Module: Introduction

Page: Introduction

CC0.1

Introduction
Please give a general description and introduction to your organization.

Xcel Energy is a U.S. investor-owned electricity and natural gas company with regulated operations in eight Midwestern and Western states. Based in Minneapolis, Minn., we provide a comprehensive portfolio of energy-related products and services to approximately 3.5 million electricity customers and 2.0 million natural gas customers through four wholly owned utility subsidiaries. According to the American Wind Energy Association, Xcel Energy is the number one wind energy provider among U.S. utilities, an honor the company has held for twelve years. Xcel Energy is also ranked by Ceres as 4th among vertically-integrated utilities in the United States for renewable energy as a percentage of retail sales.
We routinely provide a wealth of company-related information to the public and lead the industry in environmental disclosures. Our Corporate Responsibility Report, filings with the Securities and Exchange Commission (SEC), responses to the CDP questionnaires, responses to the Dow Jones Sustainability Index assessment and reporting through The Climate Registry provide detailed information regarding a variety of environmental issues, including climate change. Xcel Energy is a founding member of the Climate Registry, a non-profit organization established to measure and publicly report GHG emissions.
This report has been prepared using reasonably available data, information, emission factors, and protocols and is subject to uncertainties and variability associated with each item.
SAFE HARBOR STATEMENT
This material contains forward-looking statements that are subject to certain risks, uncertainties and assumptions. Such forward looking statements include projected earnings, cash flows, capital expenditures and other statements including projected earnings, cash flows, capital expenditures and other statements and are identified in this document by the words “anticipate”, “estimate”, “expect”, “projected”, “objective”, “outlook”, “possible”, “potential” 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.

CC0.2

Reporting Year
Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Thu 01 Jan 2015 - Thu 31 Dec 2015

CC0.3

Country list configuration

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

Select country
United States of America

CC0.4

Currency selection

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

USD($)

CC0.6

Modules
As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.
If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.
If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Calendar year 2014 is the most recent year in which GHG 3rd party verification is complete. June 30, 2016 is the data submission deadline for 2015 data to The Climate Registry.

Module: Management

Page: CC1. Governance

CC1.1

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

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

CC1.1a

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

The Board of Director's Operations, Nuclear, Environmental and Safety Committee provides oversight of the company's environmental strategy and compliance. Under the Xcel Energy environmental policy, the Xcel Energy Board of Directors, acting through the Operations, Nuclear, Environmental and Safety Committee, oversees Xcel Energy's environmental compliance program and policy initiatives. The policy sets forth our commitment to outstanding environmental compliance and our commitment to pursue industry-leading initiatives that enhance customer and shareholder value while demonstrating respect for our communities and concern for the environment. The policy is available on our website at https://www.xcelenergy.com/environment/policy/corporate_environmental_policy_and_ems. Xcel Energy has also created an environmental management system that provides employees with training and documentation of Xcel Energy's compliance responsibilities, creates processes to minimize risk of noncompliance and audits Xcel Energy's environmental performance. Additionally, we have two executive leadership councils which are involved in planning related to climate change, such as planning for resources, financial investments and other strategic issues. Those councils are the Executive Committee (formerly named Strategy Council) and Financial Council.

Each year executive management leads an annual internal planning meeting, where strategies related to climate change are often developed. Climate Change strategies are presented to the Board and the Operations, Nuclear, Environmental and Safety Committee throughout the year.

The Company has established an Environmental Policy Department, which 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. The Environmental Policy area follows the company formal process for managing risk, which includes:

• Regular reporting to the Xcel Energy Board of Directors and board committees;
• Cross-functional governance and leadership councils and committees reporting to executive management including Ben Fowke III, Chairman, President and CEO; Kent Larson, Executive Vice President and Group President, Operations; and Executive Vice President and CFO Bob Frenzel.
• Internal processes and review by: Corporate Compliance and Business Conduct Council; Corporate Risk Management Oversight committee; and Transaction Review committee;
• Sarbanes-Oxley processes/internal audit;
• Environmental management and oversight;
• Environmental public policy/advocacy.

Xcel Energy sets business goals that are focused on execution of projects that reduce carbon dioxide. Since 2005, Xcel Energy has established corporate environmental goals related to reduction of carbon dioxide levels and renewable resource growth. (See 2016 proxy statement on our website at http://investors.xcelenergy.com/interactive/newlookandfeel/4025308/reports/proxy/images/Xcel_Energy-Proxy2016.pdf, with environmental achievements listed on page iv.)

Environmental performance is a component of the Xcel Energy Executive Officer Compensation Program. As outlined in our 2016 proxy statement (see page 28), executives receive two forms of long-term incentives specifically for environmental leadership and emissions reductions. First, 37.5 percent (or 30 percent of total long-term incentive target value) of performance share awards are subject to the achievement of specified reductions in carbon emissions over the three-year performance cycle ending on December 31, 2017. The performance share awards are subject to achieving carbon reduction goals and range from 0 to 200% shares earned- The company must meet 23% reduction in carbon emissions to receive 100% pay out. Secondly, there are performance unit awards subject to achievement of EPS and Operating metrics over the previous 3 year period, 2013-2015. This includes "meeting our environmental commitments while maintaining a competitive price for service." This award is paid out in shares of common stock. The Board’s Governance, Compensation and Nominating Committee oversees and approves these performance goals. The Governance, Compensation and Nominating Committee selected reduction in carbon emissions as a performance measure as it directly supports our strong environmental leadership.

The company is on track to meet a 30% targeted reduction in CO2 from 2005 levels by 2020, having already exceeded a previous target of 20% by 2020.

CC1.2

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

Yes

CC1.2a

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

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Board chairman	Other non-monetary reward	Emissions reduction target	Environmental performance is a component of the Xcel Energy Executive Officer Compensation Program. As outlined in our 2016 proxy statement (see page 28), executives receive two forms of long-term incentives specifically for environmental leadership and emissions reductions. First, 37.5 percent (or 30 percent of total long-term incentive target value) of performance share awards are subject to the achievement of specified reductions in carbon emissions over the three-year performance cycle ending on December 31, 2017. The performance share awards are subject to achieving carbon reduction goals and range from 0 to 200% shares earned- The company must meet 23% reduction in carbon emissions to receive 100% pay out. Secondly, there are performance unit awards subject to achievement of EPS and Operating metrics over the previous 3 year period, 2013-2015. This includes "meeting our environmental commitments while maintaining a competitive price for service." This award is paid out in shares of common stock. The Board's Governance, Compensation and Nominating Committee oversees and approves these performance goals. The Governance, Compensation and Nominating Committee selected reduction in carbon emissions as a performance measure as it directly supports our strong environmental leadership. These goals were selected to further the corporate goal of environmental leadership which directly relates to successfully executing projects to achieve our carbon emissions reduction target as described in section 3.1, and thus prudently reducing our impact to the environment.
Chief Executive Officer (CEO)	Other non-monetary reward	Emissions reduction target	Environmental performance is a component of the Xcel Energy Executive Officer Compensation Program. As outlined in our 2016 proxy statement (see page 28), executives receive two forms of long-term incentives specifically for environmental leadership and emissions reductions. First, 37.5 percent (or 30 percent of total long-term incentive target value) of performance share awards are subject to the achievement of specified reductions in carbon emissions over the three-year performance cycle ending on December 31, 2017. The performance share awards are subject to achieving carbon reduction goals and range from 0 to 200% shares earned- The company must meet 23% reduction in carbon emissions to receive 100% pay out. Secondly, there are performance unit awards subject to achievement of EPS and Operating metrics over the previous 3 year period, 2013-2015. This includes "meeting our environmental

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
			commitments while maintaining a competitive price for service." This award is paid out in shares of common stock. The Board's Governance, Compensation and Nominating Committee oversees and approves these performance goals. The Governance, Compensation and Nominating Committee selected reduction in carbon emissions as a performance measure as it directly supports our strong environmental leadership. These goals were selected to further the corporate goal of environmental leadership which directly relates to successfully executing projects to achieve our carbon emissions reduction target as described in section 3.1, and thus prudently reducing our impact to the environment.
Executive officer	Other non-monetary reward	Emissions reduction target	Environmental performance is a component of the Xcel Energy Executive Officer Compensation Program. As outlined in our 2016 proxy statement (see page 28), executives receive two forms of long-term incentives specifically for environmental leadership and emissions reductions. First, 37.5 percent (or 30 percent of total long-term incentive target value) of performance share awards are subject to the achievement of specified reductions in carbon emissions over the three-year performance cycle ending on December 31, 2017. The performance share awards are subject to achieving carbon reduction goals and range from 0 to 200% shares earned- The company must meet 23% reduction in carbon emissions to receive 100% pay out. Secondly, there are performance unit awards subject to achievement of EPS and Operating metrics over the previous 3 year period, 2013-2015. This includes "meeting our environmental commitments while maintaining a competitive price for service." This award is paid out in shares of common stock. The Board's Governance, Compensation and Nominating Committee oversees and approves these performance goals. The Governance, Compensation and Nominating Committee selected reduction in carbon emissions as a performance measure as it directly supports our strong environmental leadership. These goals were selected to further the corporate goal of environmental leadership which directly relates to successfully executing projects to achieve our carbon emissions reduction target as described in section 3.1, and thus prudently reducing our impact to the environment.
Corporate executive team	Other non-monetary reward	Emissions reduction target	Environmental performance is a component of the Xcel Energy Executive Officer Compensation Program. As outlined in our 2016 proxy statement (see page 28), executives receive two forms of long-term incentives specifically for environmental leadership and emissions reductions. First, 37.5 percent (or 30 percent of total long-term incentive target value) of performance share awards are subject to the achievement of specified reductions in carbon emissions over the three-year performance cycle ending on December 31, 2017. The performance share awards are subject to achieving carbon reduction goals and range from 0 to 200% shares earned- The company must meet 23% reduction in carbon emissions to receive 100% pay out. Secondly, there are performance unit awards subject to achievement of EPS and Operating metrics over the previous 3 year period, 2013-2015. This includes "meeting our environmental commitments while maintaining a competitive price for service." This award is paid out in shares of common stock. The Board's Governance, Compensation and Nominating Committee oversees and approves these performance goals. The Governance, Compensation and Nominating Committee

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
			selected reduction in carbon emissions as a performance measure as it directly supports our strong environmental leadership. These goals were selected to further the corporate goal of environmental leadership which directly relates to successfully executing projects to achieve our carbon emissions reduction target as described in section 3.1, and thus prudently reducing our impact to the environment.

Further Information

Xcel Energy's 2016 Proxy Statement is attached. The statement is also available at http://investors.xcelenergy.com/interactive/newlookandfeel/4025308/reports/proxy/images/Xcel_Energy-Proxy2016.pdf.

Attachments

https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC1.Governance/Xcel_Energy-Proxy2016.pdf

Page: CC2. Strategy

CC2.1

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

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

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

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	Xcel Energy Service Territory: Colorado, Minnesota, North Dakota, South Dakota, Wisconsin, Michigan, Texas And New Mexico	> 6 years	Xcel Energy considers risks in multiple time frames: 0-2 years, 2-5 years, and > 5 years Management Councils and senior management meet several times throughout the year and review risks including climate change risks. Board committees also meet quarterly and review climate change risks as part of the overall reviews. Each Board committee has responsibility for overseeing various aspects of risk. The Board of Directors has overall responsibility for risk oversight and with the committees periodically undertakes the review of the charters to ensure that oversight of key risks are appropriately considered by the various Board committees. The Board reviews risks at an enterprise level annually and confirms that Xcel Energy's strategy appropriately addresses risk management and mitigation.

CC2.1b

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

Xcel Energy's corporate environmental policy is the foundation of the Company's environmental commitment. It keeps Xcel Energy in compliance with today's regulations and drives efforts to further reduce our environmental impact.
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 risk. Risk identification and analysis occurs formally through a key risk assessment process conducted by senior management as well as through business planning process. 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 mentioned above (see response to CC2.1a). 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 asset level, a "carbon proxy cost" is used when examining and selecting future resources to meet our customers' needs. The cost estimates the expected future costs of carbon dioxide emissions regulations or legislation and compares both operational and costs impacts among fossil-based, renewable and other low-carbon sources of electricity in our portfolio.

CC2.1c

How do you prioritize the risks and opportunities identified?

Materiality, timing, likelihood, and controllability are considered along with safety, reliability, and cost effectiveness, to prioritize climate change risks and opportunities.
Our clean energy and emissions reduction strategy allows us to focus on those initiatives that produce the greatest benefits at the best price and positions us to meet future environmental regulations. This strategy is built on three components that include the increased use of renewable resources, energy saving programs for customers, and power plant fleet modernization initiatives. Since 2005, Xcel Energy has reduced carbon dioxide emissions by 24%, and we are projected to achieve a 30% reduction by 2020—exceeding our original goal of a 20% reduction by 2020.
In 2015 we completed a sustainability materiality assessment to identify sustainability priorities to internal and external stakeholders. Several of the priorities were related to greenhouse gas emissions and climate change.
Through this approach, we are meeting the many diverse interests of the people we serve by offering customers choice, keeping energy prices competitive, modernizing our infrastructure, investing in local economies, and improving the environment.

CC2.1d

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

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

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

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

Under Xcel Energy's environmental strategy, we take prudent steps to reduce the impact of our operations on the environment while promoting technology and public policy advancements that will support a cleaner electric system at a reasonable price to customers. Our process begins with the Environmental Policy department which has the specific responsibility of assessing risks and opportunities associated with climate change policy and reporting them internally. The internal reporting processes that achieve Xcel Energy's climate change business strategy includes management providing information to the Board in presentations and communications over the course of the Board calendar. The Risk department also analyzes a range of risks to the company including the policy, physical, and financial impacts of climate change.

The Board has an Operations, Nuclear, Environment and Safety Committee which provides oversight of the environmental strategy and compliance. In addition, senior management presents an assessment of the key risks to the Board annually. Based on this presentation, the Board confirms risk management and mitigation are included in Xcel Energy's strategy.

We believe that our most important short and long term strategies that have been influenced by climate change are: 1) continuing to acquire renewable energy; 2) offering energy efficiency programs to our customers and; 3) reducing the environmental impact of our owned generating facilities through retirements and environmental control retrofit programs.

Short term, these efforts help us meet the annual renewable energy and energy efficiency mandates required by state statute in four of the states we serve. For the long term, these efforts put us on a path to achieve a 30% reduction in CO2 from 2005 levels by 2020.

Important components of our short and long term strategy include the following:

1) Wind Energy - Xcel Energy is the nation's largest utility wind energy provider, holding this ranking for the last twelve years. Our purchases of the Border Wind Farm in North Dakota and the Pleasant Valley Wind Farm in Minnesota, as well as the construction of the Courtenay Wind Farm in North Dakota provide opportunities to grow our ownership of wind generation to serve our customers. The proposed 600 MW Rush Creek project in Colorado, currently before the Colorado PUC, would expand our wind portfolio.

2) Carbon Proxy Cost - When examining future resources needs, the company includes a carbon proxy cost to project the expected future costs of emissions to evaluate climate change risks and opportunities. The company is also analyzing the Environmental Protection Agency's regulation of carbon dioxide emissions in its risk management and resource planning.

3) Demand Side Management (DSM) - Xcel Energy offers more than 160 electric and natural gas efficiency programs that reduce power plant emissions and conserve natural resources over the long term. In 2015, Xcel Energy customers saved about 1,045 GWh of electricity through our energy efficiency programs, enough to prevent approximately 631,000 tons of CO2 for the year, as well as other emissions. Customers also saved 1.7 million Dth of natural gas in our gas efficiency programs. In total, our programs had about 4.2 million electricity and 1 million natural gas participants in 2015. Further, Xcel Energy spent approximately $219M to fund the gas and electric conservation programs and R&D initiatives that develop new DSM programs in 2015. These programs contribute to a long term advantage over our competitors by addressing new market needs for customers and are a short term strategic benefit for our shareholders due to the earned incentive on DSM achievements.

4) Clean Air Clean Jobs Act (CACJA)- The CACJA aims to reduce annual emissions of NOx by at least 70 to 80 percent by 2017 through the retirement and retrofit of 1,800 MW of coal generation. CACJA will help the Colorado system achieve carbon reductions of 35% by 2020. In 2015, Cherokee Generating Station Unit 3, a 152 MW coal generator, was retired. By 2017, Cherokee Unit 4 will be switched from coal to natural gas and Valmont Unit 5 will be retired. This legislative initiative, with a long term focus, provides Xcel Energy with a fair return on its investment and reduces multiple environmental risks for the Company and its customers.

5) Upper Midwest Resource Plan- In January 2015, Xcel Energy filed its Upper Midwest 2016-2030 Resource Plan, outlining a long-term road map to a more sustainable and affordable energy future. Under the proposal, more than 60 percent of our Upper Midwest system's energy mix would be carbon free by 2030, while maintaining fuel diversity to hedge price and reliability risk and keep energy costs affordable. The proposed plan would achieve aggressive reductions in carbon dioxide (CO2) emissions from 2005 levels - a 60 percent reduction by 2030.

6) Transmission- Xcel Energy expanded its transmission operations in 2015 and will continue to do so in the coming years. In 2015, we successfully executed more than $889 M in capital investment in transmission. We energized two major transmission lines in Minnesota as part of the CapX2020 project and in our New Mexico territory we energized 16 new substations, upgraded 27 existing substations, and placed more than 700 miles of new lines into service. We plan to invest an additional $4.1 billion in transmission between 2016 and 2020. These investments contribute to our strategic advantage over our competitors by ensuring our customers continue to receive reliable, low cost energy and increase access to renewable energy resources for the long term.

7) Colorado Innovative Clean Technology Program (ICT)- Xcel Energy established the ICT Program, an initiative to test new technology with the potential to lower greenhouse gas emissions. These programs contribute to our strategic advantage by providing the opportunity to test these technologies in the short term.
8) Nuclear Power- we maintain and operate two nuclear plants in the Upper Midwest. These plants contribute to a power mix in that system that is 51% carbon free, and in 2013 we upgraded the Monticello plant to increase its electric generation output from 600 to 671 MW, further increasing the carbon-free electricity we derive from nuclear power.
9) SolarTAC- A world-class solar test facility for demonstrating and validating some of the most advanced solar technologies available. In 2015, Xcel Energy performed the remaining battery tests for the Community Energy Storage demonstration. The tests conducted were solar ramping/smoothing, voltage regulation and energy time-shifting using the last set of battery parameters and variables.

CC2.2b

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

CC2.2c

Does your company use an internal price of carbon?

Yes

CC2.2d

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

We use an internal price of carbon in our modeling for our resource plans. For the Upper Midwest 2016-2030 Resource Plan, CO2 planning values were:
- A starting assumption of $21.50 per ton carbon dioxide (CO2) as a regulatory cost, starting in 2019 and escalating at inflation.
- Varied down to a low of $9/ton and up to $34/ton, both beginning in 2019, as established by the State of Minnesota (Docket No. E999/CI-1199)
- An additional sensitivity of no carbon cost was also performed, as required by the State of North Dakota
- “late implementation” sensitivity cases were tested, both $9 and $24 starting in 2024
- the societal value of carbon as an externality was included as a sensitivity case.

Details can be found in Appendix J of the resource plan filing on our website
https://www.xcelenergy.com/company/rates_&_regulations/resource_plans/upper_midwest_2016-2030_resource_plan

Carbon pricing is also used as a sensitivity in resource planning in New Mexico and Colorado. In our most recent resource plan filing in Colorado, we proposed a

low and high carbon price sensitivity to be run in Phase II of the resource plan. The low case was based on several external Clean Power Plan studies from NERC, MJ Bradley, and EPA. The prices start at $1.86/ton in 2022 and rise to $15.06 in 2030, then escalate at inflation. For the high case, we propose $20/ton starting in 2022 escalating at inflation. In New Mexico, our resource plans include carbon price sensitivities with levels of $8/ton, $20/ton, and $40/ton.

CC2.3

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

Direct engagement with policy makers
Trade associations
Funding research organizations

CC2.3a

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

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	Xcel Energy supported reporting of carbon emissions long before it was mandatory. To demonstrate its environmental leadership Xcel Energy joined the voluntary reporting organization, The Climate Registry, in 2008 and helped develop the protocols for reporting of emissions by the electric sector. We continue to report and verify carbon emissions, which are publicly available through www.theclimateregistry.org.	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.
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. According to the 2014 Ceres report Benchmarking Utility Clean Energy, Xcel Energy is among the top five U.S. utilities for energy efficiency savings. In 2015, our energy saving efforts and extensive portfolio of programs continued to receive national recognition. 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. We work with legislators and policymakers to advocate accordingly.

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Clean energy generation	Support	Xcel Energy operates in eight states that have renewable energy requirements by state law. Two of these states, Colorado and Minnesota, have some of the nation's most aggressive targets at 30 percent of retail sales by 2020. For the 11th year we are the nation's leading wind energy provider according to the American Wind Energy Association. Xcel Energy is fortunate to have rich wind and solar resources in the states it serves and Xcel Energy works to continue to deliver these energy resources in the most cost effective way.	Xcel Energy values renewable energy as a resource that is critical to achieving the environmental goals it has set forth. There is some risk to unfavorable policy around renewable energy and Xcel Energy has had concerns that some state level proposals have included mandates would require investments in solar power -- the most expensive energy resource -- that are not justified by current technology and at a time when we are not seeing growth in sales to pay for the investment. Distributed solar generation may become an economic competitive threat to our load growth in the future; however we believe the economics, absent significant subsidies, do not support such a trend in the near term unless a state mandates the purchase of such generation. Some states have considered such legislation.
Cap and trade	Neutral	While there are currently no strong cap and trade proposals pending for the United States or at the state level in states that Xcel Energy serves, Xcel Energy has actively engaged in policy discussions about cap and trade in the past. While Xcel Energy would prefer a national program created through new legislation, currently, carbon emission reduction requirements are likely to be led by the Environmental Protection Agency as opposed to the United States Congress. Xcel Energy is in direct communication with EPA and other stakeholders about its ideas for carbon emissions reductions.	Xcel Energy advocated for better recognition of our emissions reduction leadership, more fair targets, and the greatest flexibility at the state level to implement carbon emission reduction programs. Though we are neutral on what a potential legislative solution would include, Xcel Energy would prefer a national program created through legislation.
Other: Clean Power Plan	Support with major exceptions	In 2015, we have continued to be heavily involved in understanding, analyzing, and commenting on EPA's 111(d) Clean Power Plan rulemaking process in order to reduce customer costs and reinforce corporate environmental leadership strategy. In 2015, this work involved advocacy throughout the first half of the year, analyzing the Final Rule released in August, and engaging our states in productive planning. We submitted comments to the proposed Federal Plan that would provide guidelines for Clean Power Plan implementation. Due to the stay in early 2016, the nature of this work changed, but we are continually focused on ensuring carbon rules give credit to the investments our customers have already made and create an environment in which industry can continue to thrive. As part of our engagement on climate policy, we have been involved with the utility coalition Center for Innovative Climate Solutions, Colorado State University's Center for the New Energy Economy, Center for Climate	In response to the proposed Federal Plan for Clean Power Plan Implementation, Xcel Energy has proposed several modifications to improve the program in our comments to the EPA: Allow the customers of utilities who retire coal plants to retain the environmental value created by the retirement; Authorize a common-sense approach to the issue of “leakage” of emissions from existing to new units in a mass-based program, focusing on a state’s authority to design its leakage program narrowly consistent with the realities of its operations; Ensure that leakage requirements do not apply to new generation replacing nuclear, coal hydro or renewables; Respect the existing, proven state measurement and verification regimes for energy efficiency and renewable energy; and count all new renewable energy facilities for compliance purposes even

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
		Change and Energy Solutions, the MJ Bradley Downstream Initiative, and local sustainability boards. We were also recently recognized with the EPA Climate leaders award.	if they are built on the site of an existing renewable plant. We have been and will continue to work with states to the extent that they continue to develop a state plan to comply with the Clean Power Plan.

CC2.3b

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

Yes

CC2.3c

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

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
American Gas Association (AGA)	Mixed	In 2009 AGA approved the organizations Climate Change Principals. They state that natural gas should be a cornerstone of any viable greenhouse gas reduction program. Climate change mitigation is a national priority and federal action to reduce greenhouse gas emissions is warranted. Such action should be developed in concert with national energy and economic conditions and goals. All sectors of the economy should contribute to emissions reductions and any program should maximize efficiency and minimize cost. A diverse mix of low GHG emitting sources should be promoted. Gas utilities need to be able to recover the cost of a program.	As Board members we contribute to and influence the positions of AGA through our participation.
Colorado Association of Commerce and	Mixed	CACI includes the following in their climate change position: recognition for what industry and the legislature are already doing or have done to reduce GHGs, support of engineering solutions for GHG emissions reductions,	As Board members we contribute to and influence the positions of CACI through our participation.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Industry (CACI)		opposes legislation to aggressively reduce carbon emissions (i.e., “carbon tax,” “cap and trade”) without an accurate assessment of cost and benefits as well as consideration of technological capabilities for mitigating the impact on carbon-intensive industries, which will have a negative impact by driving up energy costs to all consumers, discouraging economic growth in Colorado and driving jobs to other states.	
Edison Electric Institute (EEI)	Mixed	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 2014, electric power sector CO2 emissions had declined 15 percent from 2005 levels, driven in part by low natural gas prices, increased deployment of renewable generation and low load growth.	As Board members and having held other leadership positions in this organization, we contribute to and influence the positions of EEI including those on environmental matters.
Electric Power Research Institute (EPRI)	Mixed	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. They offer "climate briefs" to members on a wide spectrum of climate policy issues.	As Board members we influence the research conducted by EPRI, including the work on environmental matters.

CC2.3d

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

No

CC2.3e

Please provide details of the other engagement activities that you undertake

CC2.3f

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

As a Company our positions on climate change issues and other environmental topics are managed through the internal Environmental Policy department led by the Vice President of Policy and Federal Affairs, who reports directly to the CEO. 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 Environmental Policy department and use the information in their communications and advocacy efforts.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

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

Absolute target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
Abs1	Other: Owned and Purchased Energy	95.7%	30%	2005	80677061.04	2020	No, and we do not anticipate setting one in the next 2 years	We have a target to reduce emissions 30% from 2005 emissions levels by 2020. We are currently 24% below 2005 emissions. Even though we do not currently have plans to officially set science-based targets, we believe this level of reduction is beyond U.S. economy-wide targets that support the U.S.' COP21 pledge, and roughly consistent with science-based targets. Xcel Energy is on a path to reduce carbon emissions more than 30 percent compared with 2005 levels by 2020. Beyond that, we've proposed a resource plan for the Upper Midwest that would double our renewable energy portfolio and reduce carbon emissions 60 percent by 2030 in the region. The carbon dioxide targets are associated with our owned and purchased electricity.

CC3.1b

Please provide details of your intensity target

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

CC3.1c

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

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

CC3.1d

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

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment

CC3.1e

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

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
	66.67%	80%	In 2015, Xcel Energy reduced its carbon dioxide emissions from 2005 levels from both owned and purchased

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
			generation 19 million metric tonnes with 12 million metric tonnes coming from owned generation and 7 million metric tonnes coming from purchased generation. On a percentage basis, the purchased energy we deliver to our customers was delivered with 45 % fewer carbon emissions than in 2005 and energy from owned generation was delivered with 11 % fewer carbon emissions.

CC3.1f

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

CC3.2

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

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Company-wide	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 customer programs, such as Wind Source, Solar Rewards, and Solar Gardens. These programs either directly provide zero emissions electricity to subscribers or retire RECs on their behalf. We have also developed a broad portfolio of energy efficiency offerings so all customers have an opportunity to participate. From rebate programs to energy audits to recycling services, our award-winning programs provide solutions that our customers value. Not only can customers save money by improving efficiency, these projects support the environment.					

CC3.3

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

Yes

CC3.3a

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

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*	6	10409005
Implementation commenced*		
Implemented*	8	21223277
Not to be implemented		

CC3.3b

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

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Processes	Xcel Energy offers about 160 electric and natural gas efficiency programs that reduce power plant emissions and conserve natural resources over the long term. In 2015, Xcel Energy customers saved more than 1,045 GWh of electricity and 1,700,000 dekatherms of natural gas through our energy efficiency	572434	Scope 1 Scope 2 (market-based)	Voluntary		197000000	16-20 years	16-20 years	According to the 2014 Ceres report Benchmarking Utility Clean Energy, Xcel Energy is among the top five U.S. utilities for energy efficiency savings. In 2015, our energy saving efforts and extensive portfolio

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	programs.								of programs continued to receive national recognition. In 2015, Xcel Energy customers saved 1,045 gigawatt-hours of electricity through our energy efficiency programs. With results like this, energy efficiency is one of the most cost-effective ways for our company to reduce emissions and meet growing clean air requirements. In total, our programs had about 4.2 million electricity and 1 million natural gas participants—some of our customers participate in multiple programs.
Process emissions reductions	Enhanced wind forecasting. Xcel Energy has used WindWX since 2009—one of the most advanced wind-production forecasting systems in the world. Through a multi-year research and development project with Global	252380	Scope 1 Scope 2 (market-based)	Voluntary	10500000		1-3 years	16-20 years	Estimated annual CO2e savings are for Colorado generation only. PSCo in Colorado is a stand-alone Balancing Authority. Our

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	Weather Corp. (GWC), an affiliate company of the National Center for Atmospheric Research (NCAR), we helped develop this highly detailed wind-forecasting system. So far, we have improved our wind forecasting accuracy by nearly 35 percent, and better forecasting and other operations improvements have saved our customers a total of $60.6 million in fuel costs through end of 2015.								dispatchers have responsibility for maintaining the balance between load and generation. As a result, we can isolate the contribution from the improvement in our wind forecasting accuracy as a factor in our dispatch decisions. Our NSP and SPS operating companies in Minnesota and Texas, respectively, are members of organized markets in which the organized markets have assumed the responsibility of economic system dispatch across multiple states and including multiple utility generation portfolios. As a result, it is impossible to isolate the effect of our own wind generation and the associated impact of improved wind

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
									generation forecasting on the dispatch of our baseload units.
Low carbon energy installation	Solar Rewards Program. Xcel Energy offers a Solar*Rewards Program, where customers receive incentives from us to buy down the cost of photovoltaic systems installed at their site, on their side of the meter. By generating emissions-free renewable energy at their facility, customers reduce the amount of power they purchase from the utility. The utility also generates less power and therefore lower emissions as a result of these systems. In 2014, the program added over 29 MW of DC rated capacity installations and paid about $29 Million in REC and rebate payments.	242948	Scope 1 Scope 2 (market-based)	Voluntary		29061696	16-20 years	16-20 years	Through Solar*Rewards, we offer customers in Colorado, Minnesota and New Mexico incentives to install solar panels on their homes and businesses. By the end of 2015, Xcel Energy had paid about $371 million in incentives to help customers install more than 31,000 rooftop PV systems, with a capacity of about 244 megawatts-AC. We continue to work with stakeholders to address issues relating to solar energy on our system. In 2015, Solar*Rewards® added 29 MW of new DC rated capacity installations and paid out over $29 Million in

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
									RECs and rebates for all total program installations on our system.
Low carbon energy installation	Solar Rewards Community. Xcel Energy's Solar*Rewards®Community® program gives customers in Colorado and Minnesota an option to invest in solar energy even if they cannot or do not want to install their own panels. Under the program, solar developers apply to Xcel Energy to build and operate solar gardens, which are community-based, shared solar installations connected to the grid. Garden developers offer Xcel Energy customers various options to subscribe, lease or purchase a share of the garden's energy.	12609	Scope 1 Scope 2 (market-based)	Voluntary		1254591	16-20 years	16-20 years	Our Solar*Rewards Community program gives customers in Colorado and Minnesota an option to invest in solar energy even if they cannot or do not want to install their own panels. At the end of 2015 there were currently 25 systems online in Colorado and Minnesota totaling nearly 14.5 MW in size, with 6 MW of that total installed in 2015. Solar*Rewards® Community added over 6 MW of new DC rated capacity installations and paid out over $1.2 M in incentives.
Low carbon energy	Renewable Energy Deliveries. Renewable energy sources play an important role in our diverse	14284762	Scope 1 Scope 2 (market-	Voluntary		822075926	16-20 years	16-20 years	In 2015, 16.8% of the energy delivered to our customers was

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
purchase	energy supply and the responsible transition to a more sustainable energy future. As an early adopter of wind and solar energy, we are well positioned to meet the renewable standards of the states we serve, but our interest goes beyond these requirements. Our customers and the communities we serve want and expect more. They look to Xcel Energy to meet their clean energy needs in the most economical, reliable way. To that end, we continue to seek cost-effective opportunities to acquire new renewable energy sources and to offer customers additional program options that fulfill their interests.		based)						generated by wind, 0.5% was generated by solar, and 3.8% was generated by hydro. Xcel Energy is on pace to surpass renewable energy requirements in the states we serve through at least 2030. New Mexico is an exception, where the company anticipates meeting the state's wind energy requirement through 2024 and has requested a waiver for acquiring additional solar energy from large, universal solar power plants due to constraints under the state's Reasonable Cost Threshold (RCT).
Other	Coal Plant Retirements. We continually evaluate our power plant operations and look for cost-effective opportunities to reduce emissions and stay ahead of clean air requirements.	5857508	Scope 1	Voluntary		85031696	16-20 years	Ongoing	In 2015, we retired Cherokee Unit 3 in Colorado and Black Dog Units 3 and 4 in the Upper Midwest, as well as ceasing

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	Our clean energy strategy includes comprehensive projects, such as Clean Air Clean Jobs in Colorado and the Metro Emissions Reduction Program in Minnesota that significantly reduce air emissions while transforming our fleet of generating plants for the future. Through these efforts, we have installed state-of-the-art emission controls on some plants while retiring and replacing aging coal plants with cleaner, more flexible natural gas. Natural gas-fueled plants have half the emissions of coal, but also operate more efficiently with variable wind and solar generation.								burning coal in Bayfront Unit 5 in the Upper Midwest in favor of natural gas. Additional retirements or conversions are scheduled through 2017 at the Cherokee and Valmont plants in Colorado.
Energy efficiency: Building services	Just as Xcel Energy encourages customers to use energy more efficiently in their homes and businesses, we seek opportunities to conserve resources at our own facilities. In 2008, our facilities organization developed its Sustainable Facilities Management program to align our building management activities with the company's core value of protecting the	636	Scope 3	Voluntary		1400000	16-20 years	16-20 years	By the end of 2015, we had accomplished the following through projects at our buildings and service centers: Saving more than 8 million kilowatt hours, including 868,645 kilowatt hours for the year; Conserving more than 170,100 therms of

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	environment. Three teams help manage a number of environmental impacts associated with our facilities: the Conservation Team, Environmental Safety Team, and Sustainable Design Team.								natural gas, including 26,924 therms of natural gas for the year; Reducing water usage by 4.6 million gallons, including 326,975 gallons for the year. We continue to seek LEED (Leadership in Energy and Environmental Design) certification for our facilities. LEED is a U.S. Green Building Council certification program that recognizes sustainable building strategies and practices. Xcel Energy currently has 14 facilities that are LEED certified throughout the eight states where we operate.
Other	Carbon offset pilot program- The first phase of our carbon offset pilot program for Colorado came to a close in late 2014, with delivery into our account on the Climate Action Reserve of the last tranche of verified carbon	52700	Scope 1	Voluntary		1313630	1-3 years	3-5 years	In the next phase of the program, we are working to convert our CRTs into California Compliance Offsets (CCOs), which have a value in the California

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	offsets purchased under the pilot program. The goal of the program is to learn how the carbon offset marketplace works, which better positions Xcel Energy to comply with any future GHG regulations at lower cost. PSCo now holds a portfolio of 262,726 metric tons CO2 equivalent in verified voluntary offsets, denominated as Climate Reserve Tonnes (CRTs). These include forestry, coal mine methane, trona mine methane, landfill gas, and dairy methane -- a total of five projects, with offset vintages from 2008 through 2014. Of the total, 182,726 metric tons CO2 equivalent are in project types eligible for conversion into compliance offsets that can be used by regulated entities in the California cap and trade market. Scope 1 emissions (offsets), voluntary, ongoing.								market approximately double the price paid for CRTs. Conversion requires listing the projects with the California Air Resources Board; undergoing desk review by a second verifier; and requesting issuance of CCOs. We are in the midst of this process now, with each project moving on a slightly different timeframe. We hope to have the conversion complete by the end of 2015. At that point we will invest the proceeds in an innovative new program in Colorado with GHG reduction benefits.

CC3.3c

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

Method	Comment
Other	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
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.
Dedicated budget for energy efficiency	The Company has a dedicated budget for energy efficiency in each of the states it serves. In 2015 the Company spent over $197 million on the energy efficiency programs it offers to customers.
Internal price of carbon	An internal price of carbon, referred to by the Company as a Carbon Proxy Cost. The Company strategy is linked to the risks and opportunities and emissions reductions targets through the use of a “carbon proxy cost.” When examining future resources needed to meet our customers' needs, the company includes a carbon proxy cost to project the expected future costs of carbon dioxide emissions on various planning scenarios. The carbon proxy costs are in the range of approximately $20/ton. The company is also considering analytical methods to simulate direct Environmental Protection Agency regulation of carbon dioxide emissions in its environmental risk management and resource planning.
Compliance with regulatory requirements/standards	Xcel Energy is on pace to surpass renewable energy requirements in the states we serve through at least 2030. New Mexico is an exception, where the company anticipates meeting the state’s wind energy requirement through 2024 and has requested a waiver for acquiring additional solar energy from large, universal solar power plants due to constraints under the state’s Reasonable Cost Threshold (RCT).
Partnering with governments on technology development	Improved wind forecasting – 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	SolarTAC. Xcel Energy is a founding member of SolarTAC, 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	Renewable Energy Portfolio - Renewable energy sources play an important role in our diverse energy supply and the responsible transition to a more sustainable energy future. As an early adopter of wind and solar energy, we are well positioned to meet the renewable standards of the states we serve, but our interest goes beyond these requirements. Our customers and the communities we serve want and expect more. They look to Xcel Energy to meet their clean energy needs

Method	Comment
	in the most economical, reliable way. To that end, we continue to seek cost-effective opportunities to acquire new renewable energy sources and to offer customers additional program options that fulfill their interests. In 2015, Xcel Energy's renewable energy portfolio consisted of 6,557 MW of wind, 378 MW of hydro, 189 MW of biomass, 112 MW of RDF/landfill, and 459 MW of solar.
Dedicated budget for other emissions reduction activities	Research, Development and Demonstration (RDD): DSM - Xcel Energy offers more than 160 efficiency and conservation programs that help our customers save money, as well as reduce power plant emissions and conserve natural resources, The company spent over $219M in 2015 to support electric and gas conservation and load management including about $3M specifically on R&D. Actual 2015 energy efficiency achievements include over 1045 GWh of electric conservation and nearly 1,700,000 Dth of natural gas conservation.
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.

CC3.3d

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

Further Information

Page: CC4. Communication

CC4.1

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

Publication	Status	Page/Section reference	Attach the document	Comment
In voluntary communications	Complete	Pages 31, 35, 39	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/Xcel_Energy-AR2015.pdf	2015 Annual Report
In voluntary communications	Complete	Page 28	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/Xcel_Energy-Proxy2016.pdf	2016 Proxy Statement
In voluntary communications	Complete	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/2015 Xcel Energy CO2 Energy at a Glance - Final.pdf	2015 Energy and Carbon Reporting
In voluntary communications	Complete	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/16-03-344-Climate-Change-Greenhouse-Gas-Emissions.pdf	2015 Corporate Responsibility Report - Climate Change and Greenhouse Gas Emissions
In voluntary communications	Underway - previous year attached	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/NSP_EquityShare 2014.pdf	Climate Registry 2014 NSP Complete Inventory
In voluntary communications	Underway - previous year attached	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/PSCo_EquityShare 2014.pdf	Climate Registry 2014 PSCo Complete Inventory
In voluntary communications	Underway - previous year attached	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/SPS_EquityShare 2014.pdf	Climate Registry 2014 SPS Complete Inventory
In voluntary communications	Underway - previous year attached	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/TCR-EPS-Verification-Statement-NSP-2014-LRQA-120315.pdf	Climate Registry 2014 NSP Verification
In voluntary communications	Underway - previous year attached	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/TCR-EPS-Verification-Statement-PSCo-2014-LRQA-120315.pdf	Climate Registry 2014 PSCo Verification
In voluntary communications	Underway - previous year attached	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/TCR-EPS-Verification-Statement-SPS-2014-LRQA-120315.pdf	Climate Registry 2014 SPS Verification
In voluntary communications	Underway - previous year attached	whole document	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC4.1/TCR-EPS-Verification-Statements-Xcel-2014-LRQA-120315.pdf	Climate Registry 2014 Xcel Energy Verification

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

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

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

CC5.1a

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	We consider any policies related to climate policy and greenhouse gas regulation to be a risk in this category. Increased public awareness and concern regarding climate change may result in more	Increased operational cost	3 to 6 years	Direct	Very likely	Low-medium	The CPP could require additional emission reductions in states in which Xcel Energy operates. If state plans do not provide credit for the investments we	We have developed several management techniques to stay ahead of GHG regulation by taking early action to lower our carbon emissions. We have managed	Our expenses for renewable energy in 2015 was approximately $822 million, which is recovered through our rates. In 2015, we paid out over $29 million in REC and rebates for the distributed solar

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	state, regional and/or federal requirements to reduce or mitigate the effects of GHGs. Our electric generating facilities may be subject to additional GHG emission regulation at either the state or federal level in the future. Such regulations could impose substantial costs on our system. The form and stringency of GHG regulation in the power sector had become more clear with the finalization of the CPP by the EPA, but the legality of the Clean Power Plan is currently being challenged in the courts. The EPA's plan to regulate GHGs from power plants was stayed by the United States						have already made to reduce GHG emissions, or if they require additional initiatives or emission reductions, then their requirements would potentially impose additional substantial costs. Until Xcel Energy has more information about SIPs or knows the requirements of the EPA's upcoming final rule on federal plans for the states that do not develop related plans, Xcel Energy cannot predict the costs of compliance with the final rule until it takes	this risk by integrating renewable energy into our system to achieve emissions reductions. We are the nation's largest utility wind energy provider and have been for 12 consecutive years. By Dec. 2015, Xcel Energy was delivering over 6557 MW of wind and over 459 MW AC of solar via utility scale and on-site offerings. We include adjustments for regulation and policy changes, including EPA regulations and emissions targets, in our resource planning process. Our resources plans do not include any new coal plants. We use a	installations on our system. The company spent approximately $197 million on DSM and EE programs in 2014 and earned incentives on these programs of $62 million. Our utility subsidiaries have entered into wind contracts averaging $42/MWh for both NSP and PSCo and $24/MWh for SPS. The carbon proxy and resource planning efforts are integrated into current processes at minimal incremental cost.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Supreme Court, which creates additional uncertainty over the legality of the rules and future compliance deadlines. State plans to achieve the EPA's goals were to be due by September 2018, but we expect that these deadlines will be extended due to the stay. In addition to the legal challenge against the CPP, uncertainties remain regarding implementation plans in our states (and the federal plan imposed by the EPA for states who do not submit approvable plans), including what opportunities are available to reduce costs, whether and what type of emission trading will be available, how states will						effect. Xcel Energy believes compliance costs will be recoverable through regulatory mechanisms. If our regulators do not allow us to recover all or a part of the cost of capital investment or the O&M costs incurred to comply with the CPP or cost recovery is not provided in a timely manner, it could have a material impact on results of operations, financial position or cash flows.	carbon proxy cost mandated by the state commissions as part of its evaluation of the impact of potential GHG regulation on future resource acquisition plans and scenario analysis. The carbon proxy costs are approximately $20/ton. In January 2015, NSP filed its Upper Midwest 2016-2030 Resource Plan outlining a long-term road map to a more sustainable and affordable energy future. By 2030, more than 60 percent of our Upper Midwest system's energy supply will be carbon free, resulting in a 60 percent reduction	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	allocate the reduction burden among utilities, what actions are creditable and the indirect impact of carbon regulation on natural gas and coal prices. The impact of these types of regulations and policies on our operational costs and the costs to our customers depends on a number of factors, including the regulatory authority (state versus national), the allocation of emission allowances to specific sources and the indirect impact of carbon regulation on natural gas and coal prices. Another important factor is our ability to recover the costs incurred to comply with any							by 2030. In January 2016, PSCo introduced the "Our Energy Future" plan. The plan involves pilot programs for energy storage, new renewable options for customers, and explores the possibility of adding 1000 MW of renewables.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	regulatory requirements in a timely manner. Generally, regulated utilities are able to recover prudently incurred costs including costs to comply with environmental regulations. However, if our regulators do not allow us to recover all or a part of the cost of capital investment or the O&M costs incurred to comply with the mandates, it could have a material adverse effect on our results of operations.								
Renewable energy regulation	As a major provider of solar energy, Xcel Energy sees solar policy as both a risk and an opportunity. The risk is seen in several states in which we operate,	Increased operational cost	1 to 3 years	Direct	Very likely	Low-medium	The financial implications of solar legislation depend on State Commissions and distributed generation market expansion. In	Through Solar*Rewards, we offer customers in Colorado, Minnesota and New Mexico incentives to install solar panels on their	In 2015, Solar*Rewards® added 29 MW of new DC rated capacity installations and paid out over $29 Million in RECs and rebates for all total program

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	including Colorado and Minnesota due to greater interest from policymakers and customers in solar energy in these jurisdictions. Xcel Energy is approaching solar energy with the same commitment that made our company the No. 1 utility provider of wind energy. We are investing in economical large-scale projects that serve all customers on our systems, in addition to offering customers the option to participate more through voluntary, customer-driven programs, such as Solar*Rewards® and Solar*Rewards® Community®. Investing in solar power is an opportunity to						CO, solar customers receive the retail rate through net-metering, about $0.06/kwh is considered a subsidy for grid costs that will be borne by rate-payers. In MN, solar customers receive an incentive of approximately $0.14/kwh. Xcel Energy will use the renewable development fund to support renewable generation and research projects. The total cost impact depends on how widespread adoption of solar technologies becomes.	homes and businesses. By the end of 2015, Xcel Energy had paid about $371 million in incentives to help customers install more than 31,000 rooftop PV systems, with a capacity of about 244 megawatts-AC. We continue to work with stakeholders to address issues relating to solar energy on our system. Our Solar*Rewards Community program gives customers in Colorado and Minnesota an option to invest in solar energy even if they cannot or do not want to install their own panels. At the end of 2015 there were currently 25 systems online in Colorado and	installations on our system. Solar*Rewards® Community added over 6 MW of new DC rated capacity installations and paid out over $1.2 M in incentives.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	further diversify our energy supply and meet customer interest in clean energy. As we expand the use of solar power, we believe the policies that encourage its development must work for all customers. Our objective is to meet the preferences and interests of our customers in a way that treats everyone equally and fairly, whether you are a customer who chooses to invest in more renewable energy or not. Net metering policies establish how customers with distributed generation (DG), typically rooftop solar, are compensated and charged for the electricity they							Minnesota totaling nearly 14.5 MW in size, with 6 MW of that total installed in 2015. In January 2016, Xcel Energy's Colorado subsidiary introduced the "Our Energy Future" plan. The plan involves pilot programs for energy storage paired with renewable energy resources, the alignment of pricing in a more fair and equitable manner for customers, the introduction of Solar*Connect, a new cost-based program that allows customers to sign up for 100% solar power, exploring opportunities for up to 1000 MW of additional renewable	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	produce and use. The current net metering calculation does not separate the cost of energy from the cost of the infrastructure (poles, wires and other interconnected technologies), freeing some distributed or “rooftop” solar energy users from the costs that keep the electric grid safe and reliable. Solar customers still use and benefit from having the broader energy system available to them through the electric grid when they need it at night, when it is cloudy or when their solar panels are not producing. The risk is that, as the solar industry grows, our operational costs							resources, and an intelligent grid proposal to improve customer choice and control of energy usage.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	will increase to accommodate the DG customers use of the system without full payment will ultimately increase rates and non-solar customers will bear the cost burden.								
International agreements	International agreements could have an impact to the extent they lead to future federal or state regulations. The United States continues to participate in international negotiations related to the United Nations Framework Convention on Climate Change (UNFCCC). In December 2015, the 21st Conference of the Parties to the UNFCCC reached consensus among	Increased operational cost	3 to 6 years	Direct	About as likely as not	Low-medium	The CPP could require additional emission reductions in states in which Xcel Energy operates. If state plans do not provide credit for the investments we have already made to reduce GHG emissions, or if they require additional initiatives or emission reductions, then their requirements would	We have developed several management techniques to stay ahead of GHG regulation by taking early action to lower our carbon emissions. We have managed this risk by integrating renewable energy into our system to achieve emissions reductions. We are the nation's largest utility wind energy provider and have been for 12	Our expenses for renewable energy in 2015 were approximately $822 million, which is recovered through our rates. In 2015, we paid out over $29 million in REC and rebates for the distributed solar installations on our system. The company spent approximately $197 million on DSM and EE programs in 2015 and earned incentives on these programs of $62 million. Our utility subsidiaries

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	190 nations on an agreement (the Paris Agreement) that establishes a framework for GHG mitigation actions by all countries ("nationally determined contributions"), with a goal of holding the increase in global average temperature to below 2 degrees Celsius above pre-industrial levels and an aspiration to limit the increase to 1.5 degrees Celsius. The Paris Agreement could result in future additional GHG reductions in the United States.						potentially impose additional substantial costs. Until Xcel Energy has more information about SIPs or knows the requirements of the EPA's upcoming final rule on federal plans for the states that do not develop related plans, Xcel Energy cannot predict the costs of compliance with the final rule until it takes effect. Xcel Energy believes compliance costs will be recoverable through regulatory mechanisms. If our regulators do not allow us to recover all or a part of the	consecutive years. By Dec. 2015, Xcel Energy was delivering over 6570 MW of wind and over 459 MW AC of solar via utility scale and on-site offerings. We include adjustments for regulation and policy changes, including emissions targets, in our resource planning process. Our resources plans do not include any new coal plants. We use a carbon proxy cost mandated by the state commissions as part of its evaluation of the impact of potential GHG regulation on future resource acquisition plans and scenario analysis. The	have entered into wind contracts averaging $42/MWh for both NSP and PSCo and $24/MWh for SPS. The carbon proxy and resource planning efforts are integrated into current processes at minimal incremental cost.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							cost of capital investment or the O&M costs incurred to comply with the CPP or cost recovery is not provided in a timely manner, it could have a material impact on results of operations, financial position or cash flows.	carbon proxy costs are approximately $20/ton. In January 2015, NSP proposed its Upper Midwest 2016-2030 Resource Plan outlining a long-term road map to a more sustainable and affordable energy future. Under this proposal, more than 60 percent of our Upper Midwest system's energy supply will be carbon free, resulting in a 60 percent reduction by 2030. In January 2016, PSCo introduced the "Our Energy Future" plan. The plan involves pilot programs for energy storage, new renewable options for customers, and explores the possibility of	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								adding 1000 MW of renewables.	

CC5.1b

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	Our customers' energy needs vary with weather conditions, primarily temperature and humidity. For residential customers, heating and cooling represent their largest energy use. To the extent weather conditions are affected by climate change, customers' energy use could increase	Increased operational cost	Up to 1 year	Direct	About as likely as not	Low	The direct financial implications of changes in extreme temperatures and changes in mean temperatures are difficult to determine due to uncertainty in occurrence and magnitude.	Xcel Energy is subject to physical risks from both changes in extreme temperatures and changes in mean temperatures. To manage these risks, Xcel Energy uses several methods including advanced water management, wind energy, demand side management, expanded transmission,	We made capital investments in our transmission system of $889 million. Additionally, Xcel Energy plans to make an additional investment in transmission of $4.1B between 2016 and 2020 and investments of $1.9B in natural gas pipeline asset health and replacement work by 2020. Our

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	or decrease. Increased energy use due to weather changes may require us to invest in additional generating assets, transmission and other infrastructure to serve increased load. Decreased energy use due to weather changes may result in decreased revenues. Extreme weather conditions in general require more system backup, adding to costs, and can contribute to increased system stress, including service interruptions. Weather conditions outside of our service territory could also have an impact on our revenues. We buy and sell electricity depending upon system needs and							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.	expenses for purchasing renewable energy in 2015 was approximately $822 million, which is recovered through our rates. In 2015, we paid out over $29 million in REC and rebates for the distributed solar installations on our system. The company spent over $197M on DSM programs in 2015 and earned approximately $62 million in incentives for its achievements.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	market opportunities. Extreme weather conditions creating high energy demand may raise electricity prices, which would increase the cost of energy we provide to our customers.								
Uncertainty of physical risks	Severe weather impacts our service territories, primarily when thunderstorms, tornadoes and snow or ice storms occur. To the extent the frequency of extreme weather events increases, this could increase our cost of providing service. Extreme weather conditions in general require more system backup, adding to costs, and can contribute to increased system stresses, including	Increased operational cost	Up to 1 year	Direct	About as likely as not	Low	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.	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	We made capital investments in our transmission system of $889 million in 2015. Additionally, Xcel Energy plans to make an additional investment in transmission of $4.1B between 2016 and 2020 and investments of $1.9B in natural gas pipeline asset health and replacement work by 2020. Our expenses for purchasing renewable energy in 2015 was approximately

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	service interruptions. Severe weather, such as tornadoes, thunder storms, cold weather, snow or ice, not only impacts our service territories directly, but can also impact surrounding areas in ways that create ripple effects on our operations. To the extent the frequency of extreme weather events increases, we must prepare accordingly as this could increase our cost of providing service.							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 participated in the DOE's partnership for Energy Sector Climate Resilience. The partnership has identified extreme weather events, changing temperatures and precipitation, and severe storms, and other changes due to climate change as a potential risk to the grid and utility businesses. The	$822 million, which is recovered through our rates. In 2015, we paid out over $29 million in REC and rebates for the distributed solar installations on our system. The company spent over $197M on DSM programs in 2015 and earned approximately $62 million in incentives for its achievements. We are currently spending over $200,000 on projects related to the DOE's partnership for Energy Sector Climate Resilience.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								utilities have performed a vulnerability assessment and are working to find solutions to improve the resiliency of the grid.	
Change in mean (average) precipitation	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	Increased operational cost	>6 years	Direct	Unlikely	Low-medium	The financial implications of drought-related events are difficult to determine due to uncertainty in occurrence and magnitude. The Company paid approximately $13 million in direct costs to supply water to its facilities in arid regions in 2015. We also see incremental costs of about $5.5 M for drought-conditional agreements, which can be exercised in a drought. In the severest drought, the risk is that no	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	The Company spent approximately $13 M in 2015 on direct water supply costs. Additionally, the Company employs a Water Resources work group which is responsible for planning and management of the Company's water supply.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	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						water would be available at any price and generation would have to be curtailed.	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	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	increase the price they pay for energy. Drought is a common occurrence in the PSCo region. 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. Drought is similarly common in the SPS region, but the generating facilities' water supply utilizes drought-resistant treated municipal effluent and groundwater							permits allow some plant operating flexibility, along with additional environmental monitoring requirements. We have maintained relatively flat water consumption 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.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	sources. We may not recover all costs related to mitigating these physical and financial risks. We must continue to ensure that our operations use water efficiently and have adequate supply.								

CC5.1c

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Our customers' perceptions of our position on climate policy or their desire for even more climate-related activity or products beyond our	Increased operational cost	>6 years	Indirect (Supply chain)	Unlikely	Low	Financial implications would take the form of low customer satisfaction and potentially lost customers. We could also see increased rates depending on	Xcel Energy provides a myriad of programs to meet new and different customer needs. Through these programs, we maintain high customer satisfaction in the face of changing market dynamics created by	Our expenses for purchasing renewable energy in 2015 were approximately $822 million, which are recovered through our rates. In 2014,

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	most cost-effective solutions affects our customer satisfaction scores.						how customers use our system and our ability to recover increased costs. We have successfully offered rates competitive with the national average, while providing enhanced services and protecting customers that choose our base offering from subsidizing enhanced services. With our rates and offerings, the financial impact is expected to be low.	climate change. In 2015, 95 percent of customers gave Xcel Energy positive marks for overall satisfaction. Xcel Energy's commitment to customers was validated through historic high positive feedback related to the company's concern for safety, support of renewable energy sources and delivery of reliable electricity service. In January 2016, Xcel Energy's Colorado subsidiary introduced the "Our Energy Future" plan. The plan involves pilot programs for energy storage paired with renewable energy resources, the alignment of pricing in a more fair and equitable manner for customers, the introduction of Solar*Connect, a new cost-based program that allows customers to sign up for 100% solar power,	we paid out over $29 million in REC and rebates for the distributed solar installations on our system. Our utility subsidiaries have entered into wind contracts averaging $42/MWh for both NSP and PSCo and $24/MWh for SPS. The company spent over $197M on DSM programs in 2015 and earned approximately $32 million in incentives for its achievements.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								investment in natural gas reserves to take advantage of historically low gas prices, exploring opportunities for up to 1000 MW of additional renewable resources, and an intelligent grid proposal to improve customer choice and control of energy usage. We continue to ensure that our energy is delivered at a competitive cost and maintain competitive rates for our customers. We continue to purchase wind energy, which serves to meet emissions reductions targets at a competitive cost. Customers continue to provide high positive scores to Xcel Energy for being a good corporate citizen.	
Changing consumer behaviour	Climate change may impact a region's	Reduced demand for goods/services	>6 years	Direct	About as likely as not	Low-medium	We continue to maintain our environmental leadership,	Xcel Energy provides a myriad of programs to meet new and different customer	Our expenses for purchasing renewable energy in 2015

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	economic health, which could impact our revenues. Our financial performance is tied to the health of the regional economies we serve. The price of energy has an impact on the economic health of our communities.						including renewable energy purchases and innovative programs, which we anticipate to preclude any financial impact from new customer behavior. The current trends do not indicate a loss of customers or changing economic health in the communities in which we serve.	needs. For example, we participate in the Solar Technology Acceleration Center (SolarTAC) to study the costs and benefits of battery storage. In 2015, Xcel Energy performed the remaining battery tests for the Community Energy Storage demonstration. The tests conducted were solar ramping/smoothing, voltage regulation and energy time-shifting using the last set of battery parameters and variables. We offer our customers opportunities to purchase cleaner power through our Windsource and Solar*Rewards programs. Windsource is a voluntary green energy program that gives customers the option to purchase more renewable energy, above what is provided in our	were approximately $822 million, which is recovered through our rates. In 2015, we paid out over $29 million in REC and rebates for the distributed solar installations on our system. Our utility subsidiaries have entered into wind contracts averaging $42/MWh for both NSP and PSCo and $24/MWh for SPS. The company spent over $197 million on DSM programs in 2015 and earned approximately $62 million in incentives for its achievements. In 2015 we spent an additional $7000 on our

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								standard energy supply. Through Solar*Rewards, we offer customers in Colorado, Minnesota and New Mexico incentives to install solar panels on their homes and businesses. Simultaneously, we continue to ensure that our energy is delivered at a competitive cost and maintain competitive rates for our customers. We continue to purchase wind energy, which serves to meet emissions reductions targets at a competitive cost. We also offer demand side management and energy efficiency programs that allow customers to engage in new energy consumption behaviors that also improve the system.	Community Energy Storage demonstration project at SolarTAC, with the program having a final total cost of approximately $400,000.
Uncertainty in market signals	To the extent financial markets view	Increased capital cost	>6 years	Direct	Unlikely	Low	We continue to maintain our environmental	Our primary approach to managing the financial market risks	Our expenses for purchasing renewable

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	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.						leadership, including renewable energy purchases and innovative programs, which we anticipate to preclude any financial impact from access to capital markets.	associated with climate change is our planning and investments in low-carbon energy resources such as the development of renewable energy resources, investments in plant modernizations, and energy efficiency programs. Our governance structure, described in CC2, also ensures that we adequately consider the impacts of climate-related risks on the company. We also comprehensively disclose the impact of carbon emissions through the Dow Jones Sustainability Index reporting, Carbon Disclosure Project reporting, publication of our Corporate Responsibility Report, and the reporting on climate-related risks in our Annual Report. Further, we engage in the sharing of sustainability best	energy in 2015 were approximately $822 million, which are recovered through our rates. In 2015, we paid out over $29 million in RECs and rebates for the distributed solar installations on our system. Our utility subsidiaries have entered into wind contracts averaging $42/MWh for both NSP and PSCo and $24/MWh for SPS. The company spent over $197M on DSM programs in 2015 and earned approximately $32 million in incentives for its achievements.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								practices through the Electric Power Research Institute's Energy Sustainability Interest Group.	

CC5.1d

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

CC5.1e

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

CC5.1f

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

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

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

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

CC6.1a

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other regulatory drivers	To address environmental issues and reduce risk, we have invested in environmental initiatives that create a fair return on our investments, and reduce	Investment opportunities	>6 years	Direct	Very likely	Low-medium	We have seen significant positive financial implications for our wind energy additions. Wind also provides a valuable hedge against other	Wind power is an important cost-effective part of Xcel Energy's diverse energy supply. It provides clean energy that reduces emissions and	Our proposed Rush Creek Wind Farm will include $1 billion in capital expenditures for wind generation and transmission. Our expenses for renewable

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	regulatory uncertainty and regulatory lag in recovering our investments. Opportunities driven by changes in regulation create investment opportunities that benefit our operating companies and customers, such as wind generation, demand response, and transmission expansion to support renewable energy growth.						fuel costs because we can establish 20-25 year long term purchase agreements. Our slate of wind projects announced in 2013, which are nearly complete, are expected to save customers over $900 million over the length of the contracts. Additionally, our proposed Rush Creek Wind Farm would save Colorado customers $800 million by taking advantage of tax credits.	long-term contract can protect customers from the rising cost of fossil fuels and environmental compliance. We announced plans in 2013 to grow our wind generation portfolio by 1900MW - nearly 40 percent through nine new cost-effective projects. By the end of 2015, we had completed seven projects totaling 1500 MW, with the remaining two projects set for completion in 2016. The projects are being offered at prices competitive with new natural gas-fueled generation and are estimated to save customers	energy in 2015 were approximately $822 million, which is recovered through our rates. In 2015, we paid out over $29 million in REC and rebates for the distributed solar installations on our system. The company spent approximately $197 million on DSM and EE programs in 2015 and earned incentives on these programs of $62 million. Our utility subsidiaries have entered into wind contracts averaging $42/MWh for both NSP and PSCo and $24/MWh for SPS. We made

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								more than $900M over the length of the contracts. Xcel Energy added two new wind farms in the Upper Midwest in 2015 that the company owns and operates, and broke ground on a third. In 2016 we announced our proposed 600MW Rush Creek Wind Farm in Colorado, which would save customers over $800M by taking advantage of available tax credits. The wind farm will cost $1B in capital investments, including additional transmission lines. Xcel Energy increased the solar energy on	capital investments in our transmission system of $889 million. Additionally, Xcel Energy plans to make an additional investment in transmission of $4.1B between 2016 and 2020 and investments of $1.9B in natural gas pipeline asset health and replacement work by 2020.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								our systems in 2015 by more than 130 MW-40 percent. We helped customers install more than 5,700 private solar energy projects and added 11 new community solar gardens. We are integrating our growing renewable resources through transmission expansion, and we see great opportunities in growing the new gas infrastructure. Our EE programs also offer emissions and cost savings.	
Renewable energy regulation	The Renewable Energy Standards governed by individual states in which we	Investment opportunities	3 to 6 years	Direct	Very likely	Low	We have seen significant positive financial implications for our wind	Xcel Energy is on pace to surpass renewable energy requirements in	Our proposed Rush Creek Wind Farm will include $1 billion in capital expenditures for

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	operate present an opportunity to capitalize on our early action in integrating renewable resources into our energy mix. These rules provide impetus for us to modernize our fleet at competitive prices for our customers as well as enhancing our reputation on a local and national level.						energy additions. Wind also provides a valuable hedge against other fuel costs because we can establish 20-25 year long term purchase agreements. We announced plans in 2013 to grow our wind generation portfolio by 1,900 megawatts or nearly 40 percent through nine new, cost-effective projects. By the end of 2015, we had completed seven of the projects totaling 1,500 megawatts, with the remaining two projects set for completion in	the states we serve through at least 2030. New Mexico is an exception, where the company anticipates meeting the state's wind energy requirement through 2024 and has requested a waiver for acquiring additional solar energy from large, universal solar power plants due to constraints under the state's Reasonable Cost Threshold (RCT). Xcel Energy increased the solar energy on our systems in 2015 by more than 130 megawatts—or 40 percent. We helped	wind generation and transmission. Our expenses for renewable energy in 2015 were approximately $822 million, which is recovered through our rates. In 2015, we paid out over $29 million in REC and rebates for the distributed solar installations on our system. Our utility subsidiaries have entered into wind contracts averaging $42/MWh for both NSP and PSCo and $24/MWh for SPS. We made capital investments in our transmission system of $889 million.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							2016. These projects are expected to save customers over $900 million over the length of the contracts. Xcel Energy owns and operates two new wind farms added last year in the Upper Midwest, Pleasant Valley and Border. We also broke ground in 2015 on the Courtenay Wind Farm that we will own and operate. We have also proposed to construct and own the $1 billion, 600 MW Rush Creek Wind Farm in Colorado, which would save customers $800 million by	customers install more than 5,700 private solar energy projects for their homes and businesses and added 11 new community solar gardens to our systems during the year. We announced plans in 2013 to grow our wind generation portfolio by 1,900 megawatts or nearly 40 percent through nine new, cost-effective projects. By the end of 2015, we had completed seven of the projects totaling 1,500 megawatts, with the remaining two projects set for completion in 2016. For the future, we have proposed adding another	Additionally, Xcel Energy plans to make an additional investment in transmission of $4.1B between 2016 and 2020 and investments of $1.9B in natural gas pipeline asset health and replacement work by 2020.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							taking advantage of available tax credits.	1,800 megawatts of wind energy through our Upper Midwest Resource Plan, and we have proposed constructing and owning 600 megawatts of new wind generation and 90 miles of new transmission in eastern Colorado. We have been able to maintain nationally competitive prices while adding wind, solar, and other renewable onto our system.	

CC6.1b

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	Our customers' energy needs vary with weather conditions, primarily temperature and humidity. For residential customers, heating and cooling represent their largest energy use. 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 additional generating assets, transmission and other infrastructure to serve increased load. Weather conditions outside of our	Increased demand for existing products/services	Up to 1 year	Direct	About as likely as not	Low-medium	The direct financial implications of changes in extreme temperatures and changes in mean temperatures are difficult to determine due to uncertainty in occurrence and magnitude.	Investments in infrastructure help us ensure that we can reliably meet our customers' energy needs at affordable prices. We are integrating our growing renewable resources through transmission expansion. This contributes to our strategic advantage by ensuring customers continue to receive reliable, low cost energy and increase access to renewable energy resources.	We made capital investments in our transmission system of $889 million. Additionally, Xcel Energy plans to make an additional investment in transmission of $4.1B between 2016 and 2020 and investments of $1.9B in natural gas pipeline asset health and replacement work by 2020.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	service territory could also have an impact on our revenues. We buy and sell electricity depending upon system needs and market opportunities.								

CC6.1c

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other drivers	We continue to look for ways to increase the value of the renewable energy on our systems through the sale of RECs. In several states, Xcel Energy has more renewable	Investment opportunities	>6 years	Direct	Virtually certain	Low	Our REC sales strategy has consistently created positive financial outcomes for the Company. In 2015, our total REC sales resulted in margins of nearly $27.3 million, with	Due to our strategy to acquire renewable energy, we have been able to sell RECs not needed for compliance. In 2009, we developed a strategy to sell RECs on the national	In 2015, our total REC sales resulted in margins of nearly $27.3 million, with approximately $22.5 million returned to ratepayers and $4.8 million retained by shareholders.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	energy on its system than is needed for compliance with renewable energy standards. Based on market opportunities and the anticipated expiration of RECs, we sell some of our RECs. In 2015, we sold nearly 1.3 million RECs, about 279,000 more than in 2014. The renewable energy that generated these RECs came from Colorado, New Mexico, Texas and the Upper Midwest. Our customers benefit by sharing in any profits associated with the sales. REC sales make up						approximately $22.5 million returned to ratepayers and $4.8 million retained by shareholders.	renewable energy market and have continued to capitalize on that strategy. We continue to develop ways to opportunistically participate in the market to benefit our customers.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	a minor portion of our REC holdings. For example in 2015, we sold about 5 percent of the RECs that we generated for that year.								
Other drivers	Transmission investment to serve increased load -As stated previously, climate change developments have driven key changes in our energy mix and integration of renewable energy. Transmission investment is the key opportunity behind our ability to add new sources to our energy mix. Expansion of our transmission lines helps with the integration	Investment opportunities	>6 years	Direct	Very likely	Medium	Xcel Energy plans to make an additional investment in transmission of $4.1B between 2016 and 2020.. Xcel Energy recovers its capital costs and earns a return on equity (ROE) for the capital investments made by the company. For regulated assets, ROEs are set in our rate cases by state and federal regulators. Per our 10-K, Xcel	We are integrating our growing renewable resources through transmission expansion. This contributes to our strategic advantage by ensuring customers continue to receive reliable, low cost energy and increase access to renewable energy resources. In 2014, we also created 3 independent transmission companies, to give us the flexibility to	We made capital investments in our transmission system of $889 million. Additionally, Xcel Energy plans to make an additional investment in transmission of $4.1B between 2016 and 2020.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	of renewable resources on our system including access to additional wind resources that require no water.						Energy earned an ROE of 9.46% in 2015. This does not represent a guarantee for our return on capital investments in transmission, but instead shows the average ROE earned across all areas of business and operating companies for Xcel Energy as a whole.	compete in a competitive transmission market.	
Other drivers	New product offerings and markets - Climate change-related developments have also opened the door for new markets as consumers start to perceive energy differently. As motivated by our strategic	New products/business services	>6 years	Direct	Very likely	Low-medium	One of our strategic calls to action is to be the provider of choice for our customers. By providing new and different product offerings, we can meet the changing needs of our customer base, from those who want	As customers become increasingly interested in making energy choices that meet their individual needs and preferences, Xcel Energy is providing solutions. Our diverse and innovative programs include more convenient	In 2015, we paid out over $29 million in REC and rebates for the distributed solar installations on our system. The company spent over $197M on DSM programs in 2015 and earned approximately $62 million in

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	call to action, we seek to offer our customers and communities more services and options that they want and value. Therefore, we do seek to provide new products and market offerings according to the new demand for low emissions energy options.						more solar and wind to those that enjoy our diverse energy mix. Meeting the needs of our customer base with new and different product offerings should increase our revenues and be viewed favorably by our regulators.	payment options, rebates for energy efficient upgrades and the chance to make a difference by choosing renewable energy. In addition, we are working to meet the fueling needs of customers who choose to drive electric and natural gas vehicles. Customers are taking advantage of Xcel Energy's solutions in large numbers, and have expressed strong satisfaction with their ability to select programs and make their own energy decisions. In January 2016, PSCo introduced the "Our Energy Future" plan. The plan involves pilot programs for energy storage, new renewable	incentives for its achievements. The two pilot programs in Colorado are expected to cost $10.7 million, and the proposed solar + storage project in Minnesota is expected to cost $12.5 million.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								energy product options for customers, and explores the possibility of adding 1000 MW of renewables. Xcel Energy has begun to explore pilot programs to test the deployment of advanced technologies including microgrids and battery storage. Two projects have been approved in Colorado, one storage project testing batteries in an area with high penetration of solar PV systems, and another microgrid project including solar and storage in partnership with Panasonic. The company has also sought approval of a project in Belle Plaine, MN that	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								would test the ability of solar + storage to offset traditional grid infrastructure investments.	
Other drivers	Part of being an environmental leader is also making sure that we are conducting our operations in the most effective manner. Climate-related developments give us the opportunity to capitalize on our many operational improvement efforts. Operational excellence means using our resources in the most efficient way possible, including using simplified and automated process and the	Reduced operational costs	>6 years	Direct	Very likely	Low-medium	Operational excellence brings down costs by adding new efficiencies - we can run our systems at lower costs. Through our wind forecasting efforts, we have saved customers $37.5 million in fuel savings. Our capital investments and transmission expansion will bring lower operational costs for the long-term.	Running our business well involves managing complex capital investment projects, as well as day-to-day operations. Thanks to our strong project management capabilities, we've been able to complete large-scale capital projects at costs lower than the industry average. Over the next five years, we are also investing heavily in capital expenditures, including distribution, transmission, and generation assets. Our wind forecasting effort	We made capital investments in our transmission system of $889 million. Additionally, Xcel Energy plans to make an additional investment in transmission of $4.1B between 2016 and 2020 and investments of $1.9B in natural gas pipeline asset health and replacement work by 2020.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	most modern technologies. By cutting down on unplanned outages, for example, we enable our resources to meet demand at the lowest cost and lower emissions impacts.							is another example of operational excellence. Utilizing the most advanced wind production forecasting systems in the world, we can make better commitment and dispatch decisions. So far, we have improved our wind forecasting accuracy by nearly 35 percent, and better forecasting and other operations improvements have saved our customers a total of $60.6 million in fuel costs through end of 2015. In January 2015, Xcel Energy filed its Upper Midwest 2016-2030 Resource Plan with Minnesota Public Utilities Commission, outlining a long-	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								term road map to a more sustainable and affordable energy future. Under our proposal, more than 60 percent of our Upper Midwest system's energy supply will be carbon free, while maintaining fuel diversity to hedge price and reliability risk and keeping energy costs affordable. The plan is driven by achieving aggressive reductions in CO2 emissions from 2005 levels—a 60 percent reduction by 2030.	

CC6.1d

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

CC6.1e

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

CC6.1f

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

Further Information

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

Page: CC7. Emissions Methodology

CC7.1

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

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Sat 01 Jan 2005 - Sat 31 Dec 2005	64392484.3

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 2 (location-based)	Sat 01 Jan 2005 - Sat 31 Dec 2005	
Scope 2 (market-based)	Sat 01 Jan 2005 - Sat 31 Dec 2005	1025048.5

CC7.2

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

Please select the published methodologies that you use
The Climate Registry: General Reporting Protocol
The Climate Registry: Electric Power Sector (EPS) Protocol
US EPA Mandatory Greenhouse Gas Reporting Rule

CC7.2a

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

CC7.3

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

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)
N2O	IPCC Second Assessment Report (SAR - 100 year)
SF6	IPCC Second Assessment Report (SAR - 100 year)
HFCs	IPCC Second Assessment Report (SAR - 100 year)

CC7.4

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

Fuel/Material/Energy	Emission Factor	Unit	Reference
			See XLS Attachement

Further Information

Attachments

https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/2016_EF_Worksheet_CDP updates_FINAL.xls

Page: CC8. Emissions Data - (1 Jan 2015 - 31 Dec 2015)

CC8.1

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

Equity share

CC8.2

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

52140449

CC8.3

Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?

Yes

CC8.3a

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

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
1061615	553959	

CC8.4

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

Yes

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Small fire extinguishers, refrigerants from water fountains, and vehicle air conditioners are excluded based on minimal source exemptions from The Climate Registry's GRP and EPS reporting protocols.	Emissions are not relevant	No emissions excluded	No emissions excluded	The data is very small compared to other sources. In addition accurate data is difficult to obtain and validate, requiring resources that are better focused on other GHG sources. For this reason The Climate Registry allows certain industries and reporters to exclude these sources from their GHG Emissions Inventory. The emissions from these sources are essentially non-existent compared to the other Scope 1 sources at Xcel Energy.

CC8.5

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

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	Less than or equal to 2%	Data Gaps Assumptions	98.0% of Scope 1 CO2e emissions are measured CO2 from a U.S. EPA Part 75 Continuous Emissions Monitoring (CEMS) system and will be reported to US EPA under the Mandatory Reporting Rule for GHG. Approximately 0.3% of the total emissions are based on estimated fuel consumption or fugitive emission factor data.
Scope 2 (location-based)	Less than or equal to 2%	Assumptions	99.1 % of Scope 2 emissions result from line loss calculations associated with transportation of electrical purchased power for resale. Metering and mass balance assumptions are the main source of uncertainty. The emissions are calculated using emission rates reported by US EPA for the location of the OpCo responding.
Scope 2 (market-based)	Less than or equal to 2%	Assumptions	99.1 % of Scope 2 emissions result from line loss calculations associated with transportation of electrical purchased power for resale. Metering and mass balance assumptions are the main source of uncertainty. The emissions are from specified purchases with > 95% of the CO2e obtained from measured CO2 from a U.S. EPA Part 75 Continuous Emissions Monitoring (CEMS) system and will be reported to US EPA

CC8.6

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

Third party verification or assurance process in place

CC8.6a

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

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Underway but not complete for reporting year – previous statement of process attached	Reasonable assurance	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC8.6a/TCR-EPS-Verification-Statements-Xcel-2014-LRQA-120315.pdf	Please see pp. 2, 6 and 10	The Climate Registry's General Verification Protocol	100

CC8.6b

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

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

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

Third party verification or assurance process in place

CC8.7a

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

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Market-based	Annual process	Underway but not complete for reporting year – previous statement of process attached	Reasonable assurance	https://www.cdp.net/sites/2016/39/20839/Climate Change 2016/Shared Documents/Attachments/CC8.7a/TCR-EPS-Verification-Statements-Xcel-2014-LRQA-120315.pdf	Please see pp. 2, 6 and 10	The Climate Registry's General Verification Protocol	100

CC8.8

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

Additional data points verified	Comment
Year on year emissions intensity figure	Electric emission intensity delivery metrics for all electric customers are 3rd party verified to a reasonable standard of assurance for each year.

CC8.9

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

Yes

CC8.9a

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

572597

Further Information

Xcel Energy, Inc. is a Holding Company. For purposes of GHG Reporting Xcel Energy, Inc. wholly owns and operates 3 Operating Companies (OpCos) of Northern States Power (NSP), Public Service Company of Colorado (PSCo), and Southwestern Public Service Company (SPS). According to TCR's Verification Protocol 3rd party verification is conducted at the OpCo level in order to ensure the reported emissions and intensity are applicable and available at meaningful geographic boundaries. Verification Statements provided will be an aggregation of 3 individual OpCo statements.

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC9.1

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

No

CC9.1a

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

Country/Region	Scope 1 metric tonnes CO2e

CC9.2

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

CC9.2a

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

Business division	Scope 1 emissions (metric tonnes CO2e)

CC9.2b

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude

CC9.2c

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

GHG type	Scope 1 emissions (metric tonnes CO2e)

CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC10.1

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

No

CC10.1a

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

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

CC10.2

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

CC10.2a

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

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)

CC10.2b

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

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

CC10.2c

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

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

Further Information

Page: CC11. Energy

CC11.1

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

More than 40% but less than or equal to 45%

CC11.2

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

Energy type	Energy purchased and consumed (MWh)
Heat	0
Steam	0
Cooling	0

CC11.3

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

189830868

CC11.3a

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

Fuels	MWh
Sub bituminous coal	121603736
Natural gas	44708164
Bituminous coal	20669393
Municipal waste	1578361
Wood or wood waste	1049496
Distillate fuel oil No 2	187552
Waste tire derived fuels	29148
Propane	2519
Motor gasoline	2476
Kerosene	21

Fuels	MWh
Waste oils	1

CC11.4

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

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
Direct procurement contract with a gridconnected generator or Power Purchase Agreement (PPA), supported by energy attribute certificates	693328	
Direct procurement contract with a gridconnected generator or Power Purchase Agreement (PPA), where electricity attribute certificates do not exist or are not required for a usage claim	151765	

CC11.5

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

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment

Further Information

Xcel Energy's regulated electric utility segment generates, transmits and distributes electricity in Minnesota, Wisconsin, Michigan, North Dakota, South Dakota, Colorado, Texas and New Mexico. In addition, this segment includes sales for resale and provides wholesale transmission service to various entities in the United States. Regulated electric utility also includes wholesale commodity and trading operations. Xcel Energy's regulated natural gas utility segment transports, stores and distributes natural gas primarily in portions of Minnesota, Wisconsin, North Dakota, Michigan and Colorado. In addition Xcel Energy furnishes central steam and cooling in some locations. In 2015 the electric segment contributed 85% of revenues. Xcel Energy reports and has 3rd party verified 10 years of emissions using The Climate Registries General Reporting Protocol and Electric Power Sector Protocol to 3rd party verify 99% of all Scope 1, 2 and 3 emissions from our operations. In accordance with TCR Protocols we verify >97% of our Scope 3 emissions, and all emissions associated with electric generation purchased for resale. Our response to CC11.1 includes our total operating expense spend for Natural Gas (NG) delivered to retail and wholesale customers. This fuel is a pass through which is not com busted by Xcel Energy. The NG delivered by our Local Distribution And Transmission Companies is not included in the totals of CC11.3a.

Page: CC12. Emissions Performance

CC12.1

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

Decreased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	0.5	Decrease	(52692854 – 53206292)/ 53206292 = -0.96% + 0.46% (reduced output) Combining Scope 1 and market based Scope 2 we have historically reported: a) 3 coal units were retired in 2015. These units are/will be replaced by high efficiency gas fired CCCTs. b) We continue to work to modernize and make more efficient our Electric T&D system. c) We continue to pursue no/low carbon generation for Scope 3s Purchased Power for Resale. This reduces the emission rates used to calculate Scope 2 Market based emissions. If our purchased power were included in our totals, we see approximately a 3.4% reduction year over year in 2015.
Divestment	0	No change	No divestment of assets
Acquisitions	0	No	No acquisition of assets

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
		change	
Mergers	0	No change	No mergers
Change in output	0.46	Decrease	(73,264,884 MWhs - 73,606,778 MWhs)/ 73,606,778 MWhs = -0.46%
Change in methodology	0	No change	We are reporting combined Scope 1 and Market Based Scope 2. This methodology has remained the same since 2005.
Change in boundary	0	No change	No boundary changes
Change in physical operating conditions	0	No change	No changes in physical operating conditions
Unidentified	0	No change	
Other	0	No change	

CC12.1b

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

Market-based

CC12.2

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

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
.00478	metric tonnes CO2e	11024486000	Market-based	4.4	Increase	Though our emissions were reduced in 2015 compared to 2014, our intensity figure measured in metric tonnes CO23 per total revenue increased due to a decline in revenue from $11,686,135,000 in 2014 to $11,024,486,000 in 2015.

CC12.3

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

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.72	metric tonnes CO2e	megawatt hour (MWh)	73264884	Market-based	0.55	Decrease	This intensity metric reflects emission reduction activities which were pursued for our owned assets. Please see CC12.1a
0.55	metric tonnes CO2e	unit of production	108707	Market-based	3.83	Decrease	This intensity metric includes all electric power delivered to our customers. The numerator includes all emissions related to acquisition, transmission, and delivery to our customers. The denominator is stated in gigawatt-hours since the CDP form limits us to 8 digits. As a regulated utility we are bound by the "regulatory compact" to serve all customers within the boundaries dictated by Regulatory Bodies with oversight. We have pursued

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
							PPAs that bring low/no carbon energy onto our grid for delivery to customers. This metric is the most accurate reflection of our total business; reflecting our commitment to reduce Carbon 30% by 2020 from 2005, and 60% by 2030.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

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

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

CC13.1b

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

CC13.2

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

Yes

CC13.2a

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

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
Credit origination	Coal mine/bed CH4	Colorado Coal Mine Methane Project- These tonnes were contracted in 2011, but the development, verification and delivery of the tonnes from the project has continued through the reporting period. We have completed the regulatory verification and are about to request issuance by the CA Air Resources Board of compliance offset credits. Once converted, we plan to sell these offset credits to a CA buyer and put the proceeds back into the Innovative Clean Technology fund to support more projects.	CAR (The Climate Action Reserve)	98500	98500		Voluntary Offsetting

Further Information

Page: CC14. Scope 3 Emissions

CC14.1

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

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, not yet calculated	0		0.00%	At this time we continue to evaluate options for collection of appropriate data and factors.
Capital goods	Relevant, not yet calculated	0		0.00%	At this time we continue to evaluate options for collection of appropriate data and factors.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	10089693	Uses The Climate Registry's Electric Power Sector (EPS) Protocol for Purchased Power for Resale. 6.1% utilizes the WRI Transportation Tool for Freight	100.00%	This category is 3rd party verified to reasonable assurance standard and TCR Protocols.
Upstream transportation and distribution	Not relevant, explanation provided	720303	100% utilizes the WRI Transportation Tool for Freight	100.00%	All emissions related to upstream transportation or distribution is reported in Category 3 of Scope 3. This category is not 3rd party verified.
Waste generated in operations	Relevant, not yet calculated	0		0.00%	At this time we continue to evaluate options for collection of appropriate data and factors.
Business travel	Relevant, calculated	3668.5	100% utilizes the WRI Transportation Tool	100.00%	In order to receive financial reimbursement for this category users must document exact mileage and fuel usage. This category is not 3rd party verified.
Employee commuting	Relevant, calculated	23981.2	100% utilizes the WRI Transportation Tool	100.00%	This value is calculated using estimates of employee commuting from business records.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					Underlying activity data is 100% from our partners (employees). This category is not 3rd party verified.
Upstream leased assets	Not relevant, explanation provided	0		0.00%	Xcel Energy has no upstream leases
Downstream transportation and distribution	Not relevant, explanation provided	0		0.00%	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	Not relevant, explanation provided	0		0.00%	Electricity and/or Natural Gas is a final product, and this Scope 3 category is not applicable.
Use of sold products	Not relevant, explanation provided	0		0.00%	Electricity and/or Natural Gas is a final product, and this Scope 3 category is not applicable.
End of life treatment of sold products	Not relevant, explanation provided	0		0.00%	There is no end of life emissions for our products.
Downstream leased assets	Not relevant, explanation provided	0		0.00%	Xcel Energy has limited downstream leased assets. These are treated as Capital leases.
Franchises	Not relevant, explanation provided	0		0.00%	Xcel Energy has no franchises
Investments	Not relevant, explanation provided	0		0.00%	Xcel Energy has no Investment business
Other (upstream)	Not relevant, explanation	0		0.00%	

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	provided				
Other (downstream)	Not relevant, explanation provided	0		0.00%	

CC14.2

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

Third party verification or assurance process in place

CC14.2a

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

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual	Underway but	Reasonable	https://www.cdp.net/sites/2016/39/20839/Climate Change	2, 6, 10	Other: TCR	94

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
process	not complete for reporting year – previous statement of process attached	assurance	2016/Shared Documents/Attachments/CC14.2a/TCR-EPS-Verification-Statements-Xcel-2014-LRQA-120315.pdf		Electric Power Sector Protocol	

CC14.3

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

Yes

CC14.3a

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

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Fuel- and energy-related activities (not	Emissions reduction	12.7	Decrease	As an electric utility managing our total portfolio of sources of energy to supply customers, Xcel Energy actively pursues low/zero carbon energy producers. Resource

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
included in Scopes 1 or 2)	activities			Planning and management of Supply Chain emissions has resulted in a 5th year of lower intensity. These results are third party verified using The Climate Registries Electric Power Sector Protocol.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Change in output	0.4	Decrease	Slightly lower output in Purchased Power for Resale. These results are third party verified using The Climate Registries Electric Power Sector Protocol.

CC14.4

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

Yes, our suppliers
Yes, our customers

CC14.4a

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

Xcel Energy buys approximately 1/3 of the total electricity it delivers to our customers from 3rd party generators through the use of long term Purchased Power Agreements (PPAs). We expend significant effort to obtain detailed data on the environmental attributes of each such supplier (between 200 and 300 each year).

Along with the overall cost of the energy, the source of the energy and the environmental attributes of each source is a major factor in the selection of our suppliers.

CC14.4b

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

Number of suppliers	% of total spend (direct and indirect)	Comment
209		The 209 suppliers listed here come from the category from which we purchase electricity for resale to our customers. We work closely with the suppliers of this category to procure renewable energy and this has the most significant impact on our emissions. We also work with our suppliers of goods and services to ensure compliance with EPA rules and regulations. For more information on those efforts, visit https://www.xcelenergy.com/company/corporate_responsibility_report/library_of_report_briefs/supply_chain.

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Identifying GHG sources to prioritize for reduction actions	Xcel Energy buys approximately 1/3 of the total electricity it delivers to our customers from 3rd party generators through the use of long term Purchased Power Agreements (PPAs). We expend significant effort to obtain detailed data on the environmental attributes of each such supplier (between 200 and 400 each year). Along with the overall cost of the energy, the energy source and environmental attributes of each source is a major factor in the selection of our suppliers.
Use in supplier scorecards	In addition to reporting owned sources we use the Scope 3 supplier information to report our corporate and operating company performances.

CC14.4d

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

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

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

Name	Job title	Corresponding job category
Frank P. Prager	Vice President, Policy and Federal Affairs	Public affairs manager

Further Information

Module: Electric utilities

Page: EU0. Reference Dates

EU0.1

Please enter the dates for the periods for which you will be providing data. The years given as column headings in subsequent tables correspond to the "year ending" dates selected below. It is requested that you report emissions for: (i) the current reporting year; (ii) one other year of historical data (i.e. before the current reporting year); and, (iii) one year of forecasted data (beyond 2020 if possible).

Year ending	Date range
2008	Tue 01 Jan 2008 - Wed 31 Dec 2008
2009	Thu 01 Jan 2009 - Thu 31

Year ending	Date range
	Dec 2009
2010	Fri 01 Jan 2010 - Fri 31 Dec 2010
2011	Sat 01 Jan 2011 - Sat 31 Dec 2011
2012	Sun 01 Jan 2012 - Mon 31 Dec 2012
2013	Tue 01 Jan 2013 - Tue 31 Dec 2013
2014	Wed 01 Jan 2014 - Wed 31 Dec 2014
2015	Thu 01 Jan 2015 - Thu 31 Dec 2015
2016	Fri 01 Jan 2016 - Sat 31 Dec 2016
2017	Sun 01 Jan 2017 - Sun 31 Dec 2017
2018	Mon 01 Jan 2018 - Mon 31 Dec 2018
2019	Tue 01 Jan 2019 - Tue 31 Dec 2019
2020	Wed 01 Jan 2020 - Thu 31 Dec 2020
2021	Fri 01 Jan 2021 - Fri 31

Year ending	Date range
	Dec 2021
2022	Sat 01 Jan 2022 - Sat 31 Dec 2022
2023	Sun 01 Jan 2023 - Sun 31 Dec 2023
2024	Mon 01 Jan 2024 - Tue 31 Dec 2024
2025	Wed 01 Jan 2025 - Wed 31 Dec 2025

Further Information

Page: EU1. Global Totals by Year

EU1.1

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emission intensity (metric tonnes CO2e/MWh)
2008	16037	77200	60675755	0.786
2009	16500	71487	54579759	0.7635
2010	18051	77506	56240194	0.7256
2011	18179	75151	54465575	0.7247

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emission intensity (metric tonnes CO2e/MWh)
2012	17580	75071	53512261	0.7128
2013	18134	70942	52154746	0.7352
2014	17783	73606	52501867	0.7133
2015	18228	73279	51798262	0.7069
2016	18158	72297	49945642	0.691
2017	18358	73227	50009137	0.683
2018	18174	72968	50174738	0.688
2019	18990	73325	48283171	0.658
2020	18881	73454	47978244	0.653
2021	18791	72262	48015267	0.664
2022	18791	72145	46788166	0.649
2023	18684	72924	47354831	0.649
2024	17420	70669	44437372	0.629
2025	17327	71136	44877122	0.631

Further Information

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

EU2.1

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

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

EU2.1a

Coal - hard

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2008	7819	51116	53999746	1.0564
2009	7433	46758	48102379	1.0288
2010	7869	47437	47802975	1.0077
2011	7874	46152	46165036	1.0003
2012	7245	43734	44104235	1.0085
2013	7655	43044	43950607	1.0211
2014	7421	43899	44805822	1.0207
2015	7351	41601	43024606	1.0342
2016	6945	43572	44257563	1.016
2017	6945	44367	44393543	1.001
2018	6414	42154	44527495	1.056
2019	6414	41094	42408944	1.032
2020	6414	41901	41782289	0.997
2021	6414	40768	42128407	1.033
2022	6414	40606	41002310	1.010
2023	6414	40965	41679014	1.017
2024	5732	37438	38228219	1.021
2025	5732	38344	38637289	1.008

EU2.1b

Lignite

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

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

EU2.1c

Oil & gas (excluding CCGT)

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2008	4139	6034	3823692	0.6337
2009	4513	5441	3503875	0.644
2010	4852	6322	4227021	0.6686
2011	4957	6716	4355776	0.6486
2012	4989	7252	4704733	0.6487
2013	5132	5953	3941362	0.6621
2014	5021	5366	3433150	0.6398
2015	4869	5127	3190858	0.6224
2016	5186	2451	1541949	0.629
2017	5186	2293	1472853	0.642
2018	5533	2662	1439593	0.541
2019	5748	3272	1614450	0.493

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2020	5639	3222	2003893	0.622
2021	5549	2781	1962954	0.706
2022	5549	2591	1714623	0.662
2023	5442	2731	1608462	0.589
2024	4896	2978	1779706	0.598
2025	4803	2945	1855004	0.630

EU2.1d

CCGT

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2008	1558	5290	2130478	0.4027
2009	2036	5321	2233471	0.4197
2010	2637	8410	3456709	0.411
2011	2637	7703	3172592	0.4119
2012	2637	9690	3888167	0.4013
2013	2637	8540	3488961	0.4085
2014	2637	8603	3518816	0.409
2015	3267	11487	4721786	0.4111
2016	3291	8442	3423574	0.406
2017	3291	8770	3447517	0.393
2018	3291	9169	3506298	0.382
2019	3291	8810	3558426	0.404

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2020	3291	7923	3489204	0.440
2021	3291	8501	3222554	0.379
2022	3291	8194	3370038	0.411
2023	3291	9007	3366003	0.374
2024	3291	9627	4062423	0.422
2025	3291	9887	4019947	0.407

EU2.1e

Nuclear

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

Year ending	Nameplate capacity (MW)	Production (GWh)
2008	1668	12993
2009	1668	12393
2010	1668	13473
2011	1668	11953
2012	1668	11948
2013	1668	10692
2014	1668	12703
2015	1703	12036
2016	1740	14138
2017	1740	13639
2018	1740	14247
2019	1740	13695

Year ending	Nameplate capacity (MW)	Production (GWh)
2020	1740	13938
2021	1740	13759
2022	1740	14301
2023	1740	13767
2024	1740	14342
2025	1740	13692

EU2.1f

Waste

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2008	21	101	174272	1.7255
2009	20	92	161504	1.7555
2010	20	90	159497	1.7722
2011	21	96	171523	1.7867
2012	21	98	173025	1.7656
2013	21	102	173873	1.7046
2014	20	95	176148	1.8542
2015	20	101	195428	1.9349
2016	43	260	441331	1.695
2017	43	244	414202	1.695
2018	43	248	420330	1.695
2019	43	248	420330	1.695

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2020	43	249	421635	1.695
2021	43	248	420330	1.695
2022	43	248	420315	1.695
2023	43	248	420330	1.695
2024	35	217	367024	1.693
2025	35	216	364882	1.693

EU2.1g

Hydro

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

Year ending	Nameplate capacity (MW)	Production (GWh)
2008	613	942
2009	623	813
2010	622	1100
2011	618	1251
2012	612	979
2013	616	1226
2014	616	1457
2015	618	1448
2016	274	858
2017	274	858
2018	274	858
2019	274	858

Year ending	Nameplate capacity (MW)	Production (GWh)
2020	274	858
2021	274	858
2022	274	858
2023	274	858
2024	274	858
2025	274	858

EU2.1h

Other renewables

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

Year ending	Nameplate capacity (MW)	Production (GWh)
2008	120	84
2009	120	339
2010	321	338
2011	321	942
2012	321	1008
2013	321	1033
2014	321	1165
2015	321	1116
2016	652	2423
2017	852	2902
2018	852	3477
2019	1452	5195
2020	1452	5209

Year ending	Nameplate capacity (MW)	Production (GWh)
2021	1452	5195
2022	1452	5195
2023	1452	5195
2024	1452	5209
2025	1452	5195

EU2.1i

Other

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2008	39	316		
2009	26	4		

EU2.1j

Solid biomass

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2008	59	323	547567	1.6953
2009	61	327	578530	1.7692
2010	61	336	593991	1.7678
2011	83	336	600648	1.7876
2012	86	361	642100	1.7787
2013	83	352	599943	1.7044
2014	78	317	567931	1.7916
2015	79	363	665583	1.8336
2016	27	153	281224	1.836
2017	27	153	281022	1.836
2018	27	153	281022	1.836
2019	27	153	281022	1.836
2020	27	153	281224	1.836
2021	27	153	281022	1.836
2022	27	153	280881	1.836
2023	27	153	281022	1.836
2024	0	0	0	0
2025	0	0	0	0

EU2.1k

Total thermal including solid biomass

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2008	15264	75858	60675755	0.7999
2009	15731	70331	54579759	0.776
2010	17108	76068	56240194	0.7393
2011	17240	72958	54465575	0.7465
2012	16646	73084	53512261	0.7322
2013	17197	68682	52154746	0.7594
2014	16845	70983	52501867	0.7396
2015	17289	70715	51798262	0.7325
2016	17232	69016	49945642	0.724
2017	17232	69467	50009137	0.720
2018	17048	68633	50174738	0.731
2019	17264	67272	48283171	0.718
2020	17155	67387	47978244	0.712
2021	17065	66209	48015267	0.725
2022	17065	66092	46788166	0.708
2023	16958	66871	47354831	0.708
2024	15694	64602	44437372	0.688
2025	15601	65083	44877122	0.690

EU2.1l

Total figures for this country

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

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes in CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2008	16037	77200	60675755	0.786
2009	16500	71487	54579759	0.7635
2010	18051	77506	56240194	0.7256
2011	18179	75151	54465575	0.7247
2012	17580	75071	53512261	0.7128
2013	18134	70942	52154746	0.7352
2014	17783	73606	52501867	0.7133
2015	18228	73279	51798262	0.7069
2016	18158	72297	49945642	0.691
2017	18358	73227	50009137	0.683
2018	18174	72968	50174738	0.688
2019	18990	73325	48283171	0.658
2020	18881	73454	47978244	0.653
2021	18791	72262	48015267	0.664
2022	18791	72145	46788166	0.649
2023	18684	72924	47354831	0.649
2024	17420	70669	44437372	0.629
2025	17327	71136	44877122	0.631

Further Information

Page: EU3. Renewable Electricity Sourcing Regulations

EU3.1

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

Yes

EU3.1a

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

Scheme name	Current % obligation	Future % obligation	Date of future obligation	Position in relation to meeting obligations
USA state scheme – Colorado	20%	30%	2020	We are compliant with our current obligations and we are on track to meet our compliance obligations through 2020 with our current resource plan.
USA state scheme – Minnesota	18%	31.5%	2020	We are compliant with our current obligations and we are on track to meet our compliance obligations through 2020 with our current resource plan.
USA state scheme – Wisconsin	12.89%	12.89%	2015	With our current resource plan, we have met our 2015 obligation and will continue to maintain the required percentage of renewable generation.
USA state scheme – Michigan	10%	10%	2015	With our current resource plan, we have met our 2015 obligation and will continue to maintain the required percentage of renewable generation.
USA state scheme – New Mexico	15%	20%	2020	We are compliant with our current obligation and anticipate meeting New Mexico's wind energy requirement through 2024. We have requested a waiver for acquiring additional solar energy from large, universal solar power plants due to constraints under the state's Reasonable Cost Threshold (RCT).
USA state scheme – Texas	3.42%	3.42%	2015	Based on statewide capacity, Xcel Energy's requirement is 3.42 percent of retail sales in 2015. We are compliant with this requirement and will remain compliant with our current resource plan.
Other: South Dakota	0%	10%	2015	Voluntary. With our current resource plan, we are on track to meet the objective through 2020.
Other: North Dakota	0%	10%	2015	Voluntary. With our current resource plan, we are on track to meet the objective through 2020.

Further Information

Page: EU4. Renewable Electricity Development

EU4.1

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

Please give:	Monetary figure	%	Comment
Renewable electricity's contribution to EBITDA			

EU4.2

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

Please give:	Monetary figure	%	Year ending	Comment
Renewable electricity's contribution to EBITDA				

EU4.3

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

Please give:	Monetary figure	%	End year of capex plan	Comment
Capex planned for renewable electricity development				

Further Information

CDP