

C0. Introduction

C0.1

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

CMS Energy Corporation (CMS Energy) is an energy company operating primarily in Michigan. It is the parent holding company of several subsidiaries, including its principal subsidiary, Consumers Energy Company (Consumers Energy or Company), an electric and natural gas utility serving about 6.7 million of Michigan's 10 million residents, and CMS Enterprises Company (CMS Enterprises), primarily a domestic independent power producer. CMS Enterprises, through its subsidiaries and equity investments, is engaged in domestic independent power production, the marketing of independent power production, and the development and operation of renewable generation.

This report is ONLY for the principal subsidiary of CMS Energy, Consumers Energy.

Consumers Energy acknowledges that the long term sustainability of our Company depends upon our ability to listen to our stakeholders and conduct business that promotes environmental health, increases societal value, and brings economic success so that we can provide safe, reliable, and affordable energy to our customers. This commitment is advanced by our focus on the triple bottom line: people, planet and prosperity.

In 2018, Consumers Energy committed to a new Corporate Planet Breakthrough Goal, to cut carbon emissions by 80 percent from a 2005 baseline and eliminate coal for generating electricity by 2040. The Company also submitted its Integrated Resource Plan to the Michigan Public Service Commission in 2018 that details our plan to exceed our goal by reducing our carbon emissions 90 percent by 2040.

This report is made as of the date hereof and contains "forward-looking statements" as defined in Rule 3b-6 of the Securities Exchange Act of 1934, Rule 175 of the Securities Act of 1933, and relevant legal decisions. The forward-looking statements are subject to risks and uncertainties and should be considered in the context of the risk and other factors detailed in CMS Energy's and Consumers Energy's SEC filings. Forward-looking statements should be read in conjunction with "FORWARD-LOOKING STATEMENTS AND INFORMATION" and "RISK FACTORS" sections of CMS Energy's and Consumers Energy's most recent Form 10-K and as updated in reports CMS Energy and Consumers Energy file with the SEC. CMS Energy's and Consumers Energy's "FORWARD-LOOKING STATEMENTS AND INFORMATION" and "RISK FACTORS" sections are incorporated herein by reference and discuss important factors that could cause CMS Energy's and Consumers Energy's results to differ materially from those anticipated in such statements. CMS Energy and Consumers Energy undertake no obligation to update any of the information presented herein to reflect facts, events or circumstances after the date hereof.

C0.2

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

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

C0.3

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

United States of America

C0.4

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

USD

C0.5

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

Financial control

C-EU0.7

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

Row 1

Electric utilities value chain

- Electricity generation
- Transmission
- Distribution

Other divisions

- Gas storage, transmission and distribution
- Smart grids / demand response

C-OG0.7

(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?

Row 1

Oil and gas value chain

Please select

Other divisions

- Grid electricity supply from gas
- Grid electricity supply from coal
- Grid electricity supply from renewables

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Director on board	The Boards of Directors ("Board") of CMS Energy and Consumers Energy, made up of a number of directors with experience and knowledge of environmental issues, have the highest level of oversight of our public responsibility and sustainability practices. Review of these practices occur at the Board level with the Governance, Sustainability and Public Responsibility Committee ("GS&PR Committee") also being responsible for advising and assisting the Board with respect to our public responsibility and sustainability matters. This committee consist of three board members. In addition to Board oversight, management of CMS Energy and Consumers Energy has implemented an Environmental Advisory Council ("EAC") in order to create a group of critical internal leaders who will work together to ensure our actions meet our environmental goals. The EAC reports to the GS&PR Committee.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Sporadic - as important matters arise	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Governance, Sustainability and Public Responsibility Committee reviews sustainability items including climate related issues, as needed, and at least annually. Management and our Board consider sustainability regularly in its decision making. The Governance, Sustainability and Public Responsibility Committee reviews the Company's sustainability programs, practices and strategies, including our reporting as it relates to engagement with shareholders and makes recommendations to the Board with respect to sustainability matters as appropriate.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	As important matters arise
President	Both assessing and managing climate-related risks and opportunities	As important matters arise
Risk committee	Both assessing and managing climate-related risks and opportunities	As important matters arise
Environment/ Sustainability manager	Both assessing and managing climate-related risks and opportunities	As important matters arise

C1.2a

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

The Governance, Sustainability and Public Responsibility Committee (a committee of the Board of Directors) reviews sustainability and climate change items, as needed, and at least annually. Management and our Board consider sustainability regularly in its decision making. Our Governance, Sustainability and Public Responsibility Committee reviews the Company's sustainability programs, practices and strategies, including our reporting as it relates to engagement with shareholders and makes recommendations to the Board with respects to sustainability matters as appropriate.

In addition to Board oversight, in 2018 management implemented an EAC in order to create a group of critical internal leaders who will work together to ensure our actions match our environmental goals and discuss climate related issues.

A risk committee also exists that works with our Environmental Department to assess risks associated with climate related issues. Additionally, the Company has personnel responsible for sustainability that work across the Company to identify and address climate related issues.

C1.3

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

Yes

C1.3a

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

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Other, please specify (All environmental enhancing activities)

Comment

The Company holds an annual sustainability awards ceremony where employees who have had a positive impact on the environmental are recognized for their efforts at our annual Sustainability Summit. This includes efforts around air, water, waste and land.

C2. Risks and opportunities

C2.1

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

	From (years)	To (years)	Comment
Short-term	1	5	
Medium-term	6	10	
Long-term	11	20	

C2.2

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

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

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Annually	>6 years	

C2.2b

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

The Company has additional long term risk management processes with Board review. Our integrated resource planning ("IRP") process identifies and quantifies the impact of various risks with regards to providing reliable, cost effective, and environmentally friendly energy to our customers. Consumers Energy maintains a balanced portfolio of resource options to address any risks that the Company may face. The IRP process addresses risk by evaluating numerous planning scenarios and sensitivities that potentially affect the business. For example, variables such as electric demand, fuel prices, state and federal mandates, carbon emission reduction scenarios and market conditions are altered to evaluate risk.

On an asset level, physical climate change risks are assessed including the impact of changing weather on our operations. Risks from potential future environmental laws, rules and regulations are also evaluated.

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Regulations that address greenhouse gas (GHG) emissions are always taken into consideration when evaluating current risks related to operations.
Emerging regulation	Relevant, always included	Regulations that address GHG emissions are always taken into consideration when evaluating future risks related to operations.
Technology	Relevant, always included	Changes in technology and availability of technology can impact current and future operational plans and therefore are always assessed for risk and impact.
Legal	Relevant, always included	The Company always strives to maintain compliance with all laws and regulations. This is taken into consideration when evaluating risks associated with GHG generation.
Market	Relevant, always included	Understanding the market changes and new demands is critical for managing future and current risks to business success and sustainability.
Reputation	Relevant, always included	How the Company is perceived by its stakeholders can have a large impact on its ability to operate.
Acute physical	Relevant, always included	Acute risks that are event-driven, including increased severity of extreme weather events can increase operational and maintenance costs and are therefore included when assessing Company risks.
Chronic physical	Relevant, always included	Chronic risks including longer-term shifts in climate patterns can have impacts on current and future capacity planning and infrastructure.
Upstream	Relevant, always included	Risks associated with our supply chain such as fuel supply have the potential to be very disruptive to our business operations and therefore are always evaluated when assessing risks.
Downstream	Relevant, always included	Downstream risks that can be derived from our business operational such as risks associated with the use of our goods and services can impact the Company's ability to operate and are always evaluated when assessing risks.

C2.2d

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

Consumers Energy has an Enterprise Risk Management (ERM) Process to monitor and track potentially significant risks to our business. The ERM process requires business units to annually review, update and report risk profiles to senior management and the Board. This review includes identification of operational risks, financial risks, regulatory risks, strategic risks and risks associated with information/cyber systems. This process also includes carbon-related policy and relevant physical risks.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

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

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Future policy to reduce GHG emissions through either a cap and trade scheme or carbon fee or tax with an aggressive schedule may result in unreasonable compliance costs.

Time horizon

Short-term

Likelihood

Unlikely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

100000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Future cap and trade programs or carbon fees or tax could have an impact on our operations and the cost of electric generation from fossil fuels due to spending on emission allowance purchases or carbon fees or tax for compliance, or the capital cost of additional equipment. Costs of cleaner generating units or costs of advanced controls such as carbon capture and sequestration are estimated to exceed \$1B/unit (costs would include capture of emissions and transportation to an appropriate sequestration site).

Management method

This risk is currently being managed through participation in both legislative and regulatory policy development, by strategy development, and by monitoring the development of control options through participation with industry research affiliations.

Cost of management

474000000

Comment

Company anticipates spending about \$474 million to decommission its remaining coal-fired plant.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

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

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

The U.S. Environmental Protection Agency (EPA) regulations over existing fossil fuel- fired units under Section 111(d) of the Clean Air Act is dependent on a state run program. The Clean Power Plan, promulgated by the Obama Administration, required increases in generation efficiency, artificial changes in dispatch order, additional capital investment in renewable energy sources and a likely increase in energy efficiency activities. In February 2016, the Supreme Court of the United States issued a judicial stay of these regulations. In 2018, the Trump Administration proposed a replacement regulatory program, titled the Affordable Clean Energy Rule, which focuses on utility investment in efficiency at the generation plants, subject to state direction. The Trump administration finalized the repeal of the Clean Power Plan and finalized the Affordable Clean Energy rule in June 2019, which Consumers Energy is still evaluating. Consumers Energy is closely tracking these ongoing developments to see what impacts, if any, they may have on operations.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Being required to substantially increase efficiency at existing plants could result in significant costs.

Management method

This risk is currently being managed through participation in both legislative and regulatory policy development, by strategy development, and by monitoring the development of control options through participation with industry research affiliations. Another risk mitigant is related to our ability to mothball or retire select generating units and provide generation with new technology that meets any new requirements. This option is subject to regulatory approval.

Cost of management

200000

Comment

In 2018, the Company spent approximately \$200k/yr participating in policy and strategy development.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Technology: Substitution of existing products and services with lower emissions options

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Federal Regulations such as the New Source Performance Standard (NSPS) for new Electric Generating Units require a minimum performance standard for new electric generation facilities. Future capacity planning must account for costs associated with the accompanying design/performance requirements.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Greenhouse Gas NSPS regulations could have a significant impact on our operations.

Management method

This risk is currently being managed through participation in both legislative and regulatory policy development, by strategy development, by business forecasting and by monitoring the development of control options through participation with industry research affiliations.

Cost of management

200000

Comment

In 2018, the Company spent approximately \$200k/yr participating in policy and strategy development.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

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

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Modifications at our existing facilities required to meet GHG regulations will likely trigger additional permitting requirements. The permitting process can be a very lengthy, litigious and a cost intensive process.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

In 2018, EPA's GHG performance standards (the Clean Power Plan) for existing electric generating units would have forced Consumers Energy to make costly upgrades on the existing fleet and or retire certain units. These costs would vary depending on the timeline for compliance and the facility. The order of magnitude of these costs were estimated to be in excess of \$1 billion.

Management method

A method to manage this risk may be retiring and replacing plants with lower carbon alternatives. Additionally, we manage this risk through participation in both legislative

and regulatory policy development, by strategy development, and by monitoring the development of control options through participation with industry research affiliations.

Cost of management

474200000

Comment

The Company spends \$200k/yr on participating in policy and strategy development. Company anticipates spending about \$474 million to decommission its remaining coal-fired plant.

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Snow and ice accumulation, coupled with strong winds from more frequent or severe storms may compromise infrastructure by damaging our distribution system equipment. Similarly, increased flooding of our distribution system can cause damage.

Time horizon

Current

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

120300000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Damages to our infrastructure due to more frequent and severe storms may increase the Company's service restoration operations and maintenance costs. For 2018, Consumers Energy spent \$53.9 million on service restoration operating and maintenance activities. We estimate that in 2018 we will spend about \$66.4 million in service restoration activities.

Management method

This risk can partly be managed by smart electric systems that have self-healing designs. This risk is also mitigated by maintaining our infrastructure in good working order.

Cost of management

918600000

Comment

Consumers Energy's Smart Energy program, kicked off in 2007 and concluded in 2017 as planned. The Company spent \$711M on the program, which was below the \$750M budget. Also in 2017, the Company spent over \$3.8 million on our reliability operations and maintenance program, \$52.4 million on our line clearing operations and maintenance program, and \$151.4 million on our reliability capital program.

Identifier

Risk 6

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Other

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Variations in Great Lakes water level may result in increased infrastructure and maintenance activities as well as fuel supply issues.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Changes in the level of the Great Lakes and its tributaries could have a significant financial impact on our generating fleet. For example, increased dredging or greater fuel costs due to operation of coal barges at less than capacity to meet requirements of shallower channels. Dredging would result in significant costs (~\$2M/yr.). Water level changes are predicted to occur over a very long period and existing generating assets could likely be mothballed, retired or replaced by that time. Additionally, recent, and upcoming changes in other EPA regulations are expected to require changes to be made at our existing water structures. Any changes would evaluate the best data on expected lake levels.

Management method

The Company is currently managing this risk by monitoring lake levels at our generating plants and also relies on the United States Army Corps of Engineers Detroit District's water level reports and forecasts.

Cost of management

0

Comment

There is no cost (\$0) associated with the monitoring of lake levels at our generating plants. The Company utilizes the United States Army Corps of Engineers Detroit District's water level reports and forecasts at no cost.

Identifier

Risk 7

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Reputation: Increased stakeholder concern or negative stakeholder feedback

Type of financial impact

Reduction in capital availability

Company- specific description

Consumers Energy's efforts to mitigate climate change through policies and practices can affect the perception of our Company. If our reputation is damaged due to inadequate efforts surrounding climate change this may reduce our appeal in the investment community.

Time horizon

Short-term

Likelihood

Unlikely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

There is a growing concern for investing in companies that address environmental issues such as climate change. Over 50% of CMS Energy's common stock is owned by signatories of the United Nation's Principles for Responsible Investing which represents over \$4B dollars. It is important for our Company that investors are confident in our business now and in the future.

Management method

To manage this risk the Company communicates its efforts surrounding climate change through public reporting. The Company uses its Corporate Social Responsibility website as a tool to inform the public about its environmental efforts regarding climate change. Additionally, the Company discloses climate change information through its Securities and Exchange Commission (SEC) Form 10-K annual report as well as this response to the Carbon Disclosure Project (CDP), annual Sustainability Report and regular meetings with our investors.

Cost of management

975

Comment

There are no additional costs (\$0) associated with disclosing our efforts on climate change on the Company website or in its SEC Form 10-K annual report. However, the cost associated with personnel hours worked to achieve these disclosures has not been calculated. The Carbon Disclosure Project submittal fee is \$975.

Identifier

Risk 8

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Market: Changing customer behavior

Type of financial impact

Reduced revenue from decreased demand for goods/services

Company- specific description

Regulatory, physical, and other risks driven by climate change have the potential to impact the economy driving costs up for our business and our customers and consequently driving the demand for our goods and services down.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

29600000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Higher energy costs could result in more households not being able to afford their energy bills. In 2018, the Company's uncollectible expense was \$29.6M.

Management method

To help reduce the amount of uncollectible payments the Company provided funds to non-profit agencies and secured grants and other energy assistance from its customers through the Michigan Public Service Commission (MPSC). Additionally, the Company offers different payment plan options to its customers.

Cost of management

20612000.48

Comment

In collaboration with community stakeholders, Consumers Energy promotes the availability and customer connections to access energy assistance the Company provided. The Company contributed \$20,296,796.28 in 2018 to the Michigan Energy Assistance Program.

C2.4

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

Yes

C2.4a

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

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Participation in carbon market

Type of financial impact

Returns on investment in low-emission technology

Company-specific description

The Company has participated in an EPA acid rain cap and trade program by selling emission allowances accrued from operational changes which reduced emissions. The Company has profited from these sales. There may be opportunities to capitalize on emission allowance sales from future cap and trade schemes targeting GHG emissions.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Astute management of cap and trade schemes delivers good customer value and can increase our competitive position in the market. At this time, it is not possible to quantify the scope of financial implications due to the lack of known operating parameters of a yet to be developed trading program.

Strategy to realize opportunity

We have identified opportunities to be competitive in a cap and trade schedule including negative cost of abatement opportunities such as plant efficiency, electric distribution line loss reductions, and energy efficiency for our customers.

Cost to realize opportunity

Comment

The capital invested depends upon the stringency of the policy.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Type of financial impact

Returns on investment in low-emission technology

Company-specific description

Efficiency standards for electric generation provide an opportunity to invest in our current generating fleet or to retire and build new low to zero carbon emitting sources. As a regulated utility, we recover a rate of return on investments in infrastructure which includes required emission control equipment or new generation equipment.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1007000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential impact of product efficiency opportunities is dependent upon the stringency of the federal policy. Because these are case specific applications for our generating assets, it is not possible to determine a monetary value without assessing each application. However, the amount that the Company plans to spend in capital on solar and wind generation is estimated at \$1,007,000,000 for 2019 to 2022.

Strategy to realize opportunity

Our Clean Energy Plan is a living process that looks at policy, load, technology and fuel prices to name a few variables, several times per year, providing a picture of the most cost effective way to serve load.

Cost to realize opportunity

0

Comment

Changes in carbon regulation will not result in any additional costs (\$0) to our strategic modelling processes.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Type of financial impact

Returns on investment in low-emission technology

Company-specific description

There are potential opportunities for our natural gas utility business. EPA regulations could drive the need for new natural gas infrastructure to support more gas fired electric generating units (EGUs). Investments in our natural gas distribution network may realize profit if infrastructure is needed.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

528462

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Investments in the existing natural gas distribution system could increase the Company's assets. If new natural gas-fired electrical generation facilities come on-line in our service territory we will have the opportunity to invest in new natural gas infrastructure. In 2018, the Company increased revenues an estimated \$528,462 from new customers for natural gas distribution.

Strategy to realize opportunity

Our Clean Energy Plan is a living process that looks at policy, load, technology and fuel prices to name a few variables, several times per year, providing a picture of the most cost effective way to serve load.

Cost to realize opportunity

30200000

Comment

In 2018, \$30,200,000 was spent on the Company's customer attachment program on new main extensions.

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Change in weather can affect electric or gas load. Warmer winters result in a decreased demand for gas and conversely warmer summers mean an increase in demand for electricity.

Time horizon

Current

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

An increase in electricity or natural gas demand allows us to expand our supply and distribution systems. Our investment opportunity is dependent upon the magnitude of the change in temperature and could be as much as \$1B.

Strategy to realize opportunity

We are supportive of revenue decoupling on both the electric and gas sides of the business, which effectively mitigate weather risk by truing up projected sales with actual sales and giving customers refunds or collecting more revenue accordingly. We are authorized to do this on the gas side only, decoupling on the electric side is not currently authorized.

Cost to realize opportunity

0

Comment

There is no additional cost (\$0) to manage this opportunity through our current business processes.

Identifier

Opp5

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of climate adaptation and insurance risk solutions

Type of financial impact

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

Company-specific description

Snow and ice from more frequent or severe storms may compromise infrastructure by damaging our distribution system equipment. There may be new investment opportunities associated with the solutions to these problems.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

31700000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The deployment of a complete electric underground distribution system would roughly cost around \$31.7 Billion. This is based on an adjusted line mileage of 56,676 miles of electric underground lines at a rough cost of \$561,000 per mile.

Strategy to realize opportunity

At the current time, we are investing in our infrastructure to assure the reliable supply of electricity and natural gas.

Cost to realize opportunity

207600000

Comment

In 2018, the Company spent over \$3.8 million on our reliability operations and maintenance program, \$52.4 million on our line clearing operations and maintenance program, and \$151.4 million on our reliability capital program.

Identifier

Opp6

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Markets

Primary climate-related opportunity driver

Other

Type of financial impact

Other, please specify (Additional access to capital)

Company-specific description

Positive perceptions driven by our response to climate change may increase the appeal of our business in the investment community.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

There is a growing concern for investing in companies that address environmental issues such as climate change. Over 50% of CMS Energy's common stock is owned by signatories of the United Nation's Principles for Responsible Investing which represents over \$4B dollars. It is important for our Company that investors are confident in our business now and in the future.

Strategy to realize opportunity

The Company manages this risk with its efforts around reducing its carbon through building efficiency, electric vehicle incentives, transitioning our generation fleet to a lower carbon intensity rating, behavioral change support, and energy efficiency processes. Additionally, the Company reports out on these efforts through our Corporate Social Responsibility Webpage, SEC Form 10K Annual Report, our EEI/AGA ESG Report, Climate Assessment Report, and the CDP to communicate them to the investment community.

Cost to realize opportunity

975

Comment

There are no additional costs (\$0) associated with disclosing our efforts on climate change on the Company website or in its SEC Form 10-K annual report. However, the cost associated with personnel hours worked to achieve these disclosures has not been calculated. The Carbon Disclosure Project submittal fee is \$975.

Identifier

Opp7

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Positive perceptions driven by our response to climate change may increase the appeal of our business in the investment community. Customers may perceive their energy usage as a contributor to climate change. This perception may cause our customers to demand new lower carbon products and services.

Time horizon

Current

Likelihood

More likely than not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

806090

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Our Green Generation® program offers our customers the opportunity to make contributions towards the purchases of renewable energy. Customers can either make purchases that match their kilowatt-hour usage at the 100% level, or can purchase in blocks of 150 kilowatt-hours. At the end of 2018, the Green Generation® program generated about \$806,090 in revenue.

Strategy to realize opportunity

The Company managed this opportunity by marketing the program to our customers. We historically communicated with these customers through a number of different methods, including direct mail, email, radio and television, and web banner ads. The Green Generation® direct mail marketing efforts were generally focused on residential customers – particularly those whom demonstrate an interest in renewable energy and the environment – as these customers were more likely to sign up for the Green Generation® program. The program closed to new enrollments April 5, 2019.

Cost to realize opportunity

285329

Comment

Company spent about \$285,329 on marketing and administration for this program in 2018.

Identifier

Opp8

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Positive perceptions driven by our response to climate change may increase the appeal of our business in the investment community. Customers may perceive their energy usage as a contributor to climate change. This perception may cause our customers to demand new lower carbon products and services.

Time horizon

Current

Likelihood

More likely than not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

495799

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Our Solar Gardens program offers our customers the opportunity to subscribe to blocks of renewable energy. At the end of 2018, the Solar Gardens program generated about \$495,799 in revenue.

Strategy to realize opportunity

The Company managed this opportunity by marketing the program to our customers. We communicate with these customers through a number of different methods, including direct mail, email, radio and television, and web banner ads. The Solar Gardens email marketing efforts were generally focused on residential customers – particularly those whom demonstrate an interest in renewable energy and the environment – as these customers were more likely to sign up for the Solar Gardens program.

Cost to realize opportunity

503685

Comment

Company spent about \$503,685 on marketing and administration for this program in 2018.

Identifier

Opp9

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Positive perceptions driven by our response to climate change may increase the appeal of our business in the investment community. Customers may perceive their energy usage as a contributor to climate change. This perception may cause our customers to demand new lower carbon products and services.

Time horizon

Current

Likelihood

More likely than not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4093514

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Our Large Customer Renewable Energy Pilot program offers our largest customers the opportunity to offset their usage with renewable energy. At the end of 2018, the Large Customer Renewable Energy Pilot program generated about \$4,093,514 in revenue.

Strategy to realize opportunity

The Company managed this opportunity listening to the needs of our largest customers and developing innovative programs to meet those needs. We communicate with these customers through our corporate account managers.

Cost to realize opportunity

131228

Comment

Company spent about \$131,228 on marketing and administration for this program in 2018.

C2.5

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

	Impact	Description
Products and services	Impacted	Products and services including electricity and natural gas along with energy infrastructure have been impacted by climate driven risks and opportunities. Our energy investments are shifting and the Company is providing new products and services related to energy efficiency and renewable generation.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	The shift in energy sources used by the Company has a direct impact on our value chain. Consumers Energy is committed to monitoring and raising awareness of social and ethical issues, as well as the risks and opportunities relevant to sustainability and environmental responsibility across its supplier base.
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	The Company's operations are impacted by weather patterns. The Company responds to current weather related impacts and is working towards increased system reliability.
Investment in R&D	Impacted for some suppliers, facilities, or product lines	The Company is pursuing R & D in a variety of areas including new technology related to battery storage and microgrids.
Operations	Impacted	Financial implications associated from risks and opportunities, especially those driven by regulation, have impacts on Company operations.
Other, please specify	Please select	

C2.6

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

	Relevance	Description
Revenues	Impacted	As an Investor owned utility subject to regulation, we are required to submit our financial planning for review by the Michigan Public Service Commission. Relevant risks and opportunities are modeled in various permutations to develop the best path forward balancing the needs of all stakeholders.
Operating costs	Impacted	As an Investor owned utility subject to regulation, we are required to submit our financial planning for review by the Michigan Public Service Commission. Relevant risks and opportunities are modeled in various permutations to develop the best path forward balancing the needs of all stakeholders.
Capital expenditures / capital allocation	Impacted	As an Investor owned utility subject to regulation, we are required to submit our financial planning for review by the Michigan Public Service Commission. Relevant risks and opportunities are modeled in various permutations to develop the best path forward balancing the needs of all stakeholders.
Acquisitions and divestments	Impacted	As an Investor owned utility subject to regulation, we are required to submit our financial planning for review by the Public Service Commission. Relevant risks and opportunities are modeled in various permutations to develop the best path forward balancing the needs of all stakeholders.
Access to capital	Impacted	As an Investor owned utility subject to regulation, we are required to submit our financial planning for review by the Michigan Public Service Commission. Relevant risks and opportunities are modeled in various permutations to develop the best path forward balancing the needs of all stakeholders.
Assets	Impacted	As an Investor owned utility subject to regulation, we are required to submit our financial planning for review by the Michigan Public Service Commission. Relevant risks and opportunities are modeled in various permutations to develop the best path forward balancing the needs of all stakeholders.
Liabilities	Impacted	As an Investor owned utility subject to regulation, we are required to submit our financial planning for review by the Michigan Public Service Commission. Relevant risks and opportunities are modeled in various permutations to develop the best path forward balancing the needs of all stakeholders.
Other	Please select	

C3. Business Strategy

C3.1

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

Yes

C3.1a

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

Yes, qualitative and quantitative

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

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

Yes

C3.1c

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

Consumers Energy is committed to sustainability which means focusing on the triple bottom line (people, planet, prosperity). With each decision made, the Company considers our impact on all of our stakeholders. Consumers' President and Chief Executive Officer and leadership team own the sustainability business strategy but also have personnel assigned to manage climate change issues, which includes policy and regulation development, analysis, planning and communication. Company personnel, in conjunction with the Company's management team and the Board of Directors, develop the Company's strategy on climate change as a component of the Company's overall business strategy.

Briefing documents that explain the current anticipated impact on the Company from a proposed climate change related regulation are also developed and shared with management and distributed through the Company as needed. Additionally, Consumers Energy has a Corporate Sustainability Breakthrough Goal. Under this sustainability goal, Consumers Energy further developed the existing corporate GHG reduction target established in 2012, which was met in 2016 with the retirement of 950 MW of coal-fired generation. In 2017, the Company began extensive stakeholder outreach to best determine how to meet Company and customer needs with a Corporate Planet Breakthrough Goal which was developed in 2017 and announced in early 2018. The Company also published its first Climate Assessment Report in 2018.

The President and Chief Executive Officer communicates our climate change and sustainability strategy to the Company's employees and Board through presentations, Company policies and ultimately in our decisions. The climate change and sustainability strategy is also reflected in external communications made through, among other things, financial and regulatory reporting, news releases, our website, the annual Sustainability Report, the Climate Assessment Report, our EEI/AGA ESG Report, and the CDP.

Aspects of climate change that have influenced our business strategy include proposed federal legislation as well as state and U.S. Environmental Protection Agency (EPA) regulation governing emissions of GHG, the Paris Climate Accord, and also social expectations, including the investment community, to consider further reducing GHG emissions from our operations.

We have numerous short term business strategies to reduce GHG emissions such as modernizing our natural gas pipeline infrastructure, which reduces fugitive methane emissions, as well as building efficiency standards for any new construction. Modernizing our natural gas pipelines started in 2012 and will continue until approximately 2036. Consumers Energy has been a partner to the EPA's Natural Gas STAR Program since 1996. As part of our natural gas business, we look for opportunities to reduce methane releases from the storage and delivery of natural gas. We have received two "Continuing Excellence" awards for our voluntary measures to reduce methane emissions under the Natural Gas Star Program.

Additionally, Consumers Energy joined the Natural Gas STAR Methane Challenge Program as a Founding Member in 2016. The Company became a partner under the program's Natural Gas Distribution Segment: Mains – Cast Iron and Unprotected Steel Best Management Plan (BMP) Commitment. Our goal under this BMP is reaching a 3% or greater reduction in cast iron and unprotected steel distribution mains, over a five year period, by no later than 2021. Consumers Energy filed their Methane Challenge Implementation Plan in September of 2016. Future performance for this commitment will closely parallel existing work projected to be done under the Enhanced Infrastructure Replacement Program (EIRP) and other programs that reduce fugitive methane emissions from natural gas distribution, storage and delivery. Reporting of the Methane Challenge Commitment progress will utilize data the Company gathers for our compliance obligations under the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration regulations found in 49 CFR Part 191.

Aspects of climate change have also influenced our long term strategies through our capacity planning process. In this process we evaluate a number of factors including an estimated carbon price for CO2 emissions in our generation capacity planning. Future generation planning incorporates this business strategy to make sound business decisions. For example, in 2018 Consumers Energy submitted its Integrated Resource Plan which focuses on generation sources that will allow the Company to achieve a reduction of over 90% in carbon emissions by 2040.

Our long- term strategy also includes building and operating at least 306 MW of new wind generation by 2022, long-term power purchase agreements for renewables, and implementation of a customer energy efficiency program. Our efficiency program was initiated through state legislation in 2008 and an updated state legislative package was signed in December 2016. While the statute has numerous mandates and goals which the Company has met, the efficiency gains will continue into the future and is expected to reduce total customer electricity use by at least 1.5% annually and gas use by 1% annually. Looking forward a key component of our Integrated resource plan is to ramp up out electric savings targets to 1.8% in 2020 and then up to 2% per year from 2021 to 2029 and then up to 2.25% per year between 2030 and 2039.

One particular competitive advantage of factoring climate change into our business strategy is that it promotes diversity of our electrical generation portfolio, which leads to an overall reduction of risk associated with price volatility inherent with operating a generating fleet dominated by one technology. Maintaining a diverse generation fleet allows our ratepayers to be better insulated from price swings associated with any one particular generating technology or fuel source.

With the implementation of our triple bottom line we have moved from a compliance driven organization to an accountability driven organization where consideration of the impacts of our operations influence our future decisions; such as in the area of generation planning and evaluating new technologies. This culture change is being carried out under the umbrella of our commitment to the triple bottom line: people, planet and prosperity.

C3.1d

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

Climate-related scenarios

Details

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

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

In 2018 Consumers Energy implemented a Corporate Planet Breakthrough Goal. Under this goal, Consumers Energy further developed the existing corporate GHG reduction target, as our original GHG reduction target was met in 2016 with the retirement of 950 MW of coal generation. In 2017, the Company began extensive stakeholder outreach to best determine how to meet our customer needs. This outreach included surveys of customers as well as interviews with key stakeholders. The results clearly indicated a preference for a lower carbon future with an emphasis on renewable energy generation. In 2018 the Company announced a goal to reduce carbon dioxide emissions 80 percent and eliminate all remaining coal generation by 2040. Our plans to meet, and even exceed, this goal are outlined in our Integrated Resource Plan (IRP) that was filed with the Michigan Public Service Commission in June of 2018.

Our IRP will enable us to:

- **Reduce Carbon Emissions:** Carbon emissions will be reduced from Consumers Energy owned generating sources by over 90 percent by 2040.
- **Increase Clean Energy:** Meeting customers' electricity needs with clean energy resources such as renewable energy, energy waste reduction and energy storage by 2040. We plan to add 6,000 megawatts of solar energy by 2040.
- **Offer Innovative Energy Solutions:** We will use tools such as incentives for customers to use energy more efficiently to avoid the need to invest in new power plants. The Company's energy efficiency programs already have helped customers save \$2 billion since 2009. Customers can participate in the programs to reduce energy waste, shift energy use to more affordable times, invest in charging infrastructure for electric vehicles and support new renewable energy sources.

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Scope

Scope 3 (downstream)

% emissions in Scope

100

Targeted % reduction from base year

1

Base year

2017

Start year

2018

Base year emissions covered by target (metric tons CO2e)

105109

Target year

2018

Is this a science-based target?

Please select

% of target achieved

100

Target status

Revised

Please explain

Consumers Energy's original energy efficiency targets sunset in 2016. Currently our Scope 3 energy efficiency target of 1% reduction represents our annual energy efficiency natural gas utility savings from 2017 natural gas sales. In 2018, natural gas reductions due to efficiency efforts exceeded our target by 48%.

Target reference number

Abs 2

Scope

Scope 1

% emissions in Scope

100

Targeted % reduction from base year

80

Base year

2005

Start year

2018

Base year emissions covered by target (metric tons CO2e)

20536528.8

Target year

2040

Is this a science-based target?

Please select

% of target achieved

38

Target status

Revised

Please explain

In the past five years, Consumers Energy has created a cleaner, more sustainable energy future for the state by taking a leadership position in reducing air emissions, reducing water usage, saving landfill space, and boosting the amount of renewable energy supplied to customers. Consumers Energy's goal is to meet Michigan's energy needs by reducing carbon emissions by 80% and no longer using coal to generate electricity by 2040. To meet this goal, we believe that more than 40% of the energy produced could come from renewable sources and energy storage by 2040. This continued transformation to cleaner fuel sources is part of a long-term strategic commitment to protect the planet.

C4.2

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

Target

Renewable electricity consumption

KPI – Metric numerator

Renewable energy production %

KPI – Metric denominator (intensity targets only)

N/A

Base year

2009

Start year

2009

Target year

2021

KPI in baseline year

0

KPI in target year

15

% achieved in reporting year

12

Target Status

Underway

Please explain

In 2016 the State of Michigan revised its renewable energy goal through legislation. The new program establishes a 15% statewide target by 2021.

Part of emissions target

N/A

Is this target part of an overarching initiative?

Other, please specify (State mandate)

Target

Methane reduction target

KPI – Metric numerator

Miles of vintage distribution mains replaced

KPI – Metric denominator (intensity targets only)

Year

Base year

2015

Start year

2016

Target year

2021

KPI in baseline year

3

KPI in target year

3

% achieved in reporting year

2.14

Target Status

Underway

Please explain

In 2016, Consumers Energy also became a founding member in EPA's voluntary Methane Challenge Program, where members commit to utilizing best management practices to reduce fugitive methane losses from distribution and transmission processes. Our methane challenge commitment is to reduce cast iron and unprotected steel mains at a minimum rate of 3% by 2021, and thereafter for a 5-year period. This is a voluntary initiative that reduces Scope 3 emissions.

Part of emissions target

This is not a part of an emissions target because it encompasses infrastructure replacements and best management practices for emissions avoided.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

C-OG4.2a

(C-OG4.2a) If you do not have a methane-specific emissions reduction target for your oil and gas activities or do not incorporate methane into your target(s) reported in C4.2 please explain why not and forecast how your methane emissions will change over the next five years.

Consumers Energy does not operate any oil and gas production sites.

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*	1	84417
Implemented*		
Not to be implemented		

C4.3b

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

Initiative type

Fugitive emissions reductions

Description of initiative

Oil/natural gas methane leak capture/prevention

Estimated annual CO2e savings (metric tonnes CO2e)

84417

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

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

Payback period

Please select

Estimated lifetime of the initiative

>30 years

Comment

Consumers Energy utilizes best management practices to reduce fugitive methane losses from distribution and transmission processes, and annually targets higher risk distribution mains and services to be replaced in addition to other pipeline replacement work, which further reduces potential methane emissions. This initiative is ongoing.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Compliance with regulatory requirements receives priority funding.
Financial optimization calculations	Energy efficiency activities within our facilities are determined based on the return on the investment.
Internal price on carbon	The estimated cost of carbon may be incorporated into financial investment decisions.
Dedicated budget for energy efficiency	Funding to spur development and deployment of smart-meters, LEED certified buildings and electric vehicle charging stations is intended to help drive the development and deployment of clean and efficient energy and remain current with the industry direction.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Product

Description of product/Group of products

Net metering

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

Avoided emissions

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

Other, please specify (This is a direct GHG offset calculation)

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

0

Comment

Level of aggregation

Product

Description of product/Group of products

Continuous energy monitoring for identifying and reducing energy consumption.

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

Avoided emissions

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

Other, please specify (This is a direct GHG offset calculation)

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

0

Comment

The Virtual Energy Engineer service gives customers insights into their energy consumption that allow for the identification and reduction of energy usage, which minimalizes their carbon footprint and improves their bottom line.

Level of aggregation

Product

Description of product/Group of products

Experimental Advanced Renewable Energy Program.

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

Avoided emissions

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

Other, please specify (This is a direct GHG offset calculation)

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

0

Comment

The Company does not receive any revenue from this program. The Company pays customers for their distributed renewable generation. This program represents 6.4MW installed through over 379 contracts.

Level of aggregation

Product

Description of product/Group of products

Experimental Advanced Renewable Energy Program

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

Avoided emissions

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

Other, please specify (This is a direct GHG offset calculation)

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

Comment

The Company does not receive any revenue from this program. The Company pays customers for their distributed renewable generation. This program represents 6.4MW installed through over 379 Contracts.

Level of aggregation

Product

Description of product/Group of products

Industrial Demand Response

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

Avoided emissions

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

Other, please specify (This is a direct GHG offset calculation)

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

0

Comment

The commercial and Industrial Demand Response program calls on our business customers to reduce electric load during peak times in the summer. This prevents Consumers Energy from purchasing additional load generated from non-renewable resources. Demand Response supports the 2016 Energy law with our renewable energy standard increasing from 10 percent to 15 percent by 2021. This program does not generate revenue but rather reduces Company costs.

C-EU4.6

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

The Company focuses on optimizing combustion processes as well as eliminating leaks occurring from infrastructure that delivers natural gas to our combustion facilities and residential customers.

In 2016, Consumers Energy became a founding member in EPA's voluntary Methane Challenge program, where members commit to utilizing best management practices to reduce fugitive methane losses from distribution and transmission processes. Our methane challenge commitment is to reduce cast iron and unprotected steel mains at a minimum rate of 3% annually, target at 5-year time frame. This was reported in Section C4.2.

In addition to Consumers' normal distribution main replacement projects, our Enhanced Infrastructure Replacement Program (EIRP) targets higher risk distribution mains and services to be replaced which further reduces potential methane emissions.

In addition, on our transmission pipeline projects, we utilize pump-down techniques to lower gas line pressure using temporary compression and/or movement of gas elsewhere onto our system to avoid emissions from venting gas.

In total, 2018 methane emissions avoided were 84,417 CO₂e metric tons.

C-OG4.6

(C-OG4.6) Describe your organization's efforts to reduce methane emissions from your activities.

Consumers Energy does not operate any oil and gas production sites. Our natural gas utility has storage and distribution assets. The Company prioritizes efforts to reduce fugitive methane losses from these assets. We quantify and report these fugitive losses pursuant to the EPA GHG reporting rule Subpart W.

COG4.7

(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?

No, this is not relevant to our operations

C-OG4.7b

(C-OG4.7b) Explain why you do not conduct LDAR or use other methods to find and fix fugitive methane emissions, and whether you have a plan to do so from your oil and gas production activities.

Consumers Energy does not operate any oil and gas production sites.

C-OG4.8

(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.

Consumers Energy does not operate any oil and gas production sites.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1 2009

Base year end

December 31 2009

Base year emissions (metric tons CO2e)

18196261

Comment

Scope 2 (location-based)

Base year start

January 1 2009

Base year end

December 31 2009

Base year emissions (metric tons CO2e)

44330

Comment

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.2

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

US EPA Mandatory Greenhouse Gas Reporting Rule

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

13164704

Start date

January 1 2018

End date

December 31 2018

Comment

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment

As noted in the introduction, this report is limited to owned generation assets operating under Consumers Energy. Therefore, market based Scope 2 emissions profiles are not applicable.

C6.3

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

Reporting year

Scope 2, location-based

53959

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

January 1 2018

End date

December 31 2018

Comment

C6.4

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

Yes

C6.4a

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

Source

Refrigerant leaks

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Please select

Explain why this source is excluded

GHGs associated with refrigerant usage are contained in closed loop applications. Any leakage associated with closed loop refrigerant systems is de minimus and not required to be reported via regulation.

Source

Emergency operations

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Please select

Explain why this source is excluded

De minimis emissions associated with emergency operations, such as emergency generators, are not included in Scope 1 or Scope 2.

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

15867075

Emissions calculation methodology

Emissions are calculated based on the distribution and sale of natural gas to customers. Calculations were based on 40 CFR Part 98 emission factors.

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

Explanation

Capital goods

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Emission associated with calculated leaks in our natural gas compressor stations and distribution pipelines (assets) were previously reported as Scope 3, however these emissions have been re-classified into Scope 1 emissions.

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

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

All fuel and energy related activities are either captured as purchased goods and services, capital goods.

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Waste generated in operations

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Our energy customers do not accumulate waste as a result of the use of our product (use of electricity or combustion of natural gas).

Business travel**Evaluation status**

Relevant, calculated

Metric tonnes CO2e

77012

Emissions calculation methodology

Emissions are calculated based on business mileage associated with employees driving personal vehicles for work related purposes. Calculations were based on 40 CFR Part 98 emission factors. An estimated 20 miles/gallon was used in the emission calculations for calculating Scope 3 business mileage.

Percentage of emissions calculated using data obtained from suppliers or value chain partners**Explanation****Employee commuting****Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Employee commuting is currently outside of the Company's influence.

Upstream leased assets**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Not applicable

Downstream transportation and distribution**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Emission associated with calculated leaks in our natural gas compressor stations and distribution pipelines (assets) were previously reported as Scope 3, however these emissions have been re-classified into Scope 1 emissions.

Processing of sold products**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

The life cycle of GHG emissions associated with the use of our sold products are captured in the purchased goods and services category.

Use of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

The life cycle of GHG emissions associated with the use of our sold products are captured in the purchased goods and services category.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

The life cycle of GHG emissions associated with the use of our sold products are captured in the purchased goods and services category.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Not applicable

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Not applicable

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Not applicable

Other (upstream)

Evaluation status

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Other (downstream)

Evaluation status

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

C6.7

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

No

C6.10

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

Intensity figure

0.00204

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

13218663

Metric denominator

unit total revenue

Metric denominator: Unit total

6464000000

Scope 2 figure used

Location-based

% change from previous year

2.98

Direction of change

Decreased

Reason for change

2018 total revenue exceeded 2017's.

Intensity figure

1628

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

13218663

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

8121

Scope 2 figure used

Location-based

% change from previous year

7.39

Direction of change

Decreased

Reason for change

There were more FTE in 2018 than 2017.

Intensity figure

0.774

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

13218663

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

17074627

Scope 2 figure used

Location-based

% change from previous year

5.2

Direction of change

Decreased

Reason for change

Slight increase in MWhs generated.

C-OG6.12

(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.

Unit of hydrocarbon category (denominator)

Please select

Metric tons CO2e from hydrocarbon category per unit specified

% change from previous year

Direction of change

<Not Applicable>

Reason for change

Comment

Not in oil & gas production

C-OG6.13

(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.

Oil and gas business division

Please select

Estimated total methane emitted expressed as % of natural gas production or throughput at given division

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division

Comment

Not in oil & gas production.

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	12861112	Other, please specify (EPA emission factors)
CH4	3924	Other, please specify (EPA emission factors)
N2O	53314	Other, please specify (EPA emission factors)

C-EU7.1b

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

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	0	0	
Combustion (Electric utilities)	12687020	152	2098	12746039	Total Includes N2O
Combustion (Gas utilities)	119505	2.25	0	119628	Total Includes N2O
Combustion (Other)	54587.54	2.28	0	54780	Business mileage of fleet vehicles. Total Includes N2O
Emissions not elsewhere classified	244257			244257	Leaks from natural gas equipment & pipelines

C-OG7.1b

(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.

Emissions category

Please select

Value chain

Please select

Product

Please select

Gross Scope 1 CO2 emissions (metric tons CO2)

Gross Scope 1 methane emissions (metric tons CH4)

Total gross Scope 1 emissions (metric tons CO2e)

Comment

Not applicable. Consumers does not operate oil & gas production facilities.

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	13164704

C7.3

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

By facility

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
JH Campbell Generating Facility	7737140	42.91	-86.2
DE Karn/JC Weadock Generating Facility	2733991	43.64	-83.84
Zeeland Generating Facility	1370323	42.82	-86
Gaylord Combustion Turbine	1204	43.06	-84.72
Straits Combustion Turbine	199	45.78	-84.77
Thetford Combustion Turbine	1397	43.16	-83.63
Freedom Compressor Station	16452	42.21	-83.97
Muskegon River Compressor Station	22087	44.08	-85.02
Northville Compressor Station	4518	42.48	-83.55
Overisel Compressor Station	14985	42.7	-85.95
Ray Compressor Station	22232	42.81	-82.87
St. Clair Compressor Station	15761	42.72	-82.72
White Pigeon Compressor Station	23593	41.8	-85.59
Jackson Generating Station	899689	42.25	-84.38
Business Miles	54780		

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	12746039	<Not Applicable>	
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)		<Not Applicable>	Not applicable
Oil and gas production activities (downstream)	363885	<Not Applicable>	Oil & gas production is not applicable. Natural gas distribution for the utility is provided.
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	53959		96999	

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Office facilities	53959	

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)			
Oil and gas production activities (downstream)			
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

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

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities		<Not Applicable>		
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	115611	Decreased	0.87	Decrease in 2018 emissions is not significant in nature
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

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

Location-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	Please select			
Consumption of purchased or acquired electricity	<Not Applicable>			
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	0	166441	166441

C8.2b

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

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

C8.2c

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

C8.2e

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	17074627	69441	1994	0
Heat	0			
Steam	0			
Cooling	0			

C-EU8.2e

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

Coal – hard

Nameplate capacity (MW)
1905

Gross electricity generation (GWh)

Net electricity generation (GWh)
9804

Absolute scope 1 emissions (metric tons CO2e)
10580537

Scope 1 emissions intensity (metric tons CO2e per GWh)
1.07

Comment

Lignite

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Oil

Nameplate capacity (MW)

1203

Gross electricity generation (GWh)

Net electricity generation (GWh)

43

Absolute scope 1 emissions (metric tons CO2e)

77986

Scope 1 emissions intensity (metric tons CO2e per GWh)

1.81

Comment

Gas

Nameplate capacity (MW)

1384

Gross electricity generation (GWh)

Net electricity generation (GWh)

5234

Absolute scope 1 emissions (metric tons CO2e)

2269150

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.43

Comment

Biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Nuclear

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Hydroelectric

Nameplate capacity (MW)

1174

Gross electricity generation (GWh)

Net electricity generation (GWh)

1252

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Wind

Nameplate capacity (MW)

256

Gross electricity generation (GWh)

Net electricity generation (GWh)

736

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Solar

Nameplate capacity (MW)

2

Gross electricity generation (GWh)

Net electricity generation (GWh)

6

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other non-renewable

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Total

Nameplate capacity (MW)
5924

Gross electricity generation (GWh)

Net electricity generation (GWh)
17.07

Absolute scope 1 emissions (metric tons CO2e)
12746039

Scope 1 emissions intensity (metric tons CO2e per GWh)
0.75

Comment

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?
No

C9. Additional metrics

C9.1

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

C-EU9.5a

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

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Other renewable	1007000000	58.3	2022	Consumers Energy's Wind & Solar sources

C-EU9.5b

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

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

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

Investment start date

Investment end date

Investment area

Please select

Technology area

Please select

Investment maturity

Please select

Investment figure

Low-carbon investment percentage

Please select

Please explain

Consumers Energy does not directly invest in research and development.

C10. Verification

C10.1

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

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

C10.1a

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

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for reporting year-previous statement of process attached

Type of verification or assurance

Moderate assurance

Attach the statement

Trucost_20181231_Consumers Energy_Assurance_statement_V1.0.pdf

Page/ section reference

All

Relevant standard

A1000AS

Proportion of reported emissions verified (%)

C10.2

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

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

C11. Carbon pricing

C11.1

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

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

C11.2

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

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit origination

Project type

Other, please specify (Hydro, Solar, and Wind)

Project identification

Various Consumers Energy owned renewable energy systems.

Verified to which standard

Please select

Number of credits (metric tonnes CO2e)

1151290

Number of credits (metric tonnes CO2e): Risk adjusted volume

Credits cancelled

Yes

Purpose, e.g. compliance

Compliance

Credit origination or credit purchase

Credit purchase

Project type

Other, please specify (Landfill Gas, Hydro, Anerobic Digestor, Biomass, Solar, Wind, and Municipal Solid Waste)

Project identification

Various renewable energy systems.

Verified to which standard

Please select

Number of credits (metric tonnes CO2e)

1827652

Number of credits (metric tonnes CO2e): Risk adjusted volume

Credits cancelled

Yes

Purpose, e.g. compliance

Compliance

C11.3

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

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

C12. Engagement

C12.1

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

Yes, our customers

C12.1b

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

Type of engagement

Collaboration & innovation

Details of engagement

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

10.6

% Scope 3 emissions as reported in C6.5

6.67

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

Consumers Energy uses an integrated marketing approach to engage customers in our Energy Efficiency Programs. We have prioritized customer engagement due to its inherent business and societal value. This engagement reduces carbon emissions while creating business value through new products and services. Additionally, our energy efficiency programs save our customers money.

Impact of engagement, including measures of success

Ultimately, our engagement efforts are evaluated by the achievement of savings goals for both electricity and natural gas. As of 2018, the lifetime GHG reductions associated with customers adoption of the gas utility energy optimization plans resulted in a lifetime reduction of 1,101,253 metric tons of CO2e emissions for Scope 3 emissions. Additionally, electric optimization by customers has resulted in electric utility avoided emissions of 2,980,702 metric tons of CO2e emissions over the lifetime of the program for Scope 1 emissions.

C12.3

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

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

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (Clean energy generation)	Support	In 2016, the State of Michigan passed new state energy policy, which became effective in April 2017. Consumers Energy staff participated in this research process via roundtable discussions, workgroups, and public presentations. Staff now are in the implementation phase of those new programs.	Consumers Energy supports the enacted state energy policy. We will continue to engage in legislative workgroups and discussions to best implement the revised mandates on utilities for energy efficiency and renewable energy.

C12.3b

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

Yes

C12.3c

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

Trade association

American Gas Association (AGA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

AGA believes that every discussion about clean energy standards should include natural gas—and that energy efficiency and reduced environmental impacts be considered primary criteria for the nation's climate and energy policies.

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

Consumers Energy participates in policy development activities as well as technical support activities initiated through AGA.

Trade association

Electric Power Research Institute (EPRI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

EPRI acknowledges that the energy industry is faced with unprecedented uncertainties around environmental regulation and climate policies. They have committed to developing tools and models to assist both the public and private sector decision makers in understanding the costs and benefits of policy alternatives.

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

Consumers Energy participates in policy development activities as well as technical support activities initiated through EPRI.

C12.3d

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

No

C12.3f

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

Consumers Energy has staff that tracks and analyses developments around climate change strategy. This group is housed in the corporate Environmental Services Department. Additionally, we have Governmental Affairs staff that regularly engages with policy makers. There is regular contact between the respective teams to discuss Company activities that may impact our climate change strategy.

C12.4

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

Publication

In voluntary sustainability report

Status

Complete

Attach the document

consumers-energy-sustainability-report-2019.pdf

Page/Section reference

Pages 16-27

Content elements

Governance

Strategy

Emissions figures

Emission targets

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

Climate_Assessment_Report.pdf

Page/Section reference

All

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

FINAL_AnnualReport2018_Full_web-ready.pdf

Page/Section reference

Pages 38-39, 54, 84

Content elements

Governance

Strategy

Risks & opportunities

Comment

C14. Signoff

C-FI

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

C14.1

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

	Job title	Corresponding job category
Row 1	Linda Hilbert, Environmental and Laboratory Services Executive Director	Environment/Sustainability manager

SC. Supply chain module

SC0.0

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

SC0.1

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

	Annual Revenue
Row 1	6500000000

SC0.2

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

Yes

SC0.2a

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

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	US12589610

SC1.1

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

Requesting member
General Motors Company

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
316476

Uncertainty (±%)

Major sources of emissions
Generation of electricity supplied to GM facilities.

Verified
No

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
This value is calculated from the metered electricity usage for the GM customer accounts and Consumers Energy specific emissions factor for our delivered electricity.

Requesting member
General Motors Company

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
7002

Uncertainty (±%)

Major sources of emissions
Natural gas sold to GM facilities.

Verified
No

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Calculated from the metered natural gas sold to GM. Emission factors are from the EPA part 98 GHG reporting rule.

SC1.2

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

N/A

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Other, please specify	The nature of supplying energy to a regional base prevents Consumers Energy from being able to calculate customer specific emission factors. We can provide Consumers Energy specific emission factors, which is an average of all our generation sources emission profiles for our entire service territory.

SC1.4

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

No

SC1.4b

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

We currently provide this information on request basis to our customers. We do not have current plans to expand upon our capabilities.

SC2.1

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

SC2.2

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

No

SC3.1

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

No

SC3.2

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

No

SC4.1

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

Please select

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