oil as possible.

Type of penalty

Fine

Financial impact

500

Country/Region

United States of America

River basin

St. Lawrence

Type of incident

Spillage, leakage or discharge of potential water pollutant

Description of penalty, incident, regulatory violation, significance, and resolution

Notice of Violation 00299226 - DTE Energy MONPP (Facility #7) (\$500) MONPP was the source of an estimated 60 gallons of oil that was discharged to the plant's internal intake canal system. . No water or oil back flowed from the intake canal into the River Raisin. However, the source of the oil on the River Raisin was from the plant storm water stations that feed into the oily waste treatment system. A heavy rainfall event caused the system to back up, which resulted in oily water flowing over a plant road and entering the intake canal. A company approved pollution control contractor was contacted to contain and clean up the residual oil resulting from the storm water system back up. A fine of \$500 was paid to USCG.

W3. Procedures

W-EU3.1

(W-EU3.1) How does your organization identify and classify potential water pollutants associated with your business activities in the electric utilities sector that could have a detrimental impact on water ecosystems or human health?

Water pollutants are identified and classified as part of the application process for the National Pollutant Discharge Elimination System (NPDES) permit. As part of the permitting process the State of Michigan requires us to assess water quality parameters specific to our industry. We must also comply with regulatory requirements related to accidental spills and other incidents related to release of hazardous materials at our facilities. In addition, we conduct environmental impact assessments as part of our licensing process for plants.

W-EU3.1a

(W-EU3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants associated with your activities in the electric utilities sector on water ecosystems or human health.

Potential water pollutant	Description of water pollutant and potential impacts	Management procedures	Please explain
Coal combustion residuals	Coal combustion residuals consist of fly ash, bottom ash, boiler slag, and flue gas desulfurization (FGD) solids produced at power plants burning fossil fuel.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness	We comply with NPDES permits, develop and implement Storm Water Pollution Prevention Plans (SWPPP), Spill Prevention, Control & Countermeasure (SPCC) Plans, and other incident response plans.
Radiation	During normal operations, nuclear power plants release small amounts of radiation that are strictly regulated by the US Nuclear Regulatory Commission (NRC). The regulatory system for radioactive materials is designed to prevent the possibility that anyone could receive an exposure even close to the levels that might inflict short-term damage.	Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness Other, please specify (Compliance with US NRC rules and regs)	Experience has shown that, during normal operations, nuclear power plants typically release only a small fraction of the radiation allowed by the NRC's established limits. The radioactive material that fuels a nuclear power plant is contained in ceramic fuel pellets that are capable of withstanding thousands of degrees of heat. These fuel pellets are then encased in hollow metal rods that help keep the material from interacting with the water that cools the reactor. In addition, the reactor's thick metal walls and piping, as well as a massive reinforced concrete containment structure, are designed to keep the coolant, fuel, and associated radiation isolated from the environment.
Contaminated cooling water	Cooling water systems are used to remove waste heat from the process to the environment. Circulating pumps move the cooled water through a piping circuit that includes heat exchangers, reactor jackets, and other critical pieces of process equipment and then back to either the surface water (once-through system) or the cooling tower (closed-cycle system). Cooling water has the potential to degrade ecosystems by increasing the temperature of surface waters in the mixing zone. Since large volumes of air pass through a cooling tower to enable cooling, biological impact can also be great and must be controlled.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness	Cooling water contamination is prevented by following operation and maintenance procedure and complying with NPDES permit limits and specifications.
Thermal pollution	Thermal pollution is any deviation from the natural temperature in a habitat and can range from increased temperatures associated with industrial cooling activities to discharges of cold water into streams.	Compliance with effluent quality standards Community/stakeholder engagement Emergency preparedness	Thermal effluents are regulated because heat is defined as a pollutant under Clean Water Act (CWA) Section 502(6). We comply with NPDES permits that authorize any thermal effluent discharge.
Other, please specify	Mercury. The Clean Water Act identifies acceptable pollution levels in water for mercury that must be complied with in order to protect human health, fish, and wildlife.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness	We comply with NPDES permits that set up monitoring requirements and limits for mercury. We also developed and implement Pollution Minimization Plans (PMPs) for mercury.
Please select	<Not Applicable>	<Not Applicable>	

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Direct operations

Coverage

Partial

Risk assessment procedure

Water risks are assessed as a standalone issue

Frequency of assessment

Annually

How far into the future are risks considered?

6 to 10 years

Type of tools and methods used

Other

Tools and methods used

Internal company methods

Comment

Annual spill plan reviews, monthly environmental compliance reviews, annual corporate environmental compliance audits, self assessment audits conducted in conformance with iSO 14001

Supply chain

Coverage

Partial

Risk assessment procedure

Please select

Frequency of assessment

Please select

How far into the future are risks considered?

Please select

Type of tools and methods used

Please select

Tools and methods used

Please select

Comment

Other stages of the value chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, not included	Water availability is important to our operations, however we operate in a region where water is readily available.
Water quality at a basin/catchment level	Relevant, always included	Meeting regulatory requirements and avoiding uncontrolled releases.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, sometimes included	On an as-needed basis, we will engage with stakeholders on water issues.
Implications of water on your key commodities/raw materials	Not considered	N/A
Water-related regulatory frameworks	Relevant, always included	Water regulatory risk is a key driver for our operations.
Status of ecosystems and habitats	Relevant, always included	Impacts on ecosystems are included in permit application/assessments and voluntary habitat preservation and restoration is a priority for the company.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Employee safety is a number one priority for the company and providing access to fully functioning safety requirements related to water is essential.
Other contextual issues, please specify	Not considered	N/A

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Relevant, sometimes included	Generally, the company's use of water does not directly impact customers; however we will engage customers as necessary if a water risk involves potential customer impact.
Employees	Relevant, always included	Employee training and attention to water related aspects are key to minimizing water risks.
Investors	Relevant, sometimes included	Investor reaction to water risk as well as overall environmental risks for the company are considered at an enterprise level. However, water risks do not receive the same attention from investors as other environmental risks such as carbon emissions.
Local communities	Relevant, always included	Our water use and discharges potentially impact local communities. We work with local regulatory agencies to meet required water standards. The risks and impacts to these communities are considered during risk assessment discussions.
NGOs	Relevant, sometimes included	Because our water use and discharges potentially impact local communities and we work with agencies on water permits, NGOs get involved with the permit review process. Risks from NGO engagement are considered during water permit application periods and/or when NGOs choose to engage with the company.
Other water users at a basin/catchment level	Not considered	N/A
Regulators	Relevant, always included	Regulations drive much of our water risk. Risks of non-compliance with these regulations is a key driver performing a risk assessment.
River basin management authorities	Relevant, sometimes included	It's not clear what river basin management authorities should be considered in a risk assessment for our region. We engage with the U.S. Army Corps of Engineers on projects related to dredging or navigation channels and we would evaluate risks related to these projects on an as needed case by case basis.
Statutory special interest groups at a local level	Relevant, sometimes included	Tribes or International Joint Commission (IJC) may engage us in specific water issues that may arise on a case by case basis related to our water use.
Suppliers	Relevant, always included	We require all our suppliers to meet the environmental regulatory requirements.
Water utilities at a local level	Relevant, always included	Our facilities discharge to locally owned water utilities and are required to meet pretreatment standard prior to discharge. The potential to exceed these standards are a significant risk to the company.
Other stakeholder, please specify	Not considered	N/A

W3.3d

(W3.3d) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

There are regulatory risks , reputational risks, availability risks, natural disaster riskshanges that create water-related risks

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, both in direct operations and the rest of our value chain

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

The majority of our operations and supply chain takes place in Michigan, which has an abundant fresh water supply. Although the risks to our company are low at this time, the risks are expected to increase in the future (e.g. as regulations continue to change and challenge our industry). An example of a substantive change would be legislation or a physical change in supply that would reduce our ability to withdraw the amount of water needed to produce adequate amount of electricity for our customers

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	8	100	There are seven electric generating stations and one natural gas compressor station that withdraw fresh water from the Michigan Great Lakes, which are located in the St. Lawrence watershed. A significant change in the water level within the watershed could put these facilities at risk of damage or losing production.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive impact on your business, and what is the potential business impact associated with those facilities?

Country/Region

United States of America

River basin

St. Lawrence

Number of facilities exposed to water risk

8

% company-wide facilities this represents

100%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

100%

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

100%

Comment

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes, are located in the St. Lawrence watershed. A significant change in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 100% depending on the nature of the event or situation. For example, a significant drop in water level could result in the loss of cooling water, and therefore generation or production, at one or all of the facilities.

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Region

United States of America

River basin

St. Lawrence

Type of risk

Physical

Primary risk driver

Drought

Primary potential impact

Increased capital costs

Company-specific description

Changing water levels could require restructuring of cooling water intake structures (CWIS) and plant discharge structures.

Timeframe

More than 6 years

Magnitude of potential impact

Unknown

Likelihood

Unlikely

Potential financial impact

Explanation of financial impact

unknown

Primary response to risk

Engage with regulators/policymakers

Description of response

DTE would engage with public policy makers and would increased capital expenditure to address infrastructure inadequate for the new conditions.

Cost of response

Explanation of cost of response

unknown

Country/Region

United States of America

River basin

St. Lawrence

Type of risk

Regulatory

Primary risk driver

Mandatory water efficiency, conservation, recycling or process standards

Primary potential impact

Increased operating costs

Company-specific description

The company may have to change its operations (e.g. reduce intake and output) in order to meet mandatory requirements.

Timeframe

Unknown

Magnitude of potential impact

Unknown

Likelihood

Unknown

Potential financial impact

Explanation of financial impact

unknown

Primary response to risk

Comply with local regulatory requirements

Description of response

The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements.

Cost of response

Explanation of cost of response

unknown

Country/Region

United States of America

River basin

St. Lawrence

Type of risk

Regulatory

Primary risk driver

Regulation of discharge quality/volumes

Primary potential impact

Increased compliance costs

Company-specific description

Clean Water Act regulations related to 316(b) for cooling water intake structures, and effluent limitation guidelines (ELG) for wastewater discharges, will require substantive physical and operational changes at our steam electric generating stations. In addition, the revised coal combustion residuals (CCR) rule requires extensive changes to wastewater systems at some of our facilities.

Timeframe

1 - 3 years

Magnitude of potential impact

High

Likelihood

Virtually certain

Potential financial impact

Explanation of financial impact

very high

Primary response to risk

Comply with local regulatory requirements

Description of response

The company has engaged with public policy makers, has engaged with suppliers to evaluate new technologies, increased capital expenditure and increased investment in new technology in order to be able to comply with the regulatory requirements.

Cost of response

Explanation of cost of response

The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. It should be noted that the USEPA is reconsidering the ELG rule for

potential changes.

Country/Region

United States of America

River basin

St. Lawrence

Type of risk

Regulatory

Primary risk driver

Increased difficulty in supplier obtaining withdrawals/operations permit

Primary potential impact

Increased operating costs

Company-specific description

The company may have to change its operations (e.g. reduce water withdrawal) in order to meet revised limits to water withdrawal.

Timeframe

Unknown

Magnitude of potential impact

Unknown

Likelihood

Unlikely

Potential financial impact

Explanation of financial impact

unknown

Primary response to risk

Comply with local regulatory requirements

Description of response

The company would endeavor to negotiate favorable limits/allocation, but would ultimately comply with the regulatory requirements.

Cost of response

Explanation of cost of response

unknown

W4.2a

(W4.2a) Provide details of risks identified within your value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Efficiency

Primary water-related opportunity

Cost savings

Company-specific description & strategy to realize opportunity

The company owns and operates a coal management facility located on Lake Superior known as Midwest Energy Resources Company (MERC). MERC is marketed as a resource for the Company and external clients. MERC services the Company and other clients with coal supply needs. The Great Lakes provides a means of shipping coal to Company-owned power plants and other clients; this provides both cost savings and sales opportunities.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

High

Potential financial impact

Explanation of financial impact

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, total water accounting data and comparisons with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Belle River Power Plant

Country/Region

United States of America

River basin

St. Lawrence

Latitude

42.773888

Longitude

-82.495833

Primary power generation source for your electricity generation at this facility

Coal - hard

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

614442

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

606781

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

7401

Comparison of consumption with previous reporting year

Lower

Please explain

The withdrawal, discharge, and consumptive use of water were all lower in 2017 compared to 2016.

Facility reference number

Facility 2

Facility name (optional)

Connors Creek Power Plant

Country/Region

United States of America

River basin

St. Lawrence

Latitude

42.355556

Longitude

-82.961388

Primary power generation source for your electricity generation at this facility

Not applicable

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

0

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

12

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

0

Comparison of consumption with previous reporting year

About the same

Please explain

Withdrawal and consumptive used is zero and shows no change in 2017 compared to 2016. This facility no longer generates electric power and is in the process of being decommissioned. The discharge amount dropped 3.7 %.

Facility reference number

Facility 3

Facility name (optional)

Fermi 2 Power Plant

Country/Region

United States of America

River basin

St. Lawrence

Latitude

41.9625

Longitude

-83.25833

Primary power generation source for your electricity generation at this facility

Nuclear

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

63163

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

39077

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

24085

Comparison of consumption with previous reporting year

Lower

Please explain

Water withdrawal, consumption and discharged decreased in 2017.

Facility reference number

Facility 4

Facility name (optional)

Greenwood Energy Center

Country/Region

United States of America

River basin

St. Lawrence

Latitude

43.219364

Longitude

-82.706596

Primary power generation source for your electricity generation at this facility

Oil

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

44

Comparison of withdrawals with previous reporting year

Much higher

Total water discharges at this facility (megaliters/year)

346

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

741

Comparison of consumption with previous reporting year

Higher

Please explain

Withdrawal increased approximately 160% Discharge increased approximately 35% Consumptive use increased approximately 15% It should be noted that this facility operates a closed loop cooling water system and uses both municipal water supply and local surface water for make up. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Although the increase is higher, the actual amount of withdrawal is low when compared with the other facilities.

Facility reference number

Facility 5

Facility name (optional)

Harbor Beach Power Plant

Country/Region

United States of America

River basin

St. Lawrence

Latitude

43.85155

Longitude

-82.64405

Primary power generation source for your electricity generation at this facility

Not applicable

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

0

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

94

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

0

Comparison of consumption with previous reporting year

About the same

Please explain

This facility no longer generates electric power and is in the process of being decommissioned.

Facility reference number

Facility 7

Facility name (optional)

Monroe Power Plant

Country/Region

United States of America

River basin

St. Lawrence

Latitude

41.893173

Longitude

-83.346132

Primary power generation source for your electricity generation at this facility

Coal - hard

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

2119468

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

2087621

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

32159

Comparison of consumption with previous reporting year

Higher

Please explain

Withdrawal, Discharge and Consumptive water use have slightly increased in 2017 compared with 2016.

Facility reference number

Facility 8

Facility name (optional)

River Rouge Power Plant

Country/Region

United States of America

River basin

St. Lawrence

Latitude

42.2738

Longitude

-83.1117

Primary power generation source for your electricity generation at this facility

Coal - hard

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

204098

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

203252

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

930

Comparison of consumption with previous reporting year

Lower

Please explain

Withdrawal and discharge increased, while consumptive use has slightly decreased.

Facility reference number

Facility 9

Facility name (optional)

St. Clair Power Plant

Country/Region

United States of America

River basin

St. Lawrence

Latitude

42.762777

Longitude

-82.472222

Primary power generation source for your electricity generation at this facility

Coal - hard

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

776472

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

770778

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

5589

Comparison of consumption with previous reporting year

Higher

Please explain

Water withdrawal and discharge decreased, while consumptive use slightly increased.

Facility reference number

Facility 10

Facility name (optional)

Sibley Quarry

Country/Region

United States of America

River basin

St. Lawrence

Latitude

42.158009

Longitude

-83.187871

Primary power generation source for your electricity generation at this facility

Not applicable

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

2022

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

2022

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

0

Comparison of consumption with previous reporting year

About the same

Please explain

The water withdrawal and discharge is about the same, about 1.5% higher in 2017 compared to 2016. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues in order to support the landfill operations.

Facility reference number

Facility 11

Facility name (optional)

Taggart Compressor Station

Country/Region

United States of America

River basin

St. Lawrence

Latitude

43.442612

Longitude

-85.143392

Primary power generation source for your electricity generation at this facility

Not applicable

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

13014

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

12994

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

22

Comparison of consumption with previous reporting year

Lower

Please explain

In 2017 compared to 2016 water withdrawal, discharge and consumption decreased by approximately 25%, 25% and 30%, respectively. W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City,

Facility reference number

Facility 12

Facility name (optional)

Trenton Channel Power Plant

Country/Region

United States of America

River basin

St. Lawrence

Latitude

42.123024

Longitude

-83.181633

Primary power generation source for your electricity generation at this facility

Coal - hard

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

305448

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

302823

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

2740

Comparison of consumption with previous reporting year

Higher

Please explain

Water withdrawal decreased with approx. 4% from 2016 to 2017 Water discharge decreased with approx. 4% from 2016 to 2017
Water consumption increased with approx. 10% from 2016 to 2017

Facility reference number

Facility 13

Facility name (optional)

Company Headquarters

Country/Region

United States of America

River basin

St. Lawrence

Latitude

42.333846

Longitude

-83.05749

Primary power generation source for your electricity generation at this facility

Not applicable

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

150

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

150

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

Comparison of consumption with previous reporting year

About the same

Please explain

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 27% from 2016.

W5.1a

(W5.1a) For each facility referenced in W5.1, provide withdrawal data by water source.

Facility reference number

Facility 1

Facility name

Belle River Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

614442

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 2

Facility name

Conners Creek Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility no longer generates electric power and is in the process of being decommissioned. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 3

Facility name

Fermi 2 Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

63163

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 4

Facility name

Greenwood Energy Center

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

44

Comment

This facility withdraws municipal water and fresh surface water for both cooling water make up and for sanitary use. The number reported only represents the amount of municipal supply that is used for cooling water purposes.

Facility reference number

Facility 5

Facility name

Harbor Beach Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility no longer generates electric power and is in the process of being decommissioned. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 7

Facility name

Monroe Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

2119468

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 8

Facility name

River Rouge Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

204098

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 9

Facility name

St. Clair Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

776472

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 10

Facility name

Sibley Quarry

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

2022

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 11

Facility name

Taggart Compressor Station

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

13014

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 12

Facility name

Trenton Channel Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

305448

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number

Facility 13

Facility name

DTE Headquarters

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

150

Comment

The total amount of withdrawal is based on invoices received from the municipal water supplier.

W5.1b

(W5.1b) For each facility referenced in W5.1, provide discharge data by destination.

Facility reference number

Facility 1

Facility name

Belle River Power Plant

Fresh surface water

606781

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 2

Facility name

Conners Creek Power Plant

Fresh surface water

12

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 3

Facility name

Fermi 2 Nuclear Power Plant

Fresh surface water

39078.96

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

26.96

Comment

This facility discharges a portion of both process wastewater and sanitary water to a municipal/industrial wastewater treatment plant; however, only the amount of process wastewater is reported.

Facility reference number

Facility 4

Facility name

Greenwood Energy Center

Fresh surface water

346

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility discharges treated process and sanitary water to fresh surface water.

Facility reference number

Facility 5

Facility name

Harbor Beach Power Plant

Fresh surface water

94

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 7

Facility name

Monroe Power Plant

Fresh surface water

2087621

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 8

Facility name

River Rouge Power Plant

Fresh surface water

203252

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 9

Facility name

St. Clair Power Plant

Fresh surface water

770778

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 10

Facility name

Sibley Quarry

Fresh surface water

2022

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 11

Facility name

Taggart Compressor Station

Fresh surface water

12994

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 12

Facility name

Trenton Channel Power Plant

Fresh surface water

302823

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Facility 13

Facility name

DTE Headquarters

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

150

Comment

The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn.

W5.1c

(W5.1c) For each facility referenced in W5.1, provide the proportion of your total water use that is recycled or reused, and give the comparison with the previous reporting year.

Facility reference number

Facility 3

Facility name

Fermi 2 Nuclear Power Plant

% recycled or reused

76-99%

Comparison with previous reporting year

About the same

Please explain

Facility reference number

Facility 4

Facility name

Greenwood Energy Center

% recycled or reused

76-99%

Comparison with previous reporting year

About the same

Please explain

W5.1d

(W5.1d) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?

Water withdrawals – total volumes

% verified

Not verified

What standard and methodology was used?

None

Water withdrawals – volume by source

% verified

Not verified

What standard and methodology was used?

None

Water withdrawals – quality

% verified

Not verified

What standard and methodology was used?

None

Water discharges – total volumes

% verified

Not verified

What standard and methodology was used?

None

Water discharges – volume by destination

% verified

Not verified

What standard and methodology was used?

None

Water discharges – volume by treatment method

% verified

Not verified

What standard and methodology was used?

None

Water discharge quality – quality by standard effluent parameters

% verified

1-25

What standard and methodology was used?

The value of 1-25% verification represents analytical data provided by external laboratories used on a portion of the effluent parameters required by NPDES permits. The rest of the effluent parameters/data are measured by internal resources.

Water discharge quality – temperature

% verified

Not verified

What standard and methodology was used?

None

Water consumption – total volume

% verified

Not verified

What standard and methodology was used?

None

Water recycled/reused

% verified

Not verified

What standard and methodology was used?

None

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy, but it is not publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Select facilities, businesses, or geographies only	Description of business dependency on water Description of business impact on water Commitments beyond regulatory compliance Commitment to stakeholder awareness and education	Extensive time and effort is being expended to comply with the revised rules related to water (e.g. ELG and 316(b) rules). For example, detailed decision documents have been created for several facilities that will continue to operate past the final compliance date for the revised ELG rule. These decision documents provide a strategy and pathway toward meeting the compliance deadline and beyond. Despite a stay of the ELG rule as noted in W6.2a & b above, the company continues to move forward on several tasks related to this rule. Also as noted above in W6.2a, the company has incorporated water usage strategy as part of the Force for Growth initiative.

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Other, please specify (Chairman and CEO)	Our Chairman and CEO, together with other senior leaders of the company, exercise leadership in our sustainability initiatives. Through the Government Regulatory Committee, and Force for Growth Committee and other leadership committees, DTE Energy's senior management: • Executes the company's ESG strategy in consultation with the Board of Directors • Manages our environmental compliance processes • Mobilizes our employees, resources and partner organizations to strengthen and promote prosperity in our communities • Reports to Board of Directors on outcomes of ESG initiatives • Manages risks associated with environmental and sustainability opportunities • Receives compensation tied to achievement of company goals, including ESG targets

W6.2b

(W6.2b) Provide further details on the board’s oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	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 water-related issues that affect the Company. The PPRC's Charter is available on our website and includes the following statements on Membership & Authority: 1. The Committee shall be composed of three or more directors as determined by the Board of Directors. Committee members are appointed for one-year terms and can be re-appointed for additional terms.2. The Committee has the authority to perform the duties listed in this Charter, as it determines to be necessary and advisable from time to time in its business judgment.3. The Committee shall meet as necessary, but no fewer than three times a year. The Committee shall keep minutes or other records of its meetings.4. The Committee has the authority to retain independent outside professional advisors or experts as it deems advisable or necessary, including the sole authority to retain and terminate any such advisors or experts, to carry out its duties. The Committee shall have sole authority to approve related fees and retention terms. The PPRC met 5 times in 2017,

W6.3

(W6.3) Below board level, provide the highest-level management position(s) or committee(s) with responsibility for water-related issues.

Name of the position(s) and/or committee(s)

Other, please specify (Vice President, Environmental Management)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

As important matters arise

Please explain

The Vice President of Environmental Management & Resources manages a group that is responsible for managing compliance with environmental regulations, and assessing water-related risks and opportunities across the company.

W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4

(W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

Yes

W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a

(W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues?

	Who is entitled to benefit from these incentives?	Indicator for incentivized performance	Please explain
Monetary reward	Corporate executive team	Other, please specify (DTE system of corporate priorities)	Our CEO received 55% of his 2017 total compensation in contingent, performance-based incentives that are focused on meeting our system of corporate priorities, including environmental goals. For our other named executive officers, the average percentage of contingent, performance-based compensation was 48%. • Our short-term and long-term performance metrics all tie directly to our system of priorities. These are the same metrics that management uses to assess the Company's progress toward our aspiration of becoming the best-operated energy company in North America and a force for growth and prosperity in the communities where we live and serve.
Recognition (non-monetary)	Please select	Please select	
Other non-monetary reward	Please select	Please select	

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

- Yes, direct engagement with policy makers
- Yes, trade associations
- Yes, funding research organizations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

DTE Electric and DTE Gas facilities that have a potential for major impacts on water quality are certified to the ISO 14001 standard for environmental management systems. The ISO 14001 certified systems ensure that these facilities have processes in place to meet compliance with environmental regulations. Compliance with regulations helps to influence policy that is consistent with our overall strategy for the business, including protecting the environment. Water policy and strategy for the company is managed by the Vice President of Environmental Management & Resources.

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	A vision or objective entitled "Water Usage" was incorporated into the company's developing environmental sustainability initiative in late 2016. Water withdrawal and water consumption are currently identified as the metrics (or KPIs) for these objectives. In addition, greater regulator engagement can be secured by coming into compliance with the new ELG rule gives the Company opportunity to engage with state regulators to craft a strategy that benefits all parties. Note: This rule was stayed by the EPA until August 12, 2017 to allow for reconsideration of the rule.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	Water resource considerations are factored into site expansions. As actions are underway to close several coal fired plants in the next 3 to 6 years, the Company is in the process of planning to construct new electric generation. Several of the main considerations for this expansion are based on the availability of water and the condition of cooling water intake structures (CWIS) components at existing facilities. Also, tighter operational performance standards are put in place. One example is the company's work to comply with the revised 316(b) regulations of the Clean Water Act for cooling water intake structures (CWIS). The substantial effort to comply with the revised regulations is expected to result in tighter operational performance for CWIS at the applicable facilities.
Financial planning	Yes, water-related issues are integrated	5-10	There are increased investment opportunities related to implementing revised environmental regulations such as the 316(b) example provided above. Another investment opportunity is the effort to comply with the revised effluent limitation guideline (ELG) rule for NPDES permitted discharges. The Company is in the process of implementing strategies to comply with the new rule, and those strategies will require a substantial capital investment. Note: This rule was stayed by the EPA until August 12, 2017 to allow for reconsideration of the rule.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

	Water-related CAPEX (+/- % change)	Anticipated forward trend for CAPEX (+/- % change)	Water-related OPEX (+/- % change)	Anticipated forward trend for OPEX (+/- % change)	Please explain
Row 1					The cells for CAPEX and OPEX are left blank because the company's accounting mechanisms do not full segregate CAPEX and OPEX costs related to water.

W7.3

(W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?

	Use of climate-related scenario analysis	Comment
Row 1	Yes	Despite the favorable support of coal-fired power plants from the current administration, the Company continues on the path of closing coal burning power plants, diversifying its generation fleet, and increasing the percentage of renewable energy sources.

W7.3a

(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?

No

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, and we do not anticipate doing so within the next two years

Please explain

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Activity level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	Business level specific targets and/or goals include reducing the number of NPDES non-compliances. Company-wide targets and goals exist around water usage and water consumption as a part of a developing environmental sustainability initiative that began in 2016, and will continue to develop throughout 2018.

W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

Target reference number

Target 1

Category of target

Water consumption

Level

Site/facility

Primary motivation

Corporate social responsibility

Description of target

Reduce water consumption at corporate headquarters 35% by 2022.

Quantitative metric

% reduction in total water consumption

Baseline year

2016

Start year

2017

Target year

2022

% achieved

15

Please explain

Implementation of improved water controls and water conservation systems at company headquarters.

Target reference number

Target 2

Category of target

Water consumption

Level

Business activity

Primary motivation

Corporate social responsibility

Description of target

Reduce municipal water usage at select power plants 25% by 2022

Quantitative metric

% reduction in total water consumption

Baseline year

2017

Start year

2017

Target year

2022

% achieved

4

Please explain

Reduced city water usage by 4% at two power plants planned for long-term operations.

W8.1b

(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?

Yes

W9.1a

(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.

Linkage or tradeoff

Linkage

Type of linkage/tradeoff

Environmental restoration

Description of linkage/tradeoff

The Effluent Limitations Guidelines rule (ELG - water related) and Coal Combustion Residual rule (CCR - soild waste related) are linked.

Policy or action

The Company continues to craft a compliance strategy that takes into consideration and links both rules. For example, the Company is seeking to modify a NPDES permit (ELG) in a manner that addresses a CCR impoundment closure (CCR). Note: The EPA applied a stay on the ELG rule until August 12, 2017 to allow for reconsideration of the rule.

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?

No, we do not currently verify any other water information reported in our CDP disclosure

W11. Sign off

W-FI

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

N/A

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Senior Environmental Engineer	Other, please specify (Individual Contributor)

W11.2

(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

No

SW. Supply chain module

SW0.1

(SW0.1) What is your organization's annual revenue for the reporting period?

	Annual revenue
Row 1	12607000000

SW0.2

(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?

Yes

SW0.2a

(SW0.2a) Please share your ISIN in the table below.

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	US	2333311072

SW1.1

(SW1.1) Have you identified if any of your facilities reported in W5.1 could have an impact on a requesting CDP supply chain member?

No, we do not have this data and have no intentions to collect it

SW1.2

(SW1.2) Are you able to provide geolocation data for your site facilities not already reported in W5.1?

No, not currently but we intend to provide it within the next two years

SW2.1

(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

SW2.2

(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

No

SW3.1

(SW3.1) Provide any available water intensity values for your organization's products or services across its operations.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms