

C0. Introduction

C0.1

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

Xcel Energy is a major U.S. investor-owned electricity and natural gas company with annual revenues of \$11.5 billion. Headquartered in Minneapolis, Minnesota, we provide a comprehensive portfolio of energy-related products and services to approximately 3.6 million electricity customers and 2 million natural gas customers in eight Midwestern and Western states under four wholly owned, regulated utility subsidiaries. For more than a decade, we have been recognized as a national leader in wind energy and in reducing carbon and other emissions, efforts that are paving the way to a more sustainable energy future. We continue to manage the risk of climate change and carbon policy through a comprehensive clean energy strategy that has consistently reduced carbon emissions while continuing to provide our customers with reliable, affordable energy.

In 2018, Xcel Energy reduced carbon emissions 38% below 2005 levels from electricity that serves customers. In December of 2018, we announced our bold vision — the most ambitious in the industry — to provide customers with 100 percent carbon-free electricity by 2050 and to reduce carbon emissions 80 percent by 2030 company-wide from 2005 levels. Our goal is grounded in climate science. We hired climate modelling experts to evaluate how our vision relates to global temperature goals. These experts consulted the newest Intergovernmental Panel on Climate Change (IPCC) emission scenarios database and analyzed carbon emissions for the electric sector in industrialized countries, within the scenarios that have a high (66 percent or greater) probability of achieving the 2 C goal. Based on this expert analysis, our reduction targets are clearly consistent with — even on the low end of — the electric sector reductions in scenarios that achieve the international 2 C goal. Even more encouraging, this analysis shows that our emission trajectory is also consistent with the more aggressive 1.5 C goal.

As a founding member of The Climate Registry, a non-profit organization established to measure and publicly report greenhouse gas (GHG) emissions, we are committed to transparency and public reporting. Xcel Energy routinely reports comprehensive information on the company's environmental, social and economic performance through its annual Corporate Responsibility Report, CDP questionnaires, and filings with the Securities and Exchange Commission. In 2018, we published our first Edison Electric Institute (EEI) environmental, social, governance, and sustainability report, which is a new industry reporting template to provide information in a measurable and consistent format for investors. Our carbon report, *Building a Carbon-free Future*, released in March 2019, outlines the path to achieving ambitious carbon reductions and includes an in-depth analysis of our vision.

This report has been prepared using reasonably available data, information, emission factors, and protocols and is subject to uncertainties and variabilities associated with each item.

1. SAFE HARBOR STATEMENT

This material contains forward-looking statements that are subject to certain risks, uncertainties and assumptions. Such forward-looking statements include projected projections related to emissions reductions, changes in our generation portfolio, planned retirements, and planned capital investments and are identified in this document by the words “anticipate”, “expect”, “possible”, and similar expressions. Actual results may vary materially. Factors that could cause actual results to differ materially include, but are not limited to: general economic conditions, including the availability of credit, actions of rating agencies and their impact on capital expenditures; business conditions in the energy industry: competitive factors; unusual weather; effects of geopolitical events; including war and acts of terrorism; changes in federal or state legislation; regulation; actions of regulatory bodies; and other risk factors listed from time to time by Xcel Energy in reports filed with the SEC.

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.

Equity share

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
- Battery storage
- Micro grids

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	Management of corporate responsibility is embedded in our company, led by the direction of the CEO. The executive team plans and executes on strategies for achieving Xcel Energy's priorities and ESG/sustainability-related initiatives. Full oversight of our corporate responsibility efforts, including climate change, is explained in our Corporate Responsibility Report, Managing Corporate Responsibility section. Our executive management, including the CEO, is highly involved in our environmental policy and strategy. The executive team meets regularly throughout the year to chart and monitor progress on key strategic initiatives as well as track industry and technology trends affecting our business. Many corporate responsibility issues, including climate change, are regular features of the team's oversight. Broader and more extensive corporate strategy sessions are also conducted annually, first with the executive management team and then with the Board of Directors.
Board-level committee	Our board of directors, led by the chairman, president and CEO, oversees ESG/sustainability-related initiatives through four committees: Governance, Compensation and Nominating; Audit; Operations, Nuclear, Environmental and Safety (ONES); and Finance. The primary committee responsible for climate change at Xcel Energy is the Board of Directors ONES Committee. The ONES Committee provides oversight of the company's environmental strategy, performance, compliance, and initiatives. Climate Change strategies are presented to the Board and the ONES Committee throughout the year. The Committee is required to meet at least three times per year. The Board of Director's Governance, Compensation and Nominating Committee is responsible for oversight of the Executive Officer Compensation Program, which includes a carbon emissions reduction component. The performance awards are described in 1.3 and in our 2019 Proxy Statement.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Full oversight of our corporate responsibility efforts is explained in the Managing Corporate Responsibility of our 2018 Corporate Responsibility Report. A key accountability of the Board of Directors is the oversight of material risk, and our Board of Directors employs an effective process for doing so. Management and each Board of Directors’ committee have responsibility for overseeing the identification and mitigation of key risks and reporting its assessments and activities to the full Board of Directors. The primary committee responsible for climate change is the Board of Directors Operations, Nuclear, Environmental and Safety Committee (ONES Committee). The ONES Committee provides oversight of the company’s environmental strategy, performance, compliance, and initiatives. Climate Change strategies are presented to the Board and the ONES Committee throughout the year. The Committee is required to meet at least three times per year. Broader and more extensive corporate strategy sessions are also conducted annually, first with the executive management team and then with the Board of Directors. The Board of Director’s Governance, Compensation and Nominating Committee is responsible for oversight of the Executive Officer Compensation Program, which includes a carbon emissions reduction component. The performance awards are described in the CDP report and our 2018 Proxy Statement. Our efforts are also guided by long-term carbon reduction goals that we have been setting for our company for over a decade. The company is currently working towards an industry-leading goal of 80% reductions in carbon from 2005 levels by 2030, and an aspiration to deliver carbon-free electricity by 2050.

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	Half-yearly

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 Chairman of the Board, President, and Chief Executive Officer (CEO) of Xcel Energy is responsible for the oversight and management of the entire company, including assessing the risk and developing the strategy to address carbon emissions and climate-related issues. In addition to the oversight role of the Board of Directors, maintaining the responsibility for climate-related issues with our highest-ranking member of management ensures that our carbon strategy is central to our business. One of our three strategic priorities includes Leading the Clean Energy Transition. Under the direction and leadership of the CEO, Xcel Energy has established one of the most ambitious carbon reduction strategies in the industry, which will not only lead us to carbon-free electricity by 2050, but will also help other sectors reduce carbon emissions. This level of direction also enables business units and operating companies to execute on the strategy.

Our executive management, including the Chief Executive Officer, is also highly involved in our environmental policy and strategy. The executive team meets regularly throughout the year to chart and monitor progress on key strategic initiatives as well as track industry and technology trends affecting our business. Many corporate responsibility issues, including climate change, are regular features of the team's oversight. Broader and more extensive corporate strategy sessions are also conducted annually, first with the executive management team and then with the Board of Directors.

We also have a corporate environmental policy that governs our environmental performance, laying out responsibility across the organization for assessing and managing issues, such as climate change. The policy is available on our website https://www.xcelenergy.com/environment/responsible_operations/our_environmental_commitment Aspects of this policy include:

- The Environmental Policy Department has the specific responsibility of assessing risks and opportunities associated with climate change. This area assesses the degree to which climate change could affect the business, including regulatory and physical risks and opportunities. This group provides regular reports to senior leadership and the Board of Directors and Board committees.
- The Environmental Management System ensures environmentally responsible operations, providing training and documentation of Xcel Energy's compliance responsibilities and creating processes to minimize risk of noncompliance, including audits of Xcel Energy's environmental performance.
- The Environmental Services Department is responsible for overseeing environmental compliance and tracking our environmental performance, including progress towards our greenhouse gas emissions reduction goals.

Climate-related issues are also monitored through a robust risk-management process that is managed through our risk management department and reported up through the CEO and board.

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?

Board Chair

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Environmental performance is a component of the Xcel Energy Executive Officer Long-term Incentive Compensation. The long-term incentive compensation makes up approximately 71% of the CEO's target total direct compensation and 54% of the average of the other NEO's direct compensation. As outlined in our 2019 proxy statement, 30% of this long-term incentive compensation is subject to the achievement of carbon emissions reductions and is paid out in performance shares. For the 2018-2020 program, for our executives to receive a full incentive pay out, the company must meet three-year average carbon emission reductions of 35% below 2005 for the three years ending December 31, 2020. Executives can receive up to a 200% pay out if the company achieves 41% reductions, but these are based on stretch goals such that executives are incentivized to implement more aggressive and/or accelerated clean energy investments. The Board's Governance, Compensation and Nominating Committee, which oversees and approves these performance goals, selected reduction in carbon emissions as a performance measure as it directly supports our strong environmental leadership. By executing projects to achieve our carbon emissions reduction targets, we are continuously and prudently reducing our impact to the environment.

Who is entitled to benefit from these incentives?

Chief Executive Officer (CEO)

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Environmental performance is a component of the Xcel Energy Executive Officer Long-term Incentive Compensation. The long-term incentive compensation makes up approximately 71% of the CEO's target total direct compensation and 54% of the average of the other NEO's direct compensation. As outlined in our 2019 proxy statement, 30% of this long-term incentive compensation is subject to the achievement of carbon emissions reductions and is paid out in performance shares. For the 2018-2020 program, for our executives to receive a full incentive pay out, the company must meet three-year average carbon emission reductions of 35% below 2005 for the three years ending December 31, 2020. Executives can receive up to a 200% pay out if the company achieves 41% reductions, but these are based on stretch goals such that executives are incentivized to implement more aggressive and/or accelerated clean energy investments. The Board's Governance, Compensation and Nominating Committee, which oversees and approves these performance goals, selected reduction in carbon emissions as a performance measure as it directly supports our strong environmental leadership. By executing projects to achieve our carbon emissions reduction targets, we are continuously and prudently reducing our impact to the environment.

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Environmental performance is a component of the Xcel Energy Executive Officer Long-term Incentive Compensation. The long-term incentive compensation makes up approximately 71% of the CEO's target total direct compensation and 54% of the average of the other NEO's direct compensation. As outlined in our 2019 proxy statement, 30% of this long-term incentive compensation is subject to the achievement of carbon emissions reductions and is paid out in performance shares. For the 2018-2020 program, for our executives to receive a full incentive pay out, the company must meet three-year average carbon emission reductions of 35% below 2005 for the three years ending December 31, 2020. Executives can receive up to a 200% pay out if the company achieves 41% reductions, but these are based on stretch goals such that executives are incentivized to implement more aggressive and/or accelerated clean energy investments. The Board's Governance, Compensation and Nominating Committee, which oversees and approves these performance goals, selected reduction in carbon emissions as a performance measure as it directly supports our strong environmental leadership. By executing projects to achieve our carbon emissions reduction targets, we are continuously and prudently reducing our impact to the environment.

C2. Risks and opportunities

C2.1

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

	From (years)	To (years)	Comment
Short-term	0	2	
Medium-term	2	5	
Long-term	5		Our long-term risk planning timeframe does not specify an end year, but includes any risks that are greater than 5 years in the future.

C2.2

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

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

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	

C2.2b

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

Risk management process

Our integrated, multi-disciplinary risk management process creates accountability for managing risk across the company — from employees who are responsible for business compliance and adhering to our Code of Conduct, to senior executives and the board of directors who oversee risk management. Annually, executive leadership conducts a formal key risk assessment, considering materiality, timing and likelihood and controllability of risks. Identification and analysis occurs formally through a key risk assessment conducted by senior management, the financial disclosure process, hazard risk management procedures and internal auditing and compliance with financial and operational controls. Management also identifies and analyzes risk through its business planning process and development of goals and key performance indicators, which include risk identification to determine barriers to implementing our strategy. Risks are reviewed at least every six months, or as necessary.

Our assessments include the operational, policy and weather-related risks potentially associated with climate change. Findings are presented to the board of directors, which assigns oversight among the board's four standing committees to ensure they are well understood and managed on an on-going basis. Management communicates regularly with the Board of Directors (Board) and key stakeholders regarding risk. Senior management presents and communicates a periodic risk assessment to the Board, which provides information on material risks.

Xcel Energy has a robust compliance program and promotes a culture of compliance. The process for risk mitigation includes

adherence to our code of conduct and compliance policies, operation of formal risk management structures and overall business management to mitigate the risks inherent in the implementation of strategy. Xcel Energy manages and further mitigates risks through formal risk management structures, including management councils, risk committees and services of corporate areas such as internal audit, corporate controller and legal.

Board Oversight

The Board approaches oversight, management and mitigation of risk as an integral and continuous part of its governance of Xcel Energy. The Board regularly reviews management's key risk assessment and analyzes areas of existing and future risks and opportunities. In addition, the Board assigns oversight of critical risks to its four committees to ensure these risks are well understood and given appropriate focus. The Operations, Nuclear, Environmental and Safety Committee is responsible for oversight of environmental issues, including climate-related risks, but each committee may have a role in other aspects that may touch climate-related risks. Committees regularly report on their oversight activities and certain risk issues may be brought to the full Board for consideration as appropriate. The Board conducts an annual strategy session where future plans and initiatives are reviewed.

Resource Planning

Our resource planning process is designed to manage capital-intensive investments over decades-long time horizons. Through this regulated process, we evaluate a range of scenarios and stress test our energy portfolio against important variables, including fuel prices, renewable energy and storage costs, transmission constraints and other relevant factors. We use load forecasts to account for changing weather patterns, a key variable in explaining actual and forecasted loads. Load forecast sensitivities can also ensure our portfolio is sufficient to meet different needs created by electrification, which is likely to become more prevalent in a carbon-constrained future. Our resource planning considers the costs and risks of potential carbon regulation and potential damages from climate change by applying a carbon proxy as described in C11.

Operations

Maintaining reliable and resilient operations across our system means we constantly prepare for the unexpected. We use a suite of techniques to maintain a resilient system from water management to emergency preparedness. For example, our Monitoring and Diagnostics Center monitors the operation of major generating units in real time, identifying potential issues before they occur. We also have predictive analytics and software tools that help avoid plant failures and can even address issues which may result in higher emissions or compromise reliability. We have specific procedures in place to deal with extreme weather, flooding, drought or other conditions that may impact operability of our plants. We maintain a Root Cause Analysis process to evaluate potential issues and implement corrective actions. To better understand climate-related vulnerabilities, we joined the Department of Energy's Partnership for Energy Sector Climate Resilience. Under the Partnership, owners and operators of energy assets will develop and pursue strategies to reduce climate and weather related vulnerabilities.

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	Current regulation is continuously evaluated through our risk management process described above. Updates are regularly provided to management and the Board on our compliance positions. In addition, our Environmental Services team is responsible for ensuring our compliance with all applicable laws and regulations. An example of a current regulation is the Renewable Portfolio Standards (RPS) applicable in each of our states. We are currently in compliance with these RPSs and are working to assess our compliance position with the newly passed New Mexico Energy Transition Act. Our compliance with these standards is regularly analyzed, considered, and forwarded to management as necessary.
Emerging regulation	Relevant, always included	Legislative and regulatory responses related to climate change and new interpretations of existing laws create financial risk as our facilities may be subject to additional regulation at either the state or federal level in the future. Such regulations could impose substantial costs on our system. Examples include carbon tax and dividend proposals, clean energy standards and other potential regulation. Through our Policy and Federal Affairs team, in collaboration with General Counsel, Environmental Services, and other operational teams, we analyze potential regulations based on potential for carbon reductions and cost impact. Analysis is presented to management and to the board to assess the potential risk and opportunities.
Technology	Relevant, always included	One of the key drivers to success for our ambitious carbon strategy is technology innovation. We will require the availability of new, dispatchable, carbon-free resources to achieve our aspiration of carbon-free electricity by 2050. Carbon-free technology, thus, represents both a risk and an opportunity. In addition to the process described above we have a dedicated Innovation Transformation Office that evaluates new technology across a variety of factors to help determine the opportunity or risk to the company. This helps the company manage the potential risks associated with technological developments needed to achieve our carbon vision.
Legal	Relevant, always included	We may be subject to climate change lawsuits. An adverse outcome could require substantial capital expenditures and could possibly require payment of substantial penalties or damages. Defense costs associated with such litigation can also be significant. These payments or expenditures could affect results of operations, financial condition or cash flows if such costs are not recovered through regulated rates. These types of risks are included in our risk management process.
Market	Relevant, always included	Severe weather impacts our service territories, primarily when thunderstorms, flooding, tornadoes, wildfires and snow or ice storms occur. To the extent the frequency of extreme weather events increases, this could increase our cost of providing service. Periods of extreme temperatures could also impact our ability to meet demand. Drought or water depletion could adversely impact our ability to provide electricity to customers and increase the price paid for energy. We may not recover all costs related to mitigating these physical and financial risks. Climate change may impact a region's economy, which could impact our sales and revenues. The price of energy has an impact on the economic health of our communities. The cost of additional regulatory requirements, such as regulation of GHG, could impact the availability of goods and prices charged by our suppliers, which would normally be borne by consumers through higher prices for energy and purchased goods. To the extent financial markets view climate change and emissions of GHGs as a financial risk, this could negatively affect our ability to access capital markets or cause us to receive less than ideal terms and conditions. These types of risks are assessed through the operational process described above along with regular oversight by the Board of Directors.
Reputation	Relevant, always included	In our eight-state service territory, we have many customers and cities and communities interested in clean energy and meeting renewable energy or climate targets as well as their overall interest in sustainability. Our reputation depends on being able to provide these customers with the choices they need without adversely impacting affordability or reliability. We are able to continuously assess our reputational risk through our work on the ground with these communities. In addition to employees assigned to manage relationships with cities across our territory. We also periodically conduct focus groups and surveys to assess the status of our reputation. We also use customer satisfaction ratings to help us monitor if we are meeting customer needs. One component of these ratings is our reputation. These results are also part of our internal corporate scorecard.
Acute physical	Relevant, always included	In addition to maintaining emergency plans at all of our power plants and planning for extreme weather, we are also focused on successfully managing major storm events, responding quickly and providing information to customers as we restore service. The Edison Electric Institute has recognized Xcel Energy multiple times with its Emergency Recovery Award for outstanding storm response. These efforts extend beyond our service territory, with our crews on standby to help with recovery efforts across the country and Puerto Rico when hurricanes or other natural disasters strike. In addition to the risk management described above, our operations teams ensure safety and integrity of the system at all times and have continuously improved our storm response.
Chronic physical	Relevant, always included	Since we provide electricity in drought-prone areas, water is a precious resource that we must carefully manage. A co-benefit of our transition to renewable energy is that we are also lowering our water footprint. Beyond this, we have a comprehensive water management program to minimize the risks of continued water usage, including innovative partnerships to access water during extreme drought periods. For example, we use treated effluent to cool power plants in Texas and New Mexico. This effluent is water that would otherwise not be used and is available during drought.
Upstream	Relevant, always included	Management of risk of upstream disruptions, such as a disruption in fuel supply, is taken into account in our resource planning process. We are required to build capacity enough to serve the highest peak load with an additional buffer. In the event that we had a shortage of fuel or some other issue affecting a plant, we are able to rely on the rest of our system or even market purchases to ensure reliable service. We also take into account the ability of supply chain partners to assist with restoration from storm-related outages.
Downstream	Relevant, always included	Xcel Energy monitors the risks that climate change will impact customer demand for electricity. Our customers' energy needs vary with weather. To the extent weather conditions are affected by climate change, customers' energy use could increase or decrease. Increased energy use due to weather changes may require us to invest in generating assets, transmission and infrastructure. Decreased energy use due to weather changes may result in decreased revenues. Extreme weather conditions in general require system backup, costs, and can contribute to increased system stress, including service interruptions. Extreme weather conditions creating high energy demand may raise electricity prices, increasing the cost of energy we provide to our customers. Severe weather impacts our service territories, primarily when thunderstorms, flooding, tornadoes, wildfires and snow or ice storms occur. To the extent the frequency of extreme weather events increases, this could increase our cost of providing service. Periods of extreme temperatures could impact our ability to meet demand.

C2.2d

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

The goal of Xcel Energy's risk management is to understand, manage, and when possible, mitigate material risk. Management is responsible for identifying and managing risks, while the Board of Directors oversees and holds management accountable. Xcel Energy is faced with a number of risks including climate change, regulatory, financial, and physical risks. Risk identification and analysis occurs formally through a key risk assessment process conducted by senior management as well as through business planning processes. Many of the cross-cutting risks like climate change risks are discussed and managed across business areas and coordinated by Xcel Energy's senior management through formal risk structures and groups. Management also considers our business, the utility industry, the domestic and global economy and the environment to identify, analyze and mitigate the risks.

At the company level, we invest in renewable energy and are transitioning our generation fleet to cleaner options, including planning for the orderly retirement of fossil generation. This process is simultaneously de-risking our portfolio from possible future regulatory costs and stranded asset risks, and taking advantage of strategic investment opportunities in wind, solar, energy storage, advanced grid infrastructure, and other innovative technologies while maintaining fuel diversity. This strategy benefits our customers, shareholders, investors, and the environment.

At the asset level, we consider both the costs/risks of potential carbon regulation, and potential damages from climate change, by applying regulatory and externality carbon proxy costs in our resource planning process. This allows carbon regulatory costs and externality damages to be considered in selecting resources to meet demand, and provides a comparison of operational cost and environmental impacts among fossil-based, renewable and other low-carbon sources of electricity in our portfolio.

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

Physical risk

Primary climate-related risk driver

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

Type of financial impact

Write-offs and early retirement of existing assets (e.g., damage to property and assets in "high-risk" locations)

Company- specific description

The risk of increased intensity and severity of severe weather outbreaks may increase in Xcel Energy's service territory as a result of climate change. Our service territory covers large portions of the Great Plains that are already susceptible to severe weather events including severe thunderstorms with wind, tornadoes, and hail damage. Events such as these could cause damage to company owned assets (generation, transmission and distribution), loss of load due to homes and businesses destroyed, disruption of service, fatalities and increased operating cost.

Time horizon

Unknown

Likelihood

Unlikely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

40000000

Explanation of financial impact figure

The direct financial implications are difficult to determine due to the impossibility of predicting the exact factors that will contribute to such an event. The costs associated with repairing our lines in these types of events depends on many factors out of our control, such as cold weather and pipeline disruptions in other areas. At the low end, \$0 represents the expectation that storm restoration costs would be recovered through the electric rates paid by our customers and that property insurance would mitigate our costs. \$40 million represents estimates of potential damages to the electric generation, distribution, and transmission system from a single severe weather outbreak hitting one of our operating company service territories.

Management method

The physical climate parameter risks Xcel Energy faces include change in temperature extremes, change in mean precipitation, and change in mean temperature. To manage these risks, Xcel Energy uses several methods including advanced water management, wind energy, demand side management, expanded transmission, innovative clean technology, and infrastructure upgrades. Though not all of our investments in our electric transmission and natural gas pipeline assets are attributable to the physical risks of climate change, we believe that maintaining a robust infrastructure is a key strategy to avoiding negative impacts. Xcel Energy is a member of the DOE partnership for Energy Sector Climate Resilience. The partnership has identified extreme weather events, changing temperatures and precipitation, severe storms, and other changes due to climate change as a potential risk to the grid and utility businesses. The member utilities have performed a vulnerability assessment and are working to find solutions to improve the resiliency of the grid. The financial impacts caused by natural disasters are usually recoverable through rate cases based on evidence that the company acted in "good preventative faith" in alleviating or preventing even more significant impacts. Insurance for our generation fleet and other company assets provides additional protection against perils such as wind, hail, and flooding, and the cost of management reflects our annual property insurance premium costs.

Cost of management

13500000

Comment**Identifier**

Risk 2

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 demand for goods and/or services due to shift in consumer preferences

Company- specific description

Investor-owned utilities such as Xcel Energy are subject to the potential loss of customers to third-party providers such as community choice aggregators, community solar developers, or other service providers that allow customers to self-generate the electricity they need for their homes and businesses. Furthermore, adoption of new energy technologies such as rooftop solar and energy storage systems can lead to declining customer demand, along with programs that we implement for energy efficiency and

demand side management. Customers with aggressive renewable energy goals, especially large corporate customers, may seek opportunities to depart from our system and procure their own energy. While we are not subject to policies in our states that offer businesses the opportunity to make this transition, we monitor market and legislative activity nationwide in order to understand the landscape in which we operate and how it may change in the future.

Time horizon

Current

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

90000000

Explanation of financial impact figure

This estimate represents the range of potential annual lost revenue if a customer were to depart from our system and procure energy from another source, with \$90,000,000 representing the maximum possible lost revenue from a large customer departure.

Management method

We continuously monitor the technology landscape and have included efficiency improvements and DSM into our sales forecast. We closely monitor sales trends and incorporate adjustments to account for large commercial and Industrial (C&I) installing Combined Heat and Power (CHP). The company can reduce the risk by developing its own products (potentially through our investment in Energy Impact Partners) to compete for customers whether it is community solar gardens or battery storage or other emerging technologies. Cost of management is the approximate cost of employee time to implement and manage renewable energy choice and DSM/Energy Efficiency programs.

Cost of management

5000000

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Increased pricing of GHG emissions

Type of financial impact

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

Company- specific description

Adoption of a cap and trade or carbon tax program would affect Xcel Energy's operations by imposing a direct cost on the emissions from our electric generation. Carbon taxes, which are typically applied to the fuels based on an expected emissions rate, would increase the cost of procuring coal and natural gas for the power plants that serve our customers. A cap and trade program, whether adopted nationally or in one of our states, would require Xcel Energy to procure a sufficient number of credits to cover our annual emissions. While some existing cap and trade programs are structured to provide utilities with free allowances in order to mitigate ratepayer impact, it is expected that Xcel Energy would be required to buy at least some credits if our emissions were to be regulated under a cap and trade program.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

95000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

This estimated figure represent Xcel Energy's total cost of carbon in 2030, representing 17 million tons of emissions based on our 80% emissions reduction goal by 2030. For pricing the regulatory costs of carbon, we estimated the value using the June 2019 RGGI auction clearing price of \$5.62/ton.

Management method

Our long-term carbon goals of 80% reductions below 2005 levels by 2030 and our aspiration to serve our customers with 100% carbon-free electricity by 2050 serve as a hedge against policies that would price carbon emissions. Our current carbon emissions reductions, 38% below 2005 levels, are helping to further minimize the risks of near-term carbon pricing to our customers. Our strategy of investing in renewable energy, both by building and owning wind farms as well as entering into power purchase agreements for wind and solar reduces the carbon intensity of our electricity and mitigates the risk of carbon pricing for our customers. While we incur a wide range of both capital and O&M costs that can be associated with managing the risk of carbon regulation, the cost of management listed below represents our 2018 approximate spending on renewable energy purchases through wind and solar PPAs.

Cost of management

1100000000

Comment

Identifier

Risk 4

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

Changes in precipitation resulting in droughts or water shortages, whether caused by climate change or otherwise, could adversely affect our operations, principally our fossil generating units. A negative impact to water supplies due to long-term drought conditions could adversely impact our ability to provide electricity to customers, as well as increase the price they pay for energy. We may not recover all costs related to mitigating these physical and financial risks. Our territories extend from humid, upper Midwest states with ample precipitation to arid Western states in which drought conditions are common. We have developed operations that can perform in significant drought conditions; however, increased frequency of extreme weather events that create extenuating drought circumstances may increase our cost of providing service. For example, changes in climate patterns could result in droughts which exceed these historic events and adversely impact our ability to provide electricity to customers or increase the price they pay for energy. Drought is a common occurrence in Colorado. Here, generating facilities utilize drought-adapted cooling technologies and efficient water use practices while our water supply portfolio incorporates diverse sources of supply and flexibility in the place and manner of use. This water supply system has weathered the drought of record and several periods of severe, extended drought through proactive conservation measures. Drought is similarly common in the Southwest region, but the generating facilities' water supply utilizes drought-resistant treated municipal effluent and groundwater sources. We may not recover all costs related to mitigating these physical and financial risks. We are continually working to ensure that our operations use water efficiently and have

adequate supply.

Time horizon

Unknown

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

5500000

Explanation of financial impact figure

The financial implications of drought-related events are difficult to determine due to uncertainty in occurrence and magnitude. We could incur incremental costs of as much as \$5.5 M for drought-conditional agreements, which can be exercised in a drought. In the severest drought, the risk is that no water would be available at any price and generation would have to be curtailed.

Management method

The company has developed a diverse water supply portfolio and flexible operations to address drought conditions in arid states. Supplies and operations are planned annually and updated throughout the year to incorporate generation forecasts, local climate conditions, seasonal climate projections, and physical or infrastructure disruptions. We work with a range of stakeholders to develop innovative partnerships and agreements to increase resiliency. In the Upper Midwest, where ample annual water supplies usually provide a buffer against severe drought, we take a strategic approach to water use by monitoring weather patterns and meteorological forecasting models to prepare for an adequate water supply during any dry conditions. During drought years, we evaluate the use of alternative cooling options for each facility and implement prudent temporary measures to provide supplemental thermal cooling. In time of emergencies, our permits allow some plant operating flexibility, along with additional environmental monitoring requirements. Across the company we have improved water use efficiency by approximately 20% since 2005 while increasing electric production. In arid climates, we use drought-adapted closed-loop water cooling devices, recycled municipal effluent, and will decrease long-term water demand through the retirement of coal plants. The company paid approximately \$16.2 million in direct costs to supply water to its facilities in arid regions in 2018.

Cost of management

16200000

Comment

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Type of financial impact

Returns on investment in low-emission technology

Company-specific description

Xcel Energy's "Steel for Fuel" business strategy is driving our financial opportunities for the clean energy transition. Under the effort, we are adding renewable resources — the steel — at a net savings because the capital costs of the projects are more than offset by future avoided fuel costs. Several years ago, we announced the addition of 12 new wind farms across seven states, totalling 3,680 megawatts of new wind capacity, enough clean wind capacity to power about 1.7 million homes annually. All the projects have now moved from the approval to execution phase. When complete, we will own about 70% of the new capacity, more than quadrupling our company-owned wind portfolio. Our Rush Creek wind project was the first to be completed in fall 2018, and we are now building three wind farms to be completed in 2019: Hale in Texas, Foxtail in North Dakota and Blazing Star I in Minnesota. Nearly all 12 projects will be online by year-end 2020 to take advantage of the full production tax credit. Only the Dakota Range wind project will be complete in 2021 and is still low cost despite qualifying for a partial tax credit. Under the Colorado Energy Plan approved by regulators in 2018, we will add 1,100 megawatts of wind energy from three new wind farms and the repowering of a fourth, existing wind farm. The projects include the 500-megawatt Cheyenne Ridge wind farm that we will construct and own. We will also add a 72-megawatt solar farm and three solar and battery storage projects, which combined incorporate 560 megawatts of large-scale solar and 275 megawatts of battery storage. The solar-battery projects are located in different parts of Colorado. The two projects in Pueblo County are the largest, with capacities of 100 to 125 megawatts and four hours of battery storage. They will help provide reliable generation capacity to replace coal power from nearby Comanche units 1 and 2, slated for retirement by 2026. In addition to providing affordable, carbon-free electricity for customers, renewable projects support economic development. Our 12 new wind projects are expected to create 2,700 construction jobs, 150 full-time jobs and generate \$800 million in landowner lease and property tax payments over the lives of the projects. The Colorado Energy Plan is anticipated to inject \$2.5 billion into the state's economy, including \$1 billion from Xcel Energy.

Time horizon

Current

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

1100000000

Potential financial impact figure – maximum (currency)

1650000000

Explanation of financial impact figure

This value represents our potential earnings at a 10.00% ROE at a 55% equity ratio and for capital investments of \$20 to \$30 billion. This is an overall value reflective of the total capital investment made over a long time horizon and is not representative of one year financial impact.

Strategy to realize opportunity

Xcel Energy operates in some of the country's best regions for producing wind and solar power, and we are putting these resources to work for customers. As wind and solar technologies continue to improve, prices decline, making it possible to operate a reliable, affordable power grid with significant levels of renewable generation. Since 2005, we have been a national leader in wind energy, and according to AWEA, are ranked the No. 2 utility wind provider with nearly 8% of the country's wind capacity on our system. Our new, 600-megawatt Rush Creek wind project was completed and is estimated to produce enough electricity to power approximately 325,000 homes annually. It is the largest project we have built and is among the largest in Colorado, with 300 Vestas wind turbines manufactured in the state. The project injected \$1 billion into Colorado's economy and is projected to help avoid 1 million tons of carbon per year. At year-end, we had 762 megawatts of large-scale, universal solar capacity and 7,288 megawatts of wind capacity — enough to power approximately 3.8 million homes. This includes 1,440 megawatts at wind farms we own. We expect to continue building on our "steel for fuel" strategy that has allowed us to reach the levels of renewable energy we are at

today. \$20 to \$30 billion in incremental investment in wind, solar, storage, natural gas, and other new energy technologies is needed to successfully transition our fleet and meet our carbon reduction goals.

Cost to realize opportunity

30000000000

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Type of financial impact

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

Company-specific description

The future of transportation is dramatically changing, and as more electric vehicle options become available, a growing number of customers want to reduce their carbon footprint through the cars they drive. We are uniquely positioned to support our customers and communities and to work with EV stakeholders to make this change and ensure it truly benefits customers, the environment and the power grid we all rely upon. At the end of 2018 there were over 25,000 electric vehicles on the road in Xcel Energy's service territory, and we expect as many as 2 million EVs in our service territory by 2035. For public charging, our fast-charging-corridor pilot will seek to leverage public and private funds to increase the availability of fast-charging stations on highways and other major corridors. We are also working with the cities of Saint Paul and Minneapolis on a pilot to support a charging network for everyone, including those who may not own vehicles. Through a partnership with HOURCAR, a local, independent, non-profit car-sharing service, Xcel Energy will support a new, all-electric, one-way car-sharing service and other innovative mobility services in the Twin Cities. This project is intended to increase access to the benefits of electric transportation, including those in low-income, under-served communities. We also plan to make it easier and more affordable for large fleet operators like Metro Transit, the Minnesota Department of Administration and the City of Minneapolis to integrate electric vehicles into their fleets. We will provide the electrical infrastructure needed to charge the first eight of Metro Transit's electric buses and are looking to provide charging infrastructure for the State of Minnesota and the City of Minneapolis EV fleets and other customers over time.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

165000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

This value represents our potential earnings at a 10% ROE and at a 55% equity ratio and for capital investments of \$3 billion. This is an overall value reflective of the total capital investment made over a long time horizon and is not representative of one year financial impact.

Strategy to realize opportunity

While EVs create a significant opportunity for drivers and fleet operators to save on fuel and other costs, barriers exist to wider-scale adoption, such as customer awareness, high up-front costs and the availability of charging infrastructure. We can help overcome these barriers by developing new services, piloting them and then rolling out our most successful ideas to customers on a

broader scale. We developed a portfolio of innovative pilots in Minnesota that will benefit drivers, customers and the environment focused on three main areas: home charging, public charging and fleet operations. We expect to expand our EV efforts to other states and we are focused on these objectives: - Empower customers with information, tools and options - Increase access to electricity as a transportation fuel in an equitable manner - Encourage efficient use of the power grid and integrate renewable energy - Improve air quality and decrease carbon emissions - Ensure reliability, interoperability and safety of equipment - Leverage public and private funding opportunities - Provide benefits to all customers, both EV drivers and non-EV drivers - Ensure transparency and measure results In order to serve the projected 2 million EVs in Xcel Energy's service territory by 2035, we expect to invest approximately \$1 billion in distribution system "make ready" work to accommodate increased EV charging equipment as well as \$2 billion in charging stations.

Cost to realize opportunity

3000000000

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

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

Type of financial impact

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

Company-specific description

Through our Advanced Grid Intelligence and Security (Advanced Grid) strategic initiative, we plan to transform the grid into an intelligent, integrated network that securely, efficiently, reliably and safely integrates distributed energy resources. We have started building Advanced Grid technology infrastructure in Colorado where regulators have approved the initiative. This includes: - Upgrading to advanced meters for 1.5 million Colorado electric customers from 2019 to 2024. - Installing Integrated Volt-VAR Optimization technology (IVVO) from 2017 to 2022 allows customers' appliances to run more efficiently, and in turn, use less energy and potentially reduce monthly bills. - Implementing the Field Area Network (FAN), a new communications network that provides the infrastructure necessary to enable two-way communications between intelligent devices on the grid — such as advanced meters — and the control center. These communications include automatically notifying us when customers lose or regain power, improving our ability to identify outages and more efficiently deploying repair crews. The FAN continues to be installed in the Denver metro area and the entire network will be complete by 2023.

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)

71500000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

This value represents our potential earnings at a 10% ROE and a 55% equity ratio and for capital investments of \$1.3 billion. This is an overall value reflective of the total capital investment made over a long time horizon and is not representative of one year financial impact.

Strategy to realize opportunity

We began deploying Field Area Network (FAN) advanced field devices in 2018 and implemented a secure, two-way private network that will function as the foundation for the technology in Colorado, as well as Minnesota, where we have regulatory approval for a time-of-use pilot that will launch in 2020. The network enables the secure flow of information between control centers, new advanced devices in the field and our customers. The FAN infrastructure is critical for when we begin deploying advanced meters to Colorado and Minnesota customers in 2019. We plan to begin rolling out advanced meters to 13,000 Denver metro area customers in late 2019. Through the pilot in Minnesota, 17,500 meters will be deployed giving 10,000 customers from the Hiawatha West and Midtown area of Minneapolis and customers in the Westgate area of Eden Prairie the opportunity to save money by using electricity when it is less expensive to generate and deliver. The total anticipated cost of our Advance Grid Intelligence and Security program across all four Xcel Energy operating companies is \$1.3 billion in capital investment between 2019 and 2023.

Cost to realize opportunity

1300000000

Comment

C2.5

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

	Impact	Description
Products and services	Impacted	Just as customers want more control over their energy use, they also want more choice in how they engage with energy options. Our goal is to offer innovative solutions that enable our customers to meet their priorities around clean energy and the environment, while balancing these choices with the cost that all customers pay to support them. We were an early adopter of voluntary green power back in 1998 with the introduction of our flagship program, Windsource. Since then, our program offerings have expanded to include options for community solar gardens, on-site solar and Renewable*Connect — our newest offering. Through Renewable*Connect, customers can choose to make their energy up to 100% renewable through different contract options, such as month-to-month, five-year and 10-year terms. There is no equipment to install and customers can remain on the program if they move to a different home or business location within our service area. Renewable*Connect exemplifies innovation. We have combined our regulatory experience and customer input to design the program so customers retain the renewable energy credits and rights to renewable energy claims. Renewable*Connect also keeps bills low for participating customers, while not increasing costs for nonparticipants. It is self-supporting through subscription fees, so nonparticipants don't pay more.
Supply chain and/or value chain	Impacted	In addition to the wind farms Xcel Energy owns and operates, the company has long-term agreements with suppliers to purchase wind and solar power as part of the energy it delivers to customers. We had 5,836 megawatts of wind and 762 megawatts of solar power under contract in 2018 through 189 commercial purchased power agreements or 78.33% of our purchased power suppliers, representing approximately 35% of our purchased power spending. As a regulated utility that provides electricity to large service territories, we serve multiple states that have enacted renewable energy standards. Xcel Energy was an early adopter of these standards, and through long-term wind and solar purchases, we were able to meet state standards far in advance of compliance deadlines and support development of the wind and solar industries. We are currently on pace to surpass established renewable energy requirements in the states we serve through at least 2030. As our older purchased power agreements expire, we are working with suppliers interested in repowering their facilities and transferring ownership to Xcel Energy. For example, we purchased wind energy from the Lake Benton wind project for approximately 20 years and have now arranged to repower and purchase the repowered 100-megawatt wind farm from the supplier. Xcel Energy's long-term wind and solar purchases have helped to enable the company's clean energy transition and renewable energy leadership. In 2018, renewable energy was 25% of the energy we provided to customers, and long-term purchases comprised 86% of the wind and solar energy on our system. Carbon-free renewable energy is a significant contributor to our current 38% reduction in carbon emissions, from 2005 levels, and is essential to achieving our goal to reduce carbon emissions 80% by 2030 and aspiration to provide 100% carbon-free electricity to customers in 2050.
Adaptation and mitigation activities	Impacted	Maintaining reliable and resilient operations across generation, transmission and distribution means we constantly prepare for the unexpected. We use a suite of techniques to maintain a resilient system from water management to emergency preparedness. For example, our Monitoring and Diagnostics Center watches the operation of major generating units in real time, monitoring potential issues before they occur. We also have predictive analytics and software tools that help avoid plant failures and can even address issues that may result in higher emissions or compromise reliability. Further, we have specific procedures in place to deal with extreme weather, flooding, drought or other conditions that may impact the operability of our plants. To better understand and address climate-related vulnerabilities on our system, we joined the Department of Energy's Partnership for Energy Sector Climate Resilience to work with others in the industry.

	Impact	Description
Investment in R&D	Impacted	New cost-effective technologies have enabled our company's as well as the industry's progress in transitioning the nation's generating fleet and reducing carbon emissions. For at least the next decade, existing wind, solar, battery and natural gas technologies will continue to serve a growing portion of our energy needs while reducing carbon emissions and saving our customers money. However, renewable generation and storage alone face significant technical and economic challenges if relied on exclusively to achieve carbon-free electricity. For example, the relatively short-duration energy storage available today and anticipated in the future does not address seasonal challenges that arise when a system dependent on renewable resources experiences several days or weeks with low wind or solar generation. Even with continually declining prices, variable wind and solar resources are expected to provide diminishing value at high saturation. Fully relying on renewable sources could result in a costly overbuilding of the system where each incremental megawatt provides less capacity value, renewable curtailments reach high levels and massive investments in transmission and storage are required. We need a suite of new, carbon-free resources that can be dispatched to complement our continued adoption of renewable energy, energy efficiency and demand response. Our research shows that these new resources will be the key to achieving a carbon-free generation fleet without a costly overbuilding of the energy grid. These technologies may include carbon capture and storage, power to gas, seasonal energy storage, advanced nuclear or small modular reactors, deep rock geothermal and others not yet imagined. Each of these options holds promise, but they will require considerable investment and further research and demonstration to become viable solutions at the cost and scale at which the electric sector will need them. Federal and state policies must support this development. We can also send clear signals to the market around price, capabilities and timing for when these technologies will be needed. In this way, utility resource plans provide the market signal — the “technology pull” — from which the private sector and national laboratories and federal agencies can align their investments, research and assets.
Operations	Impacted	The significant wind and solar resources on our systems have fundamentally changed the way we operate. With each increase in renewable capacity, we have improved system operations, enabling our ability to incrementally grow the use of wind and solar power. Some of our operational improvements for accommodating more wind and solar energy include: - Adding more flexible backup generation. As we retire aging coal plants, we are replacing some of the energy with lower-emitting natural gas generation, which can more efficiently and cost-effectively ramp up or down to accommodate variable, renewable generation. - Cycling coal offline and reducing minimum generation levels. Once considered infeasible, we are turning off coal units to accommodate more wind generation and are reducing the time that units need to be offline before they can be restarted. Cycling off coal units and then turning them back on is much more challenging than with a natural gas unit because of all the systems involved, but our Operations team has studied the issues and is working to cycle coal units more efficiently and cost effectively, helping to reduce fuel use and emissions. - Negotiating greater flexibility from our natural gas suppliers. These agreements allow us to efficiently use our gas generation resources to balance variable renewable generation, helping to increase system reliability and lowering customer costs. - Investing in transmission. We are improving and building new transmission facilities that can deliver more wind and solar energy to customers. - Using control equipment. We use set-point controls for wind farms in combination with automatic generation control of thermal units that lets wind farms operate at peak levels while fossil-fuel production is reduced. - Establishing a 30-minute flexibility reserve. We previously carried one megawatt of reserve capacity for every megawatt of wind generation as backup in case winds suddenly dropped off. As our wind portfolio grew, we studied the maximum amount of wind energy typically lost within 30 minutes and were able to reduce this reserve, dramatically decreasing costs associated with carrying large wind reserves while maintaining system reliability. - Adjusting planned maintenance. We now plan transmission and plant maintenance outages around times of the year when wind and solar production is lowest.
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	Demand for electric power and natural gas is affected by seasonal differences in the weather. In general, peak sales of electricity occur in the summer months and peak sales of natural gas occur in the winter months. As a result, the overall operating results may fluctuate substantially on a seasonal basis. Additionally, Xcel Energy's operations have historically generated less revenues and income when weather conditions are milder in the winter and cooler in the summer. Our EV strategy, in which electricity replaces gasoline as a transportation fuel, is expected to lead to approximately a CAGR of 0.4% for our electricity sales between 2018 and 2035.
Operating costs	Impacted	Our Steel for Fuel initiative allows us to reduce our operating costs by substituting resources with high O&M cost for those with lower fuel and capacity costs, lower O&M, lower environmental compliance costs, and production tax credits. Xcel Energy's Steel for Fuel strategy resonates with all types of stakeholders because it expands the company's renewable portfolio and delivers carbon-free energy without raising customer bills. Under the effort, we are adding renewable resources — the steel — at a net savings because the capital costs of the projects are more than offset by future avoided fuel costs.
Capital expenditures / capital allocation	Impacted	For more than a decade, we have managed the risk of climate change and increasing customer demand for renewable energy through a clean energy strategy that consistently reduces carbon emissions and transitions our operations for the future. Our capital investment profile from 2019 through 2023 includes substantial investment in renewable energy, alternative energy sources, and the transmission and distribution systems needed to deliver that clean energy to our customers.
Acquisitions and divestments	Not impacted	Xcel Energy has no current plans for acquisitions or divestitures of businesses. Our carbon strategy does not include plans to reduce emissions by divesting emitting resources, but rather by retiring them and replacing their output with clean energy resources.
Access to capital	Not yet impacted	Utility operations require significant capital investment. As a result, we frequently need to access capital markets. Any disruption in capital markets could have a material impact on our ability to fund our operations. Capital markets are global and impacted by issues and events throughout the world. Capital market disruption events and financial market distress could prevent us from issuing short-term commercial paper, issuing new securities or cause us to issue securities with unfavorable terms and conditions, such as higher interest rates. To the extent that climate change may cause events or conditions that reduce the liquidity of capital markets and decrease available capital, we are subject to these risks. It is currently unclear in what time frame such a substantial disruption could occur.
Assets	Impacted	Xcel Energy operates in some of the country's best regions for producing wind and solar power, and we are putting these resources to work for customers. Increasingly, the customers and communities we serve want their energy from clean, renewable sources, and we are delivering. Renewable energy plays a vital and growing role in our energy supply and future plans for meeting customer needs. As wind and solar technologies continue to improve, prices decline, making it possible to operate a reliable, affordable power grid with significant levels of renewable generation. When it comes to managing cost and reliability, scale matters. We are focused on increasing the use of large-scale, universal wind and solar energy because these resources are significantly more economical and can provide energy for all customers at half the cost compared to smaller, distributed resources.
Liabilities	Not yet impacted	Xcel Energy is subject to interest rate risk. Xcel Energy's risk management policy allows interest rate risk to be managed through the use of fixed rate debt, floating rate debt and interest rate derivatives such as swaps, caps, collars and put or call options. To the extent that physical and transitional risks and opportunities affect the cost of acquiring debt, both for Xcel Energy specifically and holders of liabilities in general, our climate risks and opportunities could potentially affect our cost of debt at an unknown time in the future.
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.

Xcel Energy has identified three strategic priorities that guide our business decisions: Leading the Clean Energy Transition, Enhancing the Customer Experience, and Keeping Bills Low. Our strategic priority to Lead the Clean Energy Transition, which led us to adopt our industry-leading goals to reduce carbon dioxide emissions 80% below 2005 levels by 2030 and deliver 100% zero-carbon electricity to our customers by 2050, is directly aligned with addressing climate change issues.

We know that climate change is an urgent issue for many of our policy makers and investors and is a growing concern of our customers who want to help make a difference. It is a priority for us as well, and is the reason we were the first major energy company in the nation to announce a vision to serve customers with 100% carbon-free electricity. Planning for this transition to a clean energy future today will allow us to deliver the products our customers want and achieve reductions that our policy makers and investors are increasingly demanding. By acting now, we increase our ability to achieve our goals while assuring that our system remains reliable and our energy service affordable.

As we produce energy to serve our customers, we emit greenhouse gases. Our primary source of these emissions is from the combustion of fossil fuels to generate electricity, which makes up 99% of our total greenhouse gas emissions. Nearly all of our generation-related emissions are carbon dioxide. Because of this, it makes sense that our clean energy strategy focuses primarily on reducing carbon emissions from electricity generation.

Currently, we are implementing approved plans to achieve our previous goal to reduce carbon emissions 60% by 2030, from 2005 levels. Our state regulatory commissions have already approved the following efforts underway:

- The Colorado Energy Plan, which calls for the early retirement of 660 megawatts of coal-fired generation by 2026 and the addition of 1,100 megawatts wind, 700 megawatts solar, 380 megawatts existing natural gas and 275 megawatts large-scale battery storage.
- Our current 2016 to 2030 Minnesota Resource Plan, which increases renewables in the Upper Midwest and retires nearly 1,400 megawatts of coal-fired generation by 2026. A new resource plan for the region was proposed in summer of 2019 that includes an extension of the life of one of our nuclear units, the addition of substantial amounts of solar energy, and industry-leading energy efficiency plans.
- Our multi-state wind expansion announced in 2017 that will add nearly 3,700 megawatts of wind energy from 12 new projects across seven states.

We also are working on plans that will reduce carbon emissions by 80% by 2030. This is not a single plan, and will happen through a series of resource plans to be approved through our state regulatory processes.

In July 2019, Xcel Energy filed its Minnesota resource plan, which runs through 2034. The preferred plan would result in an 80% carbon reduction by 2030 and puts NSP on a path to achieving its vision of being 100% carbon-free by 2050. The preferred plan includes the following:

- Extends the life of the Monticello nuclear plant from 2030 to 2040;
- Continues to run the Prairie Island nuclear plant through current end of life (2033 and 2034);
- Includes the MEC acquisition and construction of the Sherco CC natural gas plant;
- Includes the early retirement of the King coal plant (511 MW) in 2028 and the Sherco 3 coal plant (517 MW) in 2030;
- Adds approximately 1,700 MW of firm peaking (combustion turbine, pumped hydro, battery storage, demand response, etc.);

- Adds approximately 1,200 MW of wind replacement; and
- Adds approximately 4,000 MW of solar.

Intervening parties will provide recommendations and comments on the resource plan. The Minnesota Commission is anticipated to make a final decision on the resource plan in late 2020 or the first half of 2021.

In setting our goals, we did sensitivity analysis to identify key elements and variables that could affect our plans for reaching the interim goal. There are a variety of cost-effective pathways to reduce carbon emissions 80% by 2030, and we know the following common elements will be part of the plans:

- Adding thousands of megawatts of wind and solar power to our system
- Incorporating both natural gas and storage resources to help balance high levels of renewable energy
- Deploying strategic electrification of certain end uses to help create flexible demand
- Continuing to implement industry-leading energy efficiency programs
- Seeking to operate our nuclear plants through at least the remainder of their licenses
- Retiring additional coal units or changing their operations to minimize emissions affordably and reliably
- Investing in supportive infrastructure to modernize the power grid

One of our most substantial decisions in 2018 that was guided in part by our integration of climate change issues into our business strategy was the proposal of the Colorado Energy Plan (CEP). In June of 2018 we filed the plan with our Colorado regulators and received approval from the in August 2018. Xcel Energy has since begun acquiring the resources identified in the plan. As detailed above, the CEP greatly expands renewable energy, adds industry-leading amounts of large-scale battery storage, slashes carbon emissions and keeps bills low for customers. The plan will retire one-third of Xcel Energy’s remaining Colorado coal generation and achieve nearly a 60 percent reduction in carbon emissions by 2026, saving customers money compared to continuing to operate the coal units.

C3.1d

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

Climate-related scenarios	Details
Other, please specify (IPCC, 2018: Global warming of 1.5°C)	<p>We conducted scenario analysis working with a climate modeler and IPCC lead author, Dr. Brian O’Neill, at the University of Denver. While informed by existing scenarios, in particular those of the IEA and the DDPP, we chose not to apply a pre-existing scenario. Having learned from an Electric Power Research Institute project on climate scenario analysis the pitfalls of applying any uniform scenario across countries or sectors, we decided to develop a company-specific approach. This is summarized in our Building a Carbon-free Future report. Goal: compare company carbon trajectory to OECD electric sector emissions consistent with a high probability of limiting warming to 2C and 1.5C. Boundary: Xcel Energy’s eight-state electricity operations, representing 99% of company-wide GHG emissions. Time horizon: to 2050, with emphasis on 2030 (80% below 2005) and 2050 (100% carbon-free) goals. This aligns with the long timeframes for electric resource planning and capital investments, and with IPCC mid-century scenarios. Methods: analysis was based on emission scenarios database published with IPCC Special Report on Global Warming of 1.5C. Dr. O’Neill selected from the 416 scenarios only those “likely” (>66%) to stay below 2C and “more likely than not” (>50%) to stay below 1.5C. He then extracted CO2 emissions from the electric sector in industrialized countries. He excluded any scenario with net negative CO2 emissions in the electric sector through 2100; holding Xcel Energy to a more stringent standard because we do not compare ourselves to any scenario that allows greater near-term emissions offset by negative emissions after 2050. These constraints left 17 scenarios consistent with 2C and 5 consistent with 1.5C. We then overlaid Xcel Energy CO2 reductions since 2005, forecast to 2030 and extrapolation to 2050. Results: Xcel Energy’s 2030 and 2050 goals represent reductions larger than the electric sector reductions in scenarios likely to limit warming to 2C, and within the range of reductions in scenarios more likely than not to limit warming to 1.5C. Reporting: Our analysis was distributed broadly within the company and publicly in reports as well as presentations at public conferences and workshops. Case study: the analysis has been used in resource plans laying out the portfolio of resources needed to meet expected energy demand over the medium to long term. In July 2019 we filed an Upper Midwest Energy Plan that proposes 84% carbon reduction by 2030 by retiring all remaining coal units, adding 4,000 MW of renewable generation on top of 1,850 MW of wind already approved (renewables more than 50% of energy by 2030), extending the license of one nuclear unit, natural gas generation where needed to enable coal retirement and integrate renewables, and expanding energy efficiency and demand response. Since achieving the Paris targets depends on economy-wide reductions, our plan enables electrification of transportation and other end uses to reduce their emissions. Our capital plan reflects significant investments for clean energy. Our plans propose orderly retirement of coal units and no new investment in coal generation; combined with accelerated depreciation, this minimizes risk of stranded assets. We are investing in wind and solar, transmission to connect them, and enabling a more resilient grid with more distributed resources and flexible demand. We are evaluating new technologies for energy storage and carbon-free dispatchable generation. Electrification of transportation and buildings may also increase electricity demand. We are planning for this by imposing minimum requirements for firm generation to meet increased demand reliably and affordably. Our approach builds in flexibility, updating our resource plans every 2-3 years to adapt to a changing outlook for energy demand, technology options and costs.</p>

(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.

While we move through this transition, we need to ensure that power will be there when our customers need it and that the prices we charge are affordable to all customers, both residential and commercial. To accomplish this, we will build upon four focus areas that are transforming our system and delivering clean, reliable, low-cost power to customers today. These focus areas include:

- Investing in wind and solar under our Steel for Fuel strategy and offering customers more renewable energy options
- Helping customers manage their energy usage and bills through efficiency and rebate programs and encouraging strategic electrification of other sectors, such as transportation
- Maintaining our carbon-free nuclear plants in the Upper Midwest
- Transforming the energy grid by retiring or reducing the operation of aging coal plants and replacing their energy with low-carbon natural gas, renewables and advanced technologies

Our goal of 80% reduction below 2005 levels by 2030 and our ambition to serve our customers with 100% zero-carbon electricity are not a single plan or initiative. Instead, it will guide the policies that we support and the resource plans that we expect to file in our states over the coming decades. As we advance these efforts, stakeholders are essential and will help to influence the outcomes. Because of this, we plan to continue working collaboratively with customers, nongovernmental organizations, policy makers and others to identify and implement pragmatic solutions to make our goals possible.

In setting our 2030 goal of reducing carbon emissions 80% below 2005 levels, we conducted sensitivity analysis to identify key elements and variables that could affect our plans. There are a variety of cost-effective pathways to an 80 percent carbon reduction by 2030, and resource plans in our jurisdictions will determine the exact resource mix. Through the pathways we explored, we have identified the following common elements that we know will be part of the plans:

- We anticipate adding thousands of megawatts of wind and solar power to our system and incorporating both natural gas and storage resources to help balance high levels of renewables.
- Strategic or beneficial electrification of certain end uses will help create flexible demand
- We will seek to operate our nuclear plants through at least the remainder of their licenses, and we will need to retire additional coal units or change their operations to minimize emissions affordably and reliably
- In addition, we will need to make critical investments in supportive infrastructure, such as transmission

As we transition our system and retire plants, we will need to assure that we do so in a way that our company remains financially healthy and that acknowledges the financial impacts of plant retirements and the replacement investment on our investors. Just as we serve other stakeholders, we must provide our investors with value to encourage them to provide the capital necessary to support these plans. There are many ways to accomplish our carbon vision, but the ability to own these replacement resources is clearly an important consideration, as investors support companies that grow their earnings power. This ownership also helps to reduce risk to customers and is fundamental to ensuring our financial viability and on-going ability to efficiently invest in day-to-day infrastructure needs as well as clean energy.

To reach our 2050 aspiration, there must be more action around the research, innovation and demonstration of advanced technologies. We need, clean technologies that can be dispatched to balance the peaks when customer use exceeds renewable generation and valleys when renewable generation exceeds customer use. Cost-effective, carbon-free dispatchable resources will be required to remove the remaining carbon from the system to serve customers with carbon-free electricity. Technology advancement is key to the long-term success of our strategy.

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

Other, please specify (Emissions from all electrical energy delivered to our customers)

% emissions in Scope

96

Targeted % reduction from base year

80

Base year

2005

Start year

2018

Base year emissions covered by target (metric tons CO₂e)

80677061

Target year

2030

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

38

Target status

New

Please explain

Working with experienced climate modelers and an IPCC lead author at the University of Denver, we confirmed that Xcel Energy's goals are in line with the Paris climate agreement targets. We compared our goals to electric power sector emissions in industrialized countries, in IPCC scenarios consistent with a high probability of achieving the 2 C and 1.5 C temperature goals in the Paris climate agreement. The analysis found that Xcel Energy's 2030 and 2050 goals represent emissions reductions that are larger than those that occur in the electric sector of industrialized countries in most of the global emissions scenarios likely to limit warming to below 2 C. Xcel Energy's goals are also within the range of reductions that occur in the limited number of scenarios achieving the 1.5 C target. Please see our report for more details:

<https://www.xcelenergy.com/staticfiles/xcel/PDF/Xcel%20Energy%20Carbon%20Report%20-%20Feb%202019.pdf>

Target reference number

Abs 2

Scope

Other, please specify (Emissions from all electrical energy delivered to our customers)

% emissions in Scope

96

Targeted % reduction from base year

100

Base year

2005

Start year

2018

Base year emissions covered by target (metric tons CO2e)

80677061

Target year

2050

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

38

Target status

New

Please explain

Please see response above. Our aspiration is 100% carbon free electricity by 2050, clearly in-line with the climate science.

C4.2

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

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	
To be implemented*	5	44200000
Implementation commenced*		
Implemented*	6	13500000
Not to be implemented	0	

C4.3b

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

Initiative type

Low-carbon energy purchase

Description of initiative

Other, please specify (Wind and Solar portfolio. Our wind and solar portfolio comprises the owned and contracted or purchased renewable energy resources that we deliver to our customers. In 2018, wind and solar energy provided 21% of our generation.)

Estimated annual CO2e savings (metric tonnes CO2e)

10840000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

471000000

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

1100000000

Payback period

21-25 years

Estimated lifetime of the initiative

Ongoing

Comment

The monetary savings estimates the annual fuel savings, which would be passed along to our customers. The investment required represents an estimate based on the average levelized cost of wind and solar energy.

Initiative type

Low-carbon energy installation

Description of initiative

Wind

Estimated annual CO2e savings (metric tonnes CO2e)

201000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

7637000

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

1000000000

Payback period

21-25 years

Estimated lifetime of the initiative

Ongoing

Comment

Rush Creek: Our new, 600-megawatt Rush Creek wind project was completed in 2018 and is estimated to produce enough electricity to power approximately 325,000 homes annually. It is the largest project we have built and is among the largest in Colorado, comprised of 300 Vestas wind turbines manufactured in the state. The project injected \$1 billion into Colorado's economy and is projected to help avoid 1 million tons of carbon per year. The emissions savings estimated here only represents the generation produced in 2018 after the unit came online. We anticipate the unit will avoid 1 million tons of carbon per year for the remaining life of the asset. The monetary savings estimates the annual fuel savings which would be passed along to our customers. The investment required is the total cost of the project incurred over several years.

Initiative type

Energy efficiency: Processes

Description of initiative

Other, please specify (Customer Energy Efficiency programs.)

Estimated annual CO2e savings (metric tonnes CO2e)

1497000

Scope

Scope 3

Voluntary/Mandatory

Mandatory

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

61516000

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

255930000

Payback period

4 - 10 years

Estimated lifetime of the initiative

Ongoing

Comment

The Energy Efficiency activity represents our efforts to partner with our 3.5 million customers in efficiency investments across our eight states through state-tailored efficiency implementation or "Demand Side Management" programs. The monetary savings estimates the annual fuel savings, which would be passed along to our customers. The investment required represents an estimate based on the average levelized cost of wind and solar energy.

Initiative type

Low-carbon energy installation

Description of initiative

Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

733000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

34421000

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

125500000

Payback period

16-20 years

Estimated lifetime of the initiative

Ongoing

Comment

Solar*Rewards® and Solar*Rewards Community®: Solar*Rewards is our rooftop PV program that offers customers in Colorado, Minnesota and New Mexico incentives to install solar panels on their homes and businesses. Solar*Rewards community is a solar shares program that gives customers in CO and MN an option to invest in solar without having panels on their own house. The monetary savings estimates the annual fuel savings, which would be passed along to our customers. The investment required represents an approximate cost of the solar energy purchased from customer-generators.

Initiative type

Low-carbon energy installation

Description of initiative

Wind

Estimated annual CO2e savings (metric tonnes CO2e)

194000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

8558000

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

16500000

Payback period

21-25 years

Estimated lifetime of the initiative

Ongoing

Comment

WindsorSource® . WindsorSource is a voluntary green energy purchasing program allowing customers to buy up to 100% wind energy in Minnesota, Wisconsin, Michigan, Colorado and New Mexico. The monetary savings estimates the annual fuel savings which would be passed along to our customers. The investment required represents an estimate based on the average levelized cost of wind energy.

Initiative type

Low-carbon energy installation

Description of initiative

Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

58000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

3073000

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

5500000

Payback period

16-20 years

Estimated lifetime of the initiative

Ongoing

Comment

Renewable*Connect®: Through Renewable*Connect, customers can choose to make their energy up to 100% renewable through different contract options, such as month-to-month, five-year and 10-year terms. There is no equipment to install and customers can remain on the program if they move to a different home or business location within our service area. In Colorado, the program's energy is delivered from the new 50-megawatt Titan Solar facility, near Deer Trail, Colorado. The energy sources for the Minnesota and Wisconsin programs include the Odell Wind Farm and North Star Solar. The monetary savings estimates the annual fuel savings, which would be passed along to our customers. The investment required represents the approximate cost of energy purchased to serve customers that participated in the program in 2018.

C4.3c

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

Method	Comment
Internal price on carbon	We utilize a price on carbon in our resource planning process to understand the impacts of our resource decisions.
Dedicated budget for energy efficiency	We have robust energy efficiency programs in all of our states for both gas and electricity. In 2018, our customers completed nearly 3.5 million electric and 1.4 million natural gas efficiency projects and received \$141 million in rebates through our conservation programs. Altogether, customers saved about 1,240 gigawatt hours of electricity for the year, equivalent to powering 160,000 average homes, and 1.6 million dekatherms of natural gas, enough to fuel 20,000 average homes.
Dedicated budget for other emissions reduction activities	The company has a dedicated budget for renewable energy, transmission, and all plant improvement projects that reduce emissions.
Partnering with governments on technology development	Xcel Energy has continued its partnership with the Global Weather Corp. (GWC), an affiliate company of the National Center for Atmospheric Research (NCAR) to develop a high-resolution, improved wind energy forecasting system that allows the company to manage wind intermittency in an improved way. Xcel Energy, NCAR and GWC are currently collaborating on a third phase of the project to further enhance the sophistication of the WindWX technology. We are seeking to improve short-term forecasting, focusing on ramping and extreme weather events, introducing probabilities into the forecasting process, as well as exploring solar forecasting behind the customer meter. Xcel Energy is also working with NREL to determine the level of PV adoption that typical distribution feeders can accommodate without experiencing voltage or other reliability issues.
Other (Renewable Energy acquisitions and expansion)	Cost-effective renewable acquisitions: The company leverages the favorable renewable energy resources in our regions to acquire renewables cost-effectively. The company does this by proactively proposing to our PUCs to add renewable energy capacity when costs are favorable, conducting competitive processes to acquire renewable energy, and by focusing on reducing the costs of integrating nation-leading levels of wind energy
Other (Advancing solar technology)	Xcel Energy is a founding member of the Solar Technology Acceleration Center, located in Colorado. It is the largest outdoor solar test facility in the United States. At the site the company partners with solar companies, other utilities, and government and non-government research institutes to advance the technology of solar energy.
Other (Colorado Innovative Clean Technology Program)	Xcel Energy established the Innovative Clean Technology (ICT) Program, an initiative to test promising new technology with the potential to lower greenhouse gas emissions and result in other environmental improvements. These programs contribute to gaining strategic advantage over our competitors by providing the opportunity to test these technologies and evaluate their cost, reliability and environmental performance at a demonstration scale before determining whether to deploy them more widely.
Other (Proactive Coal Retirements)	We have successfully worked with our regulators and legislative bodies to achieve our nationally-recognized coal retirement and replacement initiatives such as the Clean Air-Clean Jobs program in Colorado and the Metro Emissions Reduction Program in Minnesota. We also recently announced the Colorado Energy Plan, which proposes to retire 660MW of coal by 2026 in Colorado. We also have plans to retire over 2.3 GW of coal in Minnesota by 2030. These initiatives reduce our carbon emissions and can save customers money as we replace older coal with wind, solar and natural gas generation.

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

Group of products

Description of product/Group of products

Our primary product is electricity sold to customers. To the extent that we lower our total systems emissions and emissions rate, our customers also directly lower their total emissions. Further, we offer specific voluntary programs for customers that wish to go further, faster on renewable energy for their own electricity consumption, such as Windsource, Solar*Rewards, Solar*Rewards Community, and Renewable*Connect. These programs provide the opportunity to either directly subscribe to wind or solar energy or build on-site solar to reduce or eliminate emissions associated with electric usage. Participating customers can claim the Renewable Energy credits under Windsource and Renewable*Connect programs. We also offer a host of energy efficiency programs to help customers avoid emissions and energy consumption. For more information, see our CRR Renewable Energy Brief: https://www.xcelenergy.com/company/corporate_responsibility_report/library_of_report_briefs/renewable_energy and a summary of our rebate programs: <https://www.xcelenergy.com/programs%20and%20rebates>

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

Low-carbon product and avoided emissions

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

Other, please specify (The products are inherently low-carbon as they deliver additional wind and solar electricity to customers and avoid energy consumption. Programs are approved through our Commissions or regulating entities. We believe they fit the taxonomies listed.)

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

1

Comment

Our renewable energy products are specifically designed to meet the demand for customer choice that we see across our service territory. They allow customers to be served with additional wind and solar energy without impacting non-participating customers. They were not intended as a significant revenue stream.

C-EU4.6

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

Our efforts to reduce greenhouse gas emissions also include methane emissions — a primary concern for the natural gas value chain. We are actively involved in programs that work to address the supply, midstream, distribution and consumer use of natural gas that are important to maintaining the industry's ability to operate. Xcel Energy serves about 2 million customers with natural gas for heating and other energy uses critical to the colder parts of our territory, Colorado and Minnesota, and does so with minimal methane emissions. Methane emissions made up less than 1% of our total greenhouse gas emissions (190,249 metric tons CO₂e) in 2018. Nevertheless, we strive to operate the cleanest distribution system possible and minimize our methane emissions through cost-effective improvements to our natural gas system. We have achieved these reductions through voluntary efforts. Since 2008, we have participated in EPA's Natural Gas STAR program. We are a founding member of the program's Methane Challenge launched in 2016. Through the Methane Challenge, we plan to reduce methane releases more than 50% from the venting of pipelines during scheduled construction. We are also investing in operational improvements that not only reduce methane emissions, but also improve the overall safety and efficiency of the natural gas system for customers. These improvements include:

- Replacing the cast iron pipe and unprotected steel pipe on our system, originally installed 50 to 100 years ago. We replaced all 880 miles of cast iron pipe and have regulatory approval to continue removing bare-steel pipe from our system over the next five years.
- Using pressure reductions and other methods to reduce methane emissions during pipeline maintenance and repairs. We reduced our emissions from blowdowns on systems operating at excess of 60 psig by 89%, thereby, avoiding the release of 24 million cubic feet of gas into the atmosphere.
- Replacing high-bleed controllers on our distribution and high-pressure pipelines. We are currently working to replace the high-bleed controllers in our processing plants and are considering new programs to modernize the high-bleed controllers at our storage fields and compressor stations to reduce emissions at these facilities.

In addition to these programs, we are collaborating within the natural gas industry on initiatives that support our own proactive approach to operating and maintaining a natural gas system. For example, we are members of the Natural Gas Downstream Initiative, a collaborative effort with other major gas utilities, facilitated by MJ Bradley & Associates, focused on addressing the regulatory and technical issues related to the role of natural gas in a low-carbon future. Beyond our direct distribution operations, we also recognize that most greenhouse gas emissions associated with natural gas are in other parts of the value chain. This includes methane emissions from upstream sources through the production, compression and long-distance transmission of natural gas and carbon emissions from downstream, end-use consumers. We participate in the Natural Gas Supply Collaborative, a group of natural gas producers calling for transparency and sustainability from upstream suppliers. Our industry associations, the American Gas Association and the Edison Electric Institute, are also partnering to understand methane emissions and enhance disclosures across the value chain. For our customers who use natural gas, we are exploring opportunities to offer low-carbon solutions. We already provide a comprehensive portfolio of natural gas efficiency programs, but are exploring new technologies and methods to help our customers further reduce their carbon footprints. We see great potential for renewable natural gas to provide a lower carbon alternative and the potential for targeted, strategic electrification, such as water heaters, that could be powered with clean, renewable energy. As always, we are monitoring long-term technologies, such as hydrogen or power-to-gas, which could fundamentally shift natural gas supply and related carbon emissions.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1 2005

Base year end

December 31 2005

Base year emissions (metric tons CO2e)

64392484.3

Comment

Scope 2 (location-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 2 (market-based)

Base year start

January 1 2005

Base year end

December 31 2005

Base year emissions (metric tons CO2e)

1025048.5

Comment

C5.2

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

The Climate Registry: Electric Power Sector (EPS) Protocol

The Climate Registry: General Reporting Protocol

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)

47234704

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 are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based

711302

Scope 2, market-based (if applicable)

214399

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

Per TCR GRP and EPS Protocols the following sources are de-minimis for all reporters or our particular industry: • Handheld fire extinguishers • Refrigerant in office water coolers • Calibration gases • CO2 from soda fountains & soda dispensers • Gas or charcoal BBQ grills for recreational use • Refrigerant leaks from vehicle air conditioning systems • Refrigerant leaks from domestic refrigerators, ice machines, mini-fridges • Grounds keeping equipment (lawn mowers, leaf blowers, weed wackers) • Welding gases (e.g. argon/CO2 mix, MAPP gas, propane, propylene) • Propane-driven forklifts • CO2 fire-suppression systems • Refrigerant leaks from building air conditioning

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions excluded

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

No emissions excluded

Explain why this source is excluded

In order to simplify the reporting process, Members may opt to exclude miniscule sources from their inventory. The Climate Registry has determined that the miniscule sources listed are justified exclusions because of their insignificant impact on overall emissions and because of the excessive burden associated with compiling the associated site-specific data.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

We continue to evaluate options for collection of appropriate data and factors with a reasonable level of resources.

Capital goods

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

We continue to evaluate options for collection of appropriate data and factors with a reasonable level of resources.

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

8371974

Emissions calculation methodology

Emissions Calculation Methodology is The Climate Registries Electric Power Sector Protocol. Emissions in this category are 3rd Party Verified to a Reasonable Assurance Standard. 5.4% of this category utilizes the WRI Transportation Tool for Freight. This category includes 351,356 metric tonnes of biomass emissions for Purchased Power for Resale. It is not clear from the CDP guidance if this should be included or not.

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

100

Explanation

Emissions in this category are 3rd Party Verified to a Reasonable Assurance Standard.

Upstream 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

All significant emissions related to upstream transportation or distribution is reported in Category 3 of Scope 3.

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

At this time we continue to evaluate options for collection of appropriate data and factors.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

3878

Emissions calculation methodology

WRI Transportation Tool

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

100

Explanation

This value is calculated using employee travel from business records and WRI Transportation Emission Factors.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

6102

Emissions calculation methodology

WRI Transportation Tool

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

100

Explanation

This value is calculated using employee travel from business records and WRI Transportation Emission Factors.

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

Xcel Energy has no upstream leases

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

All emissions related to downstream transportation of electricity (line losses) or natural gas (fugitive and direct) is reported in either Scope 1 or 2 of our GHG Inventory.

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

Electricity and/or Natural Gas is a final product, and this Scope 3 category is not applicable.

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

Electricity and/or Natural Gas is a final product, and this Scope 3 category is not applicable.

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

There is no end of life emissions for our products.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Xcel Energy has limited downstream leased assets. These are treated as Capital leases.

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

Xcel Energy has no franchises

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Xcel Energy has no Investment business

Other (upstream)

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

Xcel Energy has no other Upstream Emissions

Other (downstream)

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

Xcel Energy has no other Downstream Emissions

C6.7

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

Yes

C6.7a

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

Row 1

Emissions from biologically sequestered carbon (metric tons CO2)

784082

Comment

In addition to the 784,082 metric tons of CO2 above we have 351,356 metric tons of biogenic CO2, which appears in the Scope 3 Category 3 from Purchased Power for Resale.

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

0.0042

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

47946006

Metric denominator

unit total revenue

Metric denominator: Unit total

11537000000

Scope 2 figure used

Location-based

% change from previous year

1.2

Direction of change

Decreased

Reason for change

Between 2017 and 2018, total operating revenues increased by \$133 million. Additionally, our emissions reductions activities such as renewable energy purchases led to a 3% decrease in emissions from 2017 to 2018.

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	46596797	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	344931	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	194527	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	98448	IPCC Fourth Assessment Report (AR4 - 50 year)

C-EU7.1b

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

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	2453.96	12837.3	4.32	421834	
Combustion (Electric utilities)	4643640	770.51	651.5	46557062	
Combustion (Gas utilities)	34357.1	185.21	0.06	39007	
Combustion (Other)	215485	4.25	1.17	215940	
Emissions not elsewhere classified	860.77	0	0	861	

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	47234704

C7.3

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

By business division

By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Upper Midwest	16562755
Colorado	18232964
Southwest	12438985

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Process - Scope 1	5848
Stationary Combustion - Scope 1	46732139
Fugitive - Scope 1	421460
Mobile Combustion - Scope 1	75256

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	46557062	<Not Applicable>	This value does not include the 783657 MT CO2 from Owned Biogenic Combustion for Electric Generation
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	711302	214399	1152467	711564

C7.6

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

- By business division
- By activity

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Upper Midwest	222874.5	84436.8
Colorado	343974.2	75275.8
Southwestern	144453	54686

C7.6c

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

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Line Losses From Transmission & Distribution	691057	208042.2
Use of Purchased Electricity	20245.2	6356.4

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	459436	Decreased	0.96	Additional renewable energy resulted in reductions to our overall Scope 1 GHG emissions.
Other emissions reduction activities	309289	Decreased	0.65	Carbon reduction activities that retire high impact generation and replace it with low or zero emission generation.
Divestment	0	No change	0	
Acquisitions	10945	Increased	0.02	For EY 2018 we acquired a biomass plant with a small amount of fossil emissions that was previously reported in Scope 3, Category 3 under Purchased Power for Resale.
Mergers	0	No change	0	
Change in output	400833	Increased	0.84	Our primary output of electricity from owned generation increased 6.2% while the emission intensity decreased 5.1%.
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

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 40% but less than or equal to 45%

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)	HHV (higher heating value)	12640478	165797837	178438315
Consumption of purchased or acquired electricity	<Not Applicable>	711564	440903	1152467
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>	168901	<Not Applicable>	168901
Total energy consumption	<Not Applicable>	13520943	166238740	179759683

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	No
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

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

Fuels (excluding feedstocks)

Bituminous Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

4177892

MWh fuel consumed for self-generation of electricity

4177892

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Subbituminous Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

101198062

MWh fuel consumed for self-generation of electricity

101198062

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

59447720

MWh fuel consumed for self-generation of electricity

58782861

MWh fuel consumed for self-generation of heat

574062

MWh fuel consumed for self-generation of steam

90798

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Wood

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

1831954

MWh fuel consumed for self-generation of electricity

1831954

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Solid Biomass Waste

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

3283471

MWh fuel consumed for self-generation of electricity

3283471

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

475827

MWh fuel consumed for self-generation of electricity

83553

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

5

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

261824

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Biodiesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

140057

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Jet Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

38105

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Tires

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

30906

MWh fuel consumed for self-generation of electricity

30906

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Propane Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

25235

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

25235

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Compressed Natural Gas (CNG)

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

274

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Waste Oils

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

33

MWh fuel consumed for self-generation of electricity

33

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

10

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

10

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

C8.2d

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

Biodiesel

Emission factor

73.84

Unit

kg CO2 per million Btu

Emission factor source

Climate Registry (TCR) default emission factors for reporting in 2018. Table 12.1 U.S. Default Factors for Calculating CO2 Emissions from Combustion of Fossil Fuel and Biomass

Comment

Bituminous Coal

Emission factor

93.28

Unit

lb CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Compressed Natural Gas (CNG)

Emission factor

61.71

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Diesel

Emission factor

73.96

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Jet Kerosene

Emission factor

72.22

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Kerosene

Emission factor

75.2

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Motor Gasoline

Emission factor

70.22

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Natural Gas

Emission factor

53.06

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Propane Gas

Emission factor

62.87

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Solid Biomass Waste

Emission factor

93.8

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Subbituminous Coal

Emission factor

97.17

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Tires

Emission factor

85.97

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel. CO2 emissions from tires is considered 80% fossil and 20% Biogenic by EPA Regulation

Comment

Waste Oils

Emission factor

76.22

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

Wood

Emission factor

93.8

Unit

kg CO2 per million Btu

Emission factor source

U.S. EPA regulations 40 CFR §98 Table C-1. Default CO2 Emission Factors and High Heat Values for Various Types of Fuel

Comment

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	81604886	1152467	4761586	711564
Heat	0	0	0	0
Steam	277184	0	0	0
Cooling	138537	0	0	0

C-EU8.2e

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

Coal – hard

Nameplate capacity (MW)

6511

Gross electricity generation (GWh)

37187

Net electricity generation (GWh)

34324

Absolute scope 1 emissions (metric tons CO2e)

35069297

Scope 1 emissions intensity (metric tons CO2e per GWh)

1022

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)

122

Gross electricity generation (GWh)

13

Net electricity generation (GWh)

12

Absolute scope 1 emissions (metric tons CO2e)

14130

Scope 1 emissions intensity (metric tons CO2e per GWh)

1178

Comment

Gas

Nameplate capacity (MW)

8031

Gross electricity generation (GWh)

22835

Net electricity generation (GWh)

23657

Absolute scope 1 emissions (metric tons CO2e)

11188924

Scope 1 emissions intensity (metric tons CO2e per GWh)

490

Comment

Biomass**Nameplate capacity (MW)**

36

Gross electricity generation (GWh)

571

Net electricity generation (GWh)

503

Absolute scope 1 emissions (metric tons CO2e)

841825

Scope 1 emissions intensity (metric tons CO2e per GWh)

1674

Comment**Waste (non-biomass)****Nameplate capacity (MW)**

16

Gross electricity generation (GWh)

113

Net electricity generation (GWh)

103

Absolute scope 1 emissions (metric tons CO2e)

175175

Scope 1 emissions intensity (metric tons CO2e per GWh)

1701

Comment

Note: For our financial reporting, we combine refuse and biomass together. For the nameplate capacity, this is

Nuclear**Nameplate capacity (MW)**

1657

Gross electricity generation (GWh)

15295

Net electricity generation (GWh)

14601

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)

371

Gross electricity generation (GWh)

1329

Net electricity generation (GWh)

1319

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Includes Pumped Storage

Wind

Nameplate capacity (MW)

1440

Gross electricity generation (GWh)

3429

Net electricity generation (GWh)

3372

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Solar

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 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)

1814

Gross electricity generation (GWh)

81600

Net electricity generation (GWh)

77067

Absolute scope 1 emissions (metric tons CO2e)

47289351

Scope 1 emissions intensity (metric tons CO2e per GWh)

613.6

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.

Basis for applying a low-carbon emission factor

Power Purchase Agreement (PPA) with energy attribute certificates

Low-carbon technology type

Solar PV

Wind

Hydropower

Region of consumption of low-carbon electricity, heat, steam or cooling

North America

MWh consumed associated with low-carbon electricity, heat, steam or cooling

711564

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

Composition of Consumed renewable energy is Wind 79%, Solar 11%, and Hydro 9%.

C-EU8.4

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

Yes

C-EU8.4a

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

Country/Region

United States of America

Voltage level

Transmission (high voltage)

Annual load (GWh)

133996

Scope 2 emissions (basis)

Location-based

Scope 2 emissions (metric tons CO2e)

664798

Annual energy losses (% of annual load)

3.14

Length of network (km)

33567

Number of connections

3608539

Area covered (km2)

131354

Comment

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
Gas	2965000000	45	2023	
Wind	3660000000	55	2023	

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
Electric vehicles	<p>The future of transportation is dramatically changing, and as more electric vehicle options become available, a growing number of customers want to reduce their carbon footprint through the cars they drive. We are uniquely positioned to support our customers and communities and to work with EV stakeholders to make this change and ensure it truly benefits customers, the environment and the power grid we all rely upon. Through our EV strategy, we are focused on: -Raising awareness and increasing access to information on the benefits of EVs - Helping reduce the upfront costs of infrastructure needed to charge EVs -Establishing time-varying rates and smart charging technologies to ensure that EVs can charge as much as possible on low-cost, low-carbon energy While EVs create a significant opportunity for drivers and fleet operators to save on fuel and other costs, barriers exist to wider-scale adoption, such as customer awareness, high up-front costs and the availability of charging infrastructure. We can help overcome these barriers by developing new services, piloting them and then rolling out our most successful ideas to customers on a broader scale. We developed a portfolio of innovative pilots in Minnesota that will benefit drivers, customers and the environment. The initiatives and pilot programs focus in three main areas: home charging, public charging and fleet operations. We expect to expand our EV efforts to other states.</p>	3000000000	70	2023
Smart grid	<p>Through our Advanced Grid Intelligence and Security (Advanced Grid) strategic initiative, we plan to transform the grid into an intelligent, integrated network that securely, efficiently, reliably and safely integrates distributed energy resources. We have started building Advanced Grid technology infrastructure in Colorado where regulators have approved the initiative. This includes: Upgrading to advanced meters for 1.5 million Colorado electric customers from 2019 to 2024. Installing Integrated Volt-VAR Optimization technology (IVVO) from 2017 to 2022, which allows customers’ appliances to run more efficiently, and in turn, use less energy and potentially reduce monthly bills. Implementing the Field Area Network (FAN), a new communications network that provides the infrastructure necessary to enable two-way communications between intelligent devices on the grid — such as advanced meters — and the control center. These communications include automatically notifying us when customers lose or regain power, improving our ability to identify outages and more efficiently deploying repair crews. The FAN continues to be installed in the Denver metro area and the entire network will be complete by 2023. We began deploying FAN advanced field devices in 2018 and implemented a secure, two-way private network that will function as the foundation for the technology in Colorado, as well as Minnesota, where we have regulatory approval for a time-of-use pilot that will launch in 2020. The network enables the secure flow of information between control centers, new advanced devices in the field and our customers. The FAN infrastructure is critical for when we begin deploying advanced meters to Colorado and Minnesota customers in 2019. We plan to begin rolling out advanced meters to 13,000 Denver metro area customers in late 2019. Through the pilot in Minnesota, 17,500 meters will be deployed giving 10,000 customers from the Hiawatha West and Midtown area of Minneapolis and customers in the Westgate area of Eden Prairie the opportunity to save money by using electricity when it is less expensive to generate and deliver.</p>	1300000000	30	2023

C-CO9.6/C-EU9.6/C-OG9.6

(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

January 1 2015

Investment end date

December 31 2020

Investment area

R&D

Technology area

Other, please specify (Investment in a consortium that funds clean energy companies in distributed energy resources, energy storage, demand side management, electric vehicles, microgrids, and cybersecurity.)

Investment maturity

Small scale commercial deployment

Investment figure

50000000

Low-carbon investment percentage

81-100%

Please explain

With the pace and scale of emerging technologies and changing customer interests, the energy industry is evolving in ways it never has before. Xcel Energy joined Energy Impact Partners in 2015 as an opportunity to better understand technology's impact on our business and to drive greater efficiency and innovation as we meet customer needs. EIP is a collaborative, strategic investment platform that provides capital primarily to clean-tech companies that seek to optimize energy consumption and improve sustainable energy generation. Our planned \$50 million investment over five years represents a new era for us, where we move beyond clean energy implementation for our customers and into the clean-tech investment space. Xcel Energy was an original participant in the collaboration that now includes more than 15 utility and industrial participants. By joining with peer companies, we gain greater visibility into the business models and technologies of promising companies and have the opportunity to influence emerging business models so that energy companies and third parties can collaborate and grow together. Also EIP brings together energy companies from around the world to share diverse, global perspectives and insights into policy and regulations, helping position us for new trends, rules and other requirements in the states we serve. We are gaining insights that are helping inform our strategic decisions and how we conduct our business across the organization from energy supply to distribution, customer solutions and cyber security.

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)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

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

Reasonable assurance

Attach the statement

EY2017 NSP TCR-EPS-Verification-Statement-Signed-rev.pdf
EY2017 SPS TCR-EPS-Verification-Statement-Signed-rev.pdf
EY2017 PSCo TCR-EPS-Verification-Statement-Signed-rev.pdf

Page/ section reference

The three documents provided are for the 3 major operating companies of Xcel Energy. Page 2 of each document lists the GHG gases by Scope and reporting boundary of equity share and operational control are shown.

Relevant standard

The Climate Registry's General Verification Protocol

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

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

Reasonable assurance

Attach the statement

Page/ section reference

The three documents provided are for the 3 major operating companies of Xcel Energy. Page 2 of each document lists the GHG gases by Scope and reporting boundary of equity share and operational control are shown.

Relevant standard

The Climate Registry's General Verification Protocol

Proportion of reported emissions verified (%)

100

Scope

Scope 2 market-based

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

Reasonable assurance

Attach the statement

Page/ section reference

The three documents provided are for the 3 major operating companies of Xcel Energy. Page 2 of each document lists the GHG gases by Scope and reporting boundary of equity share and operational control are shown.

Relevant standard

The Climate Registry's General Verification Protocol

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope

Scope 3- at least one applicable category

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

Attach the statement

EPS1.2_SPS_2017_v3Public.pdf

EPS1.2_NSP_2017_v3Public.pdf

EPS1.2_PSCo_2017_v3Public.pdf

Page/section reference

Page 2 of the three documents provided (for the 3 major operating companies of Xcel Energy) lists the GHG gases by Scope and reporting boundary of equity share and operational control are shown. On page 3 the "Verified Metrics" matrix references the Delivery and Adjusted Delivery Metrics for system energy mix. TCR's EPS utilizes the Workbooks also attached to this question. Together these form a complete 3rd party verification of the electrical purchased power for resale.

Relevant standard

The Climate Registry's General Verification Protocol

C10.2

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

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

C11. Carbon pricing

C11.1

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

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

C11.2

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

No

C11.3

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

Yes

C11.3a

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

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 3

Application

We apply both CO2 regulatory and CO2 externality prices in our Upper Midwest resource planning, per Minnesota statutes.

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

25

Variance of price(s) used

\$5 to \$25 per short ton, applied beginning in 2025, for regulatory prices. \$9.17-\$43.15 per short ton in 2018, escalating over time based on Social Cost of Carbon, for externality pricing.

Type of internal carbon price

Shadow price
Implicit price

Impact & implication

In resource planning, these CO2 prices affect the Present Value of Societal Cost (PVSC) ranking of different possible resource plans and resource acquisitions. A plan with more renewable and nuclear resources would have a lower PVSC, all else equal, than a plan with more fossil resources. The CO2 prices help internalize the cost of CO2 emissions, and guide our investments to take into account the prospect of actual CO2 regulatory costs (in the case of the CO2 regulatory range).

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 3

Application

Following new Colorado law under House Bill 19-236, we must apply the social cost of carbon starting at \$46 per metric tonne in 2020 and escalating at the central value escalation rate established in the Federal Technical Support Document- "Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 " from August 2016. We may also apply CO2 regulatory prices to understand the regulatory risks of carbon. According to our last resource plan, these costs are set between \$1.86 and \$20 per shot ton starting in 2022 escalating at 2.44%.

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

20

Variance of price(s) used

\$2 to \$20 per short ton for CO2 regulatory prices; \$46 per short ton, reflecting 2020 Social Cost of Carbon at 3% discount rate, for externality value.

Type of internal carbon price

Shadow price
Implicit price

Impact & implication

In resource planning, these CO2 prices affect the selection of different possible resource plans and resource acquisitions. A plan with more renewable resources would rank better, all else equal, than a plan with more fossil resources. The CO2 prices help internalize the cost of CO2 emissions, and guide our investments to take into account both the prospect of actual CO2 regulatory costs (in the case of the CO2 regulatory range).

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 3

Application

We apply CO2 regulatory prices in our New Mexico resource plans, per New Mexico PSC rules.

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

20

Variance of price(s) used

Carbon price sensitivities at \$8, \$20, and \$40 per metric ton

Type of internal carbon price

Shadow price
Implicit price

Impact & implication

In resource planning, these CO2 prices affect the selection of different possible resource plans and resource acquisitions. A plan with more renewable resources would rank better, all else equal, than a plan with more fossil resources. The CO2 prices help internalize the cost of CO2 emissions, and guide our investments to take into account the prospect of actual CO2 regulatory costs in the future.

C12. Engagement

C12.1

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

Yes, our suppliers
Yes, our customers
Yes, other partners in the value chain

C12.1a

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

Type of engagement

Compliance & onboarding

Details of engagement

Included climate change in supplier selection / management mechanism

% of suppliers by number

78.33

% total procurement spend (direct and indirect)

35

% Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

In addition to the wind farms Xcel Energy owns and operates, the company has long-term agreements with suppliers to purchase wind and solar power as part of the energy it delivers to customers. We had 5,836 megawatts of wind and 762 megawatts of solar power under contract in 2018 through 189 commercial purchased power agreements or 78.33% of our purchased power suppliers, representing approximately 35% of our purchased power spending. As a regulated utility that provides electricity to large service territories, we serve multiple states that have enacted renewable energy standards. Xcel Energy was an early adopter of these standards, and through long-term wind and solar purchases, we were able to meet state standards far in advance of compliance deadlines and support development of the wind and solar industries. We are currently on pace to surpass established renewable energy requirements in the states we serve through at least 2030. As our older purchased power agreements expire, we are working with some suppliers interested in repowering their facilities and transferring ownership to Xcel Energy. For example, we purchased wind energy from the Lake Benton wind project for approximately 20 years and have now arranged to purchase the repowered 100-megawatt wind farm from the supplier.

Impact of engagement, including measures of success

Xcel Energy's long-term wind and solar purchases have helped to enable the company's clean energy transition and renewable energy leadership. In 2018, renewable energy was 25% of the energy we provided to customers, and long-term purchases comprised 86% of the wind and solar energy on our system. Carbon-free renewable energy is a significant contributor to our current 38% reduction in carbon emissions from 2005 levels. It is also essential to achieving our goal to reduce carbon emissions 80% by 2030 and aspiration to provide 100% carbon-free electricity to customers in 2050.

Comment

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change

% of suppliers by number

100

% total procurement spend (direct and indirect)

25

% Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

Xcel Energy is a voluntary member of the Natural Gas Supply Collaborative organized by MJ Bradley and Associates that promotes safe and responsible practices for natural gas supply. It is a valuable platform for engaging with natural gas producers and environmental groups, and other key stakeholders. The Collaborative has identified 14 key environmental and social performance indicators for natural gas production that reflect the perspectives of natural gas purchasers, are guided by the interests of customers and stakeholders, and highlight leading producer practices. Through this effort, we encourage natural gas producers to provide an accessible discussion of important environmental and social issues through company websites and voluntary reporting. A primary topic area is methane and air emissions, and producers are encouraged to disclose their methane emissions and overall methane management strategies.

Impact of engagement, including measures of success

The efforts of the Natural Gas Supply Collaborative are designed to help producers improve environmental and social performance,

publish accurate and important information, and build trust and transparency with stakeholders. In addition to developing the 14 key environmental and social performance indicators, the Collaborative has developed an inventory of voluntary public disclosures by the top 40 U.S. natural gas producers and has been publicly recognized as an industry best practice by As You Sow and Ceres.

Comment

C12.1b

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

Type of engagement

Education/information sharing

Details of engagement

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

% of customers by number

100

% Scope 3 emissions as reported in C6.5

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

Xcel Energy offers all customers options for reducing their carbon footprints associated with energy use. We offer more than 150 energy efficiency and rebate programs to all classes of customers, including residential, commercial and industrial customers for reducing electricity and natural gas usage in all eight states where we operate. We also provide a growing portfolio of renewable energy choice programs, such as Windsource and Renewable*Connect, that give customers easy, flexible ways to choose up to 100% renewable energy. Through our marketing and communications for these programs, we emphasize the environmental benefits, as well as cost benefits, associated with saving energy and using wind and solar power. The individual programs have their own marketing plans and budgets, but generally include email, direct mail and advertising. Residential customers are sent energy-saving tips and information that compares their energy usage to neighbours, and through the My Account portal, they can find energy usage and program information. For large commercial and industrial customers, we assign key account managers who can evaluate customer energy needs and usage and recommend efficiency and renewable program solutions.

Impact of engagement, including measures of success

The success of our energy efficiency and renewable programs is measured through energy savings and program participation. In our largest service territories of Colorado and Minnesota, we have negotiated energy efficiency goals or targets with the state Public Utilities Commissions, and in 2018, customer energy efficiency savings associated with our programs surpassed those goals. Throughout our entire eight-state service territory, customers completed 3.5 million electric and 1.4 million natural gas efficiency projects and saved 1,240 gigawatt hours of electricity and 1.6 million dekatherms of natural gas for the year. Nearly 190,000 customers participated in our renewable energy choice programs in 2018. Plus, we achieved a milestone of more than 1 gigawatt of distributed solar power capacity installed since our programs began. Altogether, we estimate that customers helped to avoid 1.5 million tons of carbon emissions through our energy efficiency and renewable programs in 2018.

Type of engagement

Education/information sharing

Details of engagement

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% Scope 3 emissions as reported in C6.5

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

Xcel Energy provides carbon reporting information for all classes of customers, including residential, commercial and industrial customers, and for cities and towns, to help measure carbon footprint associated with energy use. Residential customers can log into My Account to find their energy usage and find the system carbon intensity to determine their carbon footprints. Annually, we publish carbon emission intensities on xcelenergy.com, providing three formats to meet the different requirements of commercial and industrial customers for their own measuring, tracking and reporting. These formats include a basic system carbon intensity, an intensity for Scope 2 market-based reporting and a "residual mix" intensity that excludes electricity associated with Renewable Energy Credits that were sold to the market, purchased or retired on behalf of customers participating in Xcel Energy's renewable energy programs. Finally, we provide the communities we serve with community reports that include energy use and carbon

information for individual communities, as well as efficiency and renewable energy program participation by community residents. Providing this information for customers, demonstrates Xcel Energy's support for timely, transparent public reporting of carbon dioxide and other greenhouse gas emissions. Our comprehensive greenhouse gas reporting, from all parts of our business, is based on The Climate Registry and its Electric Power Sector Protocol, which aligns with the World Resources Institute and ISO 14000 series standards. We joined The Climate Registry as a founding member to help establish a consistent and transparent standard for calculating, verifying and reporting greenhouse gases. Through The Climate Registry, we annually third-party verify, register and publicly disclose our greenhouse gas emissions.

Impact of engagement, including measures of success

While we do not measure specific customer use of this information, we receive many positive comments and inquiries about the information. Our goal is to ensure customers have the data they need and want to calculate, measure, track and/or report their carbon emissions associated with energy use, which ultimately, can lead to action and participation in Xcel Energy's efficiency and renewable programs.

C12.1c

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

Xcel Energy has special partnerships and collaborations with the towns and cities it serves to help them achieve their clean energy and climate change goals. First, through our Partners in Energy program an Xcel Energy team works with participating communities to identify their future energy goals and develop strategic plans. The company provides resources to put those plans into action and helps to implement projects for achieving goals. Partners in Energy provides the opportunity to work directly with our community officials and organizations to leverage our entire portfolio of energy solutions, including efficiency, renewable and even payment programs. Typically, a community brings ideas and resources, while Xcel Energy provides direction, guidance and project management. We learn what communities prioritize and identify potential gaps where we can provide products to meet the communities' needs. In return, the partnerships help to raise awareness and increase participation in Xcel Energy's current efficiency and renewable energy offerings.

We measure the success of Partners in Energy through community participation in the program and the increase in our efficiency and renewable programs directly associated with Partners in Energy. Since 2014, when Partners in Energy was launched, we have worked with 37 communities to develop energy action plans — 20 in Minnesota and 17 in Colorado. Working with these communities to provide outreach delivered strong results in 2018, including more than 49,000 participants in Xcel Energy efficiency programs and 15,500 participants in renewable energy offerings.

In addition to Partners in Energy, Xcel Energy has established Energy Future Collaborations with eight communities in Colorado, representing about 32% of our retail load in the state. The Collaborations are a new approach for uniting the specific energy goals of communities with our company's services and expertise to achieve shared objectives. The proactive collaborations are aimed at addressing a wide range of priorities, including how best to: advance specific carbon reduction and renewable energy targets, reduce a city's carbon footprint, maximize energy efficiency programs, support economic development, and integrate emerging energy-related technologies into area homes and businesses. The relationship-driven approach taps into many existing Xcel Energy programs and offerings but also focuses on uncovering creative solutions to new ideas and needs. From Xcel Energy's standpoint, not only do we develop a more meaningful relationship with some of our largest customers — our communities — but the collaborations provide an opportunity to inform key leaders and community members about our business and significant initiatives. Ultimately, the collaborations can increase support for company initiatives that support community goals, such as our aspiration to serve customers with 100% carbon-free electricity by 2050.

Our Energy Future Collaborations were just launched in 2018, and Memorandums of Understanding (MOUs) for the collaborations were established with eight communities. With the MOUs in place, together, the company and communities develop work plans that involve a number of projects, along with objectives, timelines, resources required, funding needed, metrics for success, reporting measures and ultimate deliverables. In 2018, work plans were finalized with six of the eight communities and the remaining plans will be complete in 2019.

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

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
Clean energy generation	Support	Xcel Energy is a leader in clean energy generation, which has enabled our progress in reducing carbon dioxide emissions for all of our customers. In 2018, we had nearly 7,600 MW of wind capacity on our system. And we are continuing to execute on our plans to add 3,680 megawatts of new wind capacity. We also support solar energy, which made up 3% of our energy production in 2018 with 762MW on our system. Xcel Energy also complies with renewable energy portfolio standards in each of our states and are currently evaluating our future plans to comply with the recently passed Energy Transition Act in New Mexico, which sets one of the most aggressive renewable and clean energy standards in the state.	Xcel Energy supports policies that create standards for long-term carbon reductions. As we move toward aggressive carbon reduction goals, we believe policy also needs to focus on carbon reductions. Wind and solar will play a key role in reaching our 80% by 2030 carbon reduction goal, but we will also need new carbon-free resources available to get all the way to 100% carbon-free electricity. Policy must support a variety of carbon-free options along with enhanced support for innovation and RD&D. We also support policy that focuses on scale, recognizing that utility-scale resources can achieve large-scale carbon reductions at low cost.
Mandatory carbon reporting	Support	Xcel Energy has always supported accurate, verified carbon emissions reporting. Xcel Energy is a founding member of the voluntary reporting organization, The Climate Registry (TCR), which was founded in 2007. We helped develop TCR's Electric Power Sector Protocol for reporting of emissions by the electric sector. We continue to report and third-party verify our carbon emissions. Currently our emissions for 2005 through 2017 are reported, third-party verified, and 2018 data verification is underway. Xcel Energy was the first utility in the country to have 13 consecutive years of data verified by third party entities. In order to communicate to customers and stakeholders, Xcel Energy reports not only the mandatory reporting requirements of owned generation, but also the emissions from purchased power. By providing this data, parties are able to accurately examine the emissions intensity of the electricity delivered to customers. We also report our emissions to the EPA under its mandatory GHG reporting rule, in our Corporate Responsibility Report, 10-K filings to the SEC, and in many other venues.	Not applicable. Both mandatory reporting requirements and voluntary reporting are already in place for the electric power sector. We do also work with our state regulators and policy-makers to support state-level greenhouse gas inventories as well.
Energy efficiency	Support	Xcel Energy supports energy efficiency programs through all of the corporate operating companies with programs in eight states. It is a cornerstone of our clean energy strategy. In 2018, our energy saving efforts and extensive portfolio of programs continued to achieve significant emissions reductions. We have supported state level legislation to develop and increase energy efficiency programs in the past.	We will continue to engage in discussions of energy efficiency programs and what they include in each legislative session. We want to ensure that the money we collect from customers to develop and support energy efficiency programs is used in a cost effective manner that provides the maximum environmental benefits.
Cap and trade	Neutral	To the extent cap and trade arises in policy discussions, Xcel Energy analyzes and actively engages in policy discussions at the state and federal level with the primary intent to ensure any policy does not affect the affordability and reliability of energy for our customers. Xcel Energy would prefer a national program created through new legislation in Congress. In the absence of that action, we continue to work toward our own voluntary carbon reduction goals of 80% by 2030 and carbon-free electricity by 2050. Going forward, we will also be actively working with regulators in Colorado as they seek to implement new greenhouse gas regulations under House Bill 19-1261, which established economy-wide carbon reduction goals for the state.	Xcel Energy advocated for better recognition of our emissions reduction leadership and greater flexibility at the state level to implement carbon emission reduction programs. Cap and trade proposals should also consider the role of beneficial electrification in reducing emissions across all sectors and providing incentives for the electric sector to pursue beneficial electrification.
Carbon tax	Neutral	While carbon tax proposals have not gained meaningful traction over recent years at the federal level, we continue to evaluate carbon tax proposals or ideas from a variety of stakeholders and policy-makers. We will continue to engage policy makers in evaluating the pros and cons of such a policy. Our major concern is that any carbon tax would directly affect the bills of our customers, including vulnerable populations, and we must keep electricity prices low in order to enable the clean energy transition. We believe we can achieve significant emissions reductions while keeping bills low and are doing so without any policy requirements.	Carbon tax proposals need to consider the cost impact on customers. The electric sector is achieving carbon reductions at affordable rates. This low-cost, clean electricity will also enable carbon reductions in other sectors. Carbon tax proposals need to keep this transition in mind.
Regulation of methane emissions	Neutral	Methane emissions from Xcel Energy's natural gas distribution system make up less than 1% of our total GHG emissions. Nevertheless, we have worked to cost-effectively prevent methane emissions through a combination of proactive system improvements and efforts implemented as part of our voluntary participation in EPA's Natural Gas STAR program. We are engaged with EPA through several voluntary methane reduction stakeholder groups, including EPA's Natural Gas STAR Methane Challenge Program and the Natural Gas Downstream Initiative facilitated by MJ Bradley & Associates. We also work with EPA to ensure the most accurate data is available for greenhouse gas accounting. We work on an on-going basis with the natural gas industry and environmental organizations to understand methane emissions from the natural gas delivery system and ways to reduce methane leak rates.	Methane emissions on our local distribution system make up less than 1% of our total emissions. We believe current voluntary efforts are making strong progress at reducing methane leakage from the natural gas transmission and distribution system. Most methane regulations to date have focused on upstream natural gas producers. If done correctly, regulation of upstream natural gas production can help ensure we are utilizing natural gas with the lowest climate impact possible.

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 Wind Energy Association (AWEA)

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

AWEA states that "Climate change poses a substantial threat to human health and the environment, and AWEA supports policies that reduce carbon pollution, including by accurately valuing wind's zero-carbon electricity." AWEA supports market-based, scalable, ambitious solutions that also accurately value the zero-carbon electricity produced by wind. AWEA also supports upgrades in the electric system to support a resilient and reliable grid. More can be found on their website here: <https://www.awea.org/policy-and-issues/electricity-policy/carbon-policy>.

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

As a Board member and national leader in wind energy, we contribute to and influence the positions of AWEA through our participation.

Trade association

Electric Power Research Institute (EPRI)

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

EPRI is a non-advocacy, non-profit, scientific research organization with a public benefit mandate. As a research focused organization, EPRI, does not take a position on climate change but does conduct detailed climate policy analysis, and provides information on low-emitting carbon technologies for the electric industry. EPRI conducts this work through a variety of avenues including Energy and Environmental Analysis, sustainability strategy and research, in-depth research into climate science and scenario analysis, and robust understanding of electrification issues.

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

As Board members we influence the research conducted by EPRI, including the work on environmental matters. Xcel Energy also participates in a multi-utility project convened by EPRI to examine the current state of the science around climate scenario analysis and company greenhouse gas goals. EPRI released a report in fall 2018 that takes stock of current scientific understanding and provides analytical guidance, titled Grounding Decisions: A Scientific Foundation for Companies Considering Global Climate Scenarios and Greenhouse Gas Goals. This research provided a starting point for our work with the University of Denver to understand our own corporate goals in comparison to scenarios in line with the Paris Agreement.

Trade association

Edison Electric Institute (EEI)

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

Global climate change presents one of the biggest energy and environmental policy challenges this country has ever faced. EEI member companies are committed to addressing the challenge of climate change and have undertaken a wide range of initiatives over the last 30 years to reduce, avoid or sequester GHG emissions. Policies to address climate change should seek to minimize impacts on consumers and avoid harm to U.S. industry and the economy. As of the end of 2018, electric power sector CO2 emissions had declined 27 percent from 2005 levels, driven in part by low natural gas prices, increased deployment of renewable generation and customer demands.

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

Xcel Energy's Chairman, President, and CEO is currently the Vice Chair of EEI and will be the Chair of EEI in 2020. In addition to this key leadership role, Xcel Energy has also taken on leadership roles on different committees and projects through the organization. Through these avenues, we contribute to the positions of EEI including those on environmental matters.

Trade association

Nuclear Energy Institute (NEI)

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

NEI believes that deep carbon reductions are needed to hit climate goals. Nuclear power can help achieve these goals - today, nuclear power delivers 55% of the carbon-free electricity produced in the US. As our largest source of clean energy, nuclear power is critical to reduce carbon emissions. Wind, solar and geothermal are on the rise, but NEI promotes policies that will ensure these technologies complement, not replace, nuclear's clean energy production. Protecting and growing our use of nuclear technologies are important ways to make a dent in greenhouse gases and help us make meaningful progress to address climate change. <https://www.nei.org/advantages/climate>

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

We work with NEI on studies of the environmental and other benefits of our nuclear power plants.

Trade association

American Gas Association (AGA)

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

AGA believes natural gas will play a role in viable greenhouse gas reduction programs. In 2014, they released a set of guidelines for natural gas utilities to continuously improve and modernize natural gas distribution systems. Through operational improvements, modernization, and other activities, natural gas utilities can continue to keep methane emissions to a minimum and continue the downward trend in methane emissions.

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

As a Board member we contribute to the positions of AGA through our participation. Recently, we have also worked with AGA to conduct analysis and further understand the role of direct use natural gas in a low-carbon future and the new strategies that can be deployed to maintain gas as an affordable, clean energy source for customers.

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?

As a Company, our positions on climate change issues and other environmental topics are managed by the Vice President of Policy and Federal Affairs, who reports to the CEO via the SVP and President of the Utilities group. Climate positions and analysis from this group are reviewed and receive input from all levels of company management. Our state legislative groups interact with the Policy and Federal Affairs department and use the information in their communications and advocacy efforts.

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 mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

CRR-carbon-free-future.pdf

Page/Section reference

All

Content elements

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

Comment

Our Corporate Responsibility Report covers our management, performance, and goals for carbon emissions along with a variety of other key sustainability metrics.

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

Xcel Energy Carbon Report - Mar 2019.pdf

Page/Section reference

All

Content elements

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

Comment

In our report, Building a Carbon-free Future, we discuss our carbon-free vision, including the opportunities, risks and challenges we face getting there. We describe how our carbon transition can have an even larger impact in other sectors, such as transportation. We also show how our commitment compares to the targets of international climate agreements

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

CRR-Performance-Summary.pdf

Page/Section reference

15

Content elements

- Emissions figures

Comment

Performance summary with carbon emissions data.

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	Chairman of the Board, President, and CEO	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

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

Xcel Energy provides information to help customers calculate the carbon emissions associated with their electricity use, available at <https://www.xcelenergy.com/staticfiles/xe-responsive/Environment/Carbon/Xcel-Energy-Carbon-Dioxide-Emission-Intensities.pdf>.

Xcel Energy is unable to provide more specific data associated with individual customer energy usage in this format. If you have more questions about your 2018 energy consumption, please contact your account representative.

SC0.1

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

	Annual Revenue
Row 1	11537000000

SC0.2

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

No

SC1.1

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

SC1.2

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

Please use the Xcel Energy Carbon Dioxide Emissions Intensities worksheet available at <https://www.xcelenergy.com/staticfiles/xe-responsive/Environment/Carbon/Xcel-Energy-Carbon-Dioxide-Emission-Intensities.pdf>

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

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 provide our customers with the tools necessary to calculate their own emissions from their use of electricity through the use of billing data already provided by Xcel Energy.

SC2.1

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

Requesting member

AT&T Inc.

Group type of project

New product or service

Type of project

New product or service that has a lower upstream emissions footprint

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized

0-1 year

Estimated lifetime CO2e savings

Estimated payback

Please select

Details of proposal

Xcel Energy offers customers multiple options to acquire 100% carbon-free renewable energy. We were an early adopter of voluntary green power back in 1998 with the introduction of our flagship program, Windsource. Since then, our program offerings have expanded to include options for community solar gardens, on-site solar and Renewable*Connect — our newest offering. Through Renewable*Connect, customers can choose to make their energy up to 100% renewable through different contract options, such as month-to-month, five-year and 10-year terms. There is no equipment to install and customers can remain on the program if they move to a different home or business location within our service area. Renewable*Connect is Green e-Energy certified, and meets the environmental and consumer-protection standards set forth by the nonprofit Center for Resource Solutions. With Renewable Connect, the Green-e Energy certified RECs are retired on your behalf, which allows you to say that you are using renewable energy. Please visit www.xcelenergy.com or contact your account representative for more information about participating in Xcel Energy's voluntary renewable energy offerings.

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?

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms