

# Vectren Corporation - Climate Change 2018

## C0. Introduction

---

### C0.1

---

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

Vectren Corporation is an energy holding company. It's wholly owned subsidiary, Vectren Utility Holdings, Inc., serves as the intermediate holding

company for three operating utilities: Vectren Energy Delivery of Vectren Indiana–North (Vectren Indiana–North), Vectren Energy Delivery of Vectren

Indiana–South (Vectren Indiana–South) and Vectren Energy Delivery of Ohio (Vectren Ohio).

Vectren Indiana–North provides energy delivery services to 592,400 natural gas customers located in central and southern Indiana. Vectren South

provides energy delivery services to 145,200 electric customers and 111,500 gas customers located in southwestern Indiana. Vectren Indiana–South

also owns and operates electric generation to serve its electric customers and optimizes those assets in the wholesale power market. Vectren Ohio

provides energy delivery services to approximately 318,100 natural gas customers located in west central Ohio.

Vectren Corporation is based in Evansville, Indiana. Additional information can be found on the About Vectren page (<http://www.vectren.com/corporate/about>) on Vectren.com. Vectren solely operates in the United States of America. Vectren Corporation is an investor-owned corporation trading on the New York Stock Exchange under the symbol, VVC.

## C0.2

---

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2017	December 31 2017	No	<Field Hidden>
Row 2	<Field Hidden>	<Field Hidden>	<Field Hidden>	<Field Hidden>
Row 3	<Field Hidden>	<Field Hidden>	<Field Hidden>	<Field Hidden>
Row 4	<Field Hidden>	<Field Hidden>	<Field Hidden>	<Field Hidden>

## C0.3

---

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

United States of America

## C0.4

---

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

USD

## C0.5

---

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

Operational control

## C-EU0.7

---

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

**Row 1**

**Electric utilities value chain**

Please select

**Other divisions**

Please select

## C-OG0.7

---

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

**Row 1**

**Oil and gas value chain**

Please select

**Other divisions**

Please select

## C1. Governance

---

### C1.1

---

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

Yes

### C1.1a

---

**(C1.1a) Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain

Position of individual(s)	Please explain
Board Chair	Carl Chapman holds the combined position of Board chair, president and chief executive officer (CEO). Board chairs are responsible for leading the board, and therefore, Carl Chapman has oversight in corporate responsibility and sustainability topics discussed during board member meetings.
Chief Executive Officer (CEO)	Carl Chapman holds the combined position of Board chair, president and chief executive officer (CEO). Chief Executive Officers are responsible for making corporate and managerial decisions. Therefore, Carl Chapman oversees and leads discussions on how Vectren can be more sustainable, responsible, and still profitable in Vectren's new environmental/sustainable operations.
Board/Executive board	The Corporate Responsibility and Sustainability (CRS) Committee is a standing committee of the Board responsible for oversight of policies and strategies fostering the sustainability and climate change strategy of Vectren to meet the evolving needs of our stakeholders.
President	Carl Chapman holds the combined position of Board chair, president and chief executive officer (CEO). With Carl Chapman holding three positions, Chapman holds responsibility for climate-related issues and ensures Vectren's climate-related projects are successfully implemented, updated to board of directors, and continually discussed.
Board Chair	John D. Engelbrecht is a chair member of the Corporate Responsibility and Sustainability Committee of the Board of Directors. Therefore, John D. Engelbrecht has specific oversight in Vectren's corporate responsibility and sustainability.
Please select	

## C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Our Board has embraced the importance of sustainability relative to value creation and promoting the interests of all of the Company’s stakeholders. Our efforts in this area have been most recently summarized in our 2017 corporate sustainability report, which includes data presented in the format prescribed by the Global Reporting Initiative. Those efforts include monitoring current and emerging political and social action, and public policy and environmental issues that may affect the business operations, material financial performance, public image of the Company They also extend to considering policies for sustainable growth strategies to create value consistent with long-term preservation and enhancement of the Company’ financial, environmental, and social capital. At every meeting, the Board’s Corporate Responsibility and Sustainability (CRS) Committee receives detailed reports corporate sustainability matters from Vice President of Environmental Affairs and Corporate Sustainability who is charged with responsibility for this. Our Board also receives periodic reports this well. Through the CRS Committee, our directors oversee the Company’ compliance, customer satisfaction, safety and community efforts. The Company’ chief compliance officer has regular private sessions with the CRS Committee in v where he advise of any issues of concern, well frankly respond to questions and comments from CRS Committee members. At each of those meetings, the CRS Committee receives detailed reports environmental matters pertaining to the Company’ businesses. The CRS Committee also v issues relating to customer satisfaction in regulated business, well safety issues pertaining to the public and colleagues. The CRS Committee is engaged in overseeing the Company’s efforts to assist broader group of our stakeholders through the Vectren Foundation, community sustainability initiative and the volunteer efforts of colleagues.

C1.2

**(C1.2) Below board-level, provide the highest-level management position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Risk committee	Both assessing and managing climate-related risks and opportunities	Quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Quarterly
Environment/ Sustainability manager	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Quarterly

## C1.2a

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored.**

The Board is ultimately responsible for risk oversight across the organization. That responsibility is shared by five standing committees comprised solely of non-employee directors which oversee financial, compensation, compliance, reputational and governance risks with specific responsibility for reviewing management's risk oversight function delegated to the Board's Audit and Risk Management Committees. Vectren's CEO holds the combined position of Board chair, president and chief executive officer (CEO).

Our Board has embraced the importance of sustainability relative to value creation and promoting the interests of all of the Company's stakeholders. Our efforts in this area have been most recently summarized in our 2017 corporate sustainability report, which includes data presented in the format prescribed by the Global Reporting Initiative. Those efforts include monitoring current and emerging political and social action, and public policy and environmental issues that may affect the business operations, material financial performance, or public image of the Company. They also extend to considering policies for sustainable growth strategies to create value consistent with long-term preservation and enhancement of the Company's financial, environmental, and social capital. At every meeting, the Board's Corporate Responsibility and Sustainability (CRS) Committee receives detailed reports on corporate sustainability matters from our Vice President of Environmental Affairs and Corporate Sustainability, who is charged with responsibility for this area. Our Board also receives periodic reports on this area as well.

The Corporate Responsibility and Sustainability (CRS) committee is primarily responsible for both ensuring the discharge of the Board's duties relating to oversight of the Company's sustainability initiatives, as well as monitoring the Company's policies, practices and procedures designed to ensure compliance with governmental regulations. The Committee charter requires that the Vice President of Environmental Affairs and Corporate Sustainability provide a report as to the Company's environmental compliance and sustainability strategies at each of the regular Committee meetings, and the Vice President of Environmental Affairs and Corporate Sustainability meets with the full Board on an as needed basis to discuss sustainability strategies, sustainability reporting and any issues that may arise throughout the year.

The CRS Committee's responsibilities include the oversight of Company policies, practices, and procedures relating to:

- Sustainability including monitoring current and emerging political and social action, and public policy and environmental issues that may affect the business operations, material financial performance public image of the Company and also considering policies for sustainable growth strategies to create value consistent with long-term preservation and enhancement of the Company' financial, environmental, and social capital;
- Business practices and legal compliance, including compliance by utility operations with applicable safety and reliability regulations;
- Public communications with key stakeholders, other than the financial community;
- Community relations, including charitable contributions and community affairs;
- Customer relations, including customer satisfaction and quality of customer service;
- Overseeing policies, practices, and procedures relating to employer practices and procedures, including the Company' objective of being employer of choice, compliance with employment related laws, regulations and policies, and the Company' Human Equity initiative (which is focused upon driving sustainable culture supportive of diverse and inclusive work environment where individual talents recognized, developed, and maximized);
- Environmental compliance and stewardship, including adherence to environmental laws and regulations; and
- The promotion of a culture of public and employee safety

In 2017 the Company established a Corporate Sustainability Disclosure Committee composed of management employees and overseen by the Company's Chief Financial Officer whose purpose is to ensure accuracy and consistency of the Company's sustainability disclosures across all of the Company's sustainability reporting platforms.

Along with the Corporate Sustainability Disclosure Committee the Company also has an enterprise Risk Management Committee in which our Company's Chief Financial Officer is a committee member. The enterprise Risk Management Committee composed of senior level management, whose purpose is to ensure an enterprise-wide approach to managing risk and compliance. The primary responsibility of the Committee is to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities to the Audit and Risk Management Committee of the Board.

## C1.3

---

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

Yes

## C1.3a

---

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.**

**Who is entitled to benefit from these incentives?**

Chief Executive Officer (CEO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Efficiency target

**Comment**

Annual cash incentive plans are 100% tied directly to business unit performances which are based on value-driving business metrics. Our incentive program focuses on transparency with an emphasis on incentivizing performance. All employees receive annual cash incentive

bonuses based on achievement of performance of metrics that are related to energy efficiency targets which relate to climate change issues, for example, offering rebates on high efficiency furnaces, smart/Wi-Fi thermostats and insulation for residential customers and appliance and custom rebates for small to mid-sized commercial customers.

---

**Who is entitled to benefit from these incentives?**

Chief Financial Officer (CFO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Efficiency target

**Comment**

Annual cash incentive plans are 100% tied directly to business unit performances which are based on value-driving business metrics. Our incentive program focuses on transparency with an emphasis on incentivizing performance. All employees receive annual cash incentive bonuses based on achievement of performance of metrics that are related to energy efficiency targets which relate to climate change issues, for example, offering rebates on high efficiency furnaces, smart/Wi-Fi thermostats and insulation for residential customers and appliance and custom rebates for small to mid-sized commercial customers.

---

**Who is entitled to benefit from these incentives?**

Chief Operating Officer (COO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Efficiency target

**Comment**

Annual cash incentive plans are 100% tied directly to business unit performances which are based on value-driving business metrics. Our incentive program focuses on transparency with an emphasis on incentivizing performance. All employees receive annual cash incentive bonuses based on achievement of performance of metrics that are related to energy efficiency targets which relate to climate change issues, for example, offering rebates on high efficiency furnaces, smart/Wi-Fi thermostats and insulation for residential customers and appliance and custom rebates for small to mid-sized commercial customers.

---

**Who is entitled to benefit from these incentives?**

Corporate executive team

**Types of incentives**

Monetary reward

**Activity incentivized**

## Efficiency target

**Comment**

Annual cash incentive plans are 100% tied directly to business unit performances which are based on value-driving business metrics. Our incentive program focuses on transparency with an emphasis on incentivizing performance. All employees receive annual cash incentive bonuses based on achievement of performance of metrics that are related to energy efficiency targets which relate to climate change issues, for example, offering rebates on high efficiency furnaces, smart/Wi-Fi thermostats and insulation for residential customers and appliance and custom rebates for small to mid-sized commercial customers.

---

## C2. Risks and opportunities

---

### C2.1

---

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

	From (years)	To (years)	Comment
Short-term	0	3	Vectren is a regulated utility company and every three years, Vectren is required to submit its Integrated Resource Plan (IRP) to the Indiana Utility Regulatory Commission (IURC). The next IRP filing will be in 2019.
Medium-term	3	6	
Long-term	6	15	

### C2.2

---

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

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

## C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	On a quarterly basis we perform an assessment of climate-related risks and goals progress with our Corporate Responsibility and Sustainability Committee and on a monthly basis climate-related risks are assessed during our enterprise Risk Management Committee. Our risk management process includes identification, analysis, and vetting of risk factors related to climate change through our risk assessment, SEC reporting process and our resource planning process. The 2017 Form 10-K included the impacts of extreme weather events and environmental laws and regulations as risks posing material impact on the company's operations. We use the Integrated Resource Planning process to forecast 20 years out on external pressures on company operations, including risks associated with climate change. We regularly perform legislative analysis at the state and federal levels to identify and prepare for potential impacts of legislative and regulatory actions.

## C2.2b

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

The Company is actively engaged in long-term strategic planning through initiative assessment, development and execution. The strategic planning process consistently engages the Company's Board of Directors and is updated as the Company's strategic environment changes. The result of that process is regularly communicated to all stakeholders. Further, the Company has a strong compliance and risk management program that promotes a culture of compliance. The Company is, however, subject to a variety of risks including execution on its strategies.

On a quarterly basis the Company performs an assessment of climate-related risks and goals progress with our Corporate Responsibility and Sustainability Committee.

Vectren defines substantive financial impact as a sudden change of the Company's strategic environment changes, in which strategic planning process cannot be implemented to keep this sudden change under management control. The climate-related risks caused by a range of hazards are beyond management control, and therefore, there is an expense or fall in revenue arising due to the sudden change.

Therefore, to avoid this, the committee develops strategies that focus on environmental, social and governance facts that contribute to the long-term growth of the Company's sustainable business model. The Company's sustainability policies and procedures are designed to assure compliance with applicable laws and regulations.

The Company's enterprise Risk Management Committee composed of senior level management whose purpose is to ensure an enterprise-wide approach to managing risk and compliance. The primary responsibility of the Committee is to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities to the Audit and Risk Management Committee of the Board. Under this enterprise risk management approach, the Committee oversees and approves a comprehensive company-wide risk assessment every two years, including an assessment of which risks are significant and provides assistance to business unit managers with risk monitoring and the implementation of strategies to mitigate risk in their areas.

The enterprise Risk Management Committee meets on a monthly basis to assess climate-related risks. As a part of our risk management process the Company identifies, analyzes, and vets risk factors related to climate change through our risk assessment, SEC reporting process and our resource planning process. The 2017 Form 10-K included the impacts of extreme weather events and environmental laws and regulations as risks posing material impact on the company's operations. Every three years we perform an Integrated Resource Planning process to forecast 20 years out on external pressures on company operations, including risks associated with climate change. We regularly perform legislative analysis at the state and federal levels to identify and prepare for potential impacts of legislative and regulatory actions.

## C2.2c

---

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The Company's sustainability policies and procedures are designed to assure compliance with applicable laws and regulations, and are directly overseen by the Corporate Responsibility and Sustainability Committee. The Corporate Responsibility and Sustainability Committee meets at least three times a year. Therefore, Vectren considers current regulation as relevant, as regulations can directly affect Vectren and its operations.
Emerging regulation	Relevant, always included	The Company's sustainability policies and procedures are designed to assure compliance with applicable laws and regulations, and are directly overseen by the Corporate Responsibility and Sustainability Committee. The Corporate Responsibility and Sustainability Committee meets at least three times a year. Therefore, Vectren considers current regulation as relevant, as regulations can directly affect Vectren and its operations.
Technology	Relevant, always included	Vectren's power system is one of the best controlled in the Midwest. By investing millions of dollars in new emissions control technology, we have been able to dramatically reduce emissions at existing facilities. Therefore, if technology advancements are worth the investment, Vectren will implement these technological advancements into their operations.
Legal	Relevant, always included	Our environmental policy requires us to operate in full compliance with applicable legal requirements and we hold ourselves and those working on our behalf accountable for this commitment. We constantly seek out ways to improve energy delivery while reducing our impact on the environment. We have made strides to protect air, water and land quality by installing emissions control equipment on our power plants, improving the efficiency of our materials purchasing process, participating in stewardship projects and substantially reducing our waste streams through reuse and recycle programs (see G4-EN23 for details on waste volumes diverted from the landfill).
Market	Relevant, always included	Vectren energy delivery subsidiaries provide natural gas and/or electricity to more than 1 million customers in the adjoining service territories which cover nearly two-thirds of Indiana and about 20 percent of Ohio, primarily in the west-central area. While the energy delivery subsidiaries serve residential, commercial and industrial customers within a regulated footprint of Indiana and Ohio, Vectren's nonutility subsidiaries and affiliates offer energy-related products and services to customers throughout the United States. The infrastructure services division serves the pipeline industry by providing underground pipeline construction and repair to utility infrastructure. The targeted business sectors include natural gas, oil, gasoline/petroleum, water and sewer. Vectren's energy services division serves schools, hospitals, governmental facilities and other private institutions across America.
Reputation	Relevant, always included	The Board is ultimately responsible for risk oversight across the organization. That responsibility is shared by five standing committees comprised solely of non-employee directors which oversee financial, compensation, compliance, reputational and governance risks with specific responsibility for reviewing management's risk oversight function delegated to the Board's Audit and Risk Management Committees.
Acute physical	Relevant, always included	Vectren infrastructure programs are focused on modernizing and hardening both the electric grid systems. This increases our ability to perform reliability and respond safely to our customers in extreme weather condition events. Storm response and safety are key metrics for Vectren and these items are heavily factored into our operational risk planning scenarios.
Chronic physical	Relevant, always included	Vectren infrastructure programs are focused on modernizing and hardening both the electric grid systems. Vectren has set a long term pipeline replacement program for bare steel and cast iron pipeline in place to provide greater reliability and safety for our customers. At the same time Vectren has announced the retirement or exiting of four coal-fired electric generation units to be replaced with less carbon emission intensive natural gas fired generation. All of these programs are planned to enable Vectren utility operations to respond to the increased demand put on our utility operations in extreme heat and cooling conditions in the longer term.

	Relevance & inclusion	Please explain
Upstream	Relevant, always included	Vectren strives to reduce the consumption of new materials and the waste streams resulting from its extensive supply chain. Our robust reuse and recycle program for hazardous and non-hazardous waste has diverted more than a half million tons of waste from the landfill each year, reducing the need to purchase new materials and generating new revenue streams which help offset disposal costs. This program has been effective in reducing environmental impacts while utilizing materials already in our supply chain.
Downstream	Relevant, always included	Vectren strives to reduce the consumption of new materials and the waste streams resulting from its extensive supply chain. Our robust reuse and recycle program for hazardous and non-hazardous waste has diverted more than a half million tons of waste from the landfill each year, reducing the need to purchase new materials and generating new revenue streams which help offset disposal costs. This program has been effective in reducing environmental impacts while utilizing materials already in our supply chain.

## C2.2d

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

The Company's Board of Directors oversees all aspects of the company's businesses, including the regulatory and operating aspects. The Board's Corporate Responsibility and Sustainability Committee are charged with reviewing and reporting to the Board on the Company's environmental initiatives and compliance strategies. Also, the Company's enterprise Risk Management Committee, comprised of senior level management, is primarily responsible to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities quarterly to the Audit and Risk Management Committee of the Board. The Company also has a Corporate Enterprise Risk Management Department. This group, in conjunction with the aforementioned committees, is responsible for establishing and enforcing the Company's risk policies, including evaluation of risk due to regulatory changes on climate change issues.

Under this enterprise risk management approach, the Committee oversees and approves a comprehensive company-wide risk assessment every two years, including an assessment of which risks are significant and provides assistance to business unit managers with risk monitoring and the implementation of strategies to mitigate risk in their areas. The Committee periodically reviews and reports the following to the Audit and Risk Management Committee of the Board, as well as the full Board; all material business risks, the processes, procedures and controls in place to manage material risks; and the overall effectiveness of the enterprise risk management process. The identification, monitoring and management of proposed or enacted legislation or regulation relating to climate change are provided primarily through the Company's Corporate Environmental Department and business unit environmental management.

## C2.3

---

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

Yes

## C2.3a

---

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

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Increased pricing of GHG emissions

**Type of financial impact driver**

Technology: Costs to adopt/deploy new practices and processes

**Company- specific description**

Vectren has identified reducing our own emissions and compliance with environmental standards as a key component of a sustainable carbon strategy. Vectren incorporates scenarios into our integrated resource planning that model a price on carbon. The increased pricing on carbon is tied to our generation planning activities and how we resource plan for a less carbon intensive generation fleet that includes natural gas generation and sources of renewable energy such as solar and wind.

**Time horizon**

Long-term

**Likelihood**

About as likely as not

**Magnitude of impact**

Medium-high

**Potential financial impact**

**Explanation of financial impact**

Our base case modeling assumes carbon price modeling growing to around \$20 per metric ton of carbon in 2035. Carbon emissions from Vectren in 2017 were 5,229,365 metric tones of CO<sub>2</sub>e.

**Management method**

Vectren has announced the retirement or exiting of 4 coal fired generation plants by 2024. The Vectren electric generation portfolio will transition to a diverse mixture of less carbon intensive natural gas fired generation and renewables.

**Cost of management****Comment**

The projects are currently in the state of development and regulatory approval.

---

**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

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

**Type of financial impact driver**

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

**Company- specific description**

Vectren has identified ensuring our infrastructure is resilient to a changing climate as a critical component of a sustainable carbon strategy. Changes in weather pattern resulting in more frequent and sever weather increase the risk of interruptions to service for Vectren customers. Modernizing and strengthening of the Vectren system infrastructure builds resilient service for our customers. Continued electric system reliability and safety, shorter electric power outages, faster electric outage identification, fewer estimated customer bills, quicker service and more information to improve customer control over energy use are all pieces of Vectren's plan to continue delivering reliable electric service to our 145,000 customers as part of our Smart Energy Future.

**Time horizon**

Long-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-high

### Potential financial impact

#### Explanation of financial impact

In 2017, Vectren sought and received approval to begin enhancing our electric system by investing approximately \$450 million in new infrastructure. Encompassing more than 800 projects over the next seven years, Vectren's energy grid modernization plan is an integral part in the company's strategy to become a next generation energy company.

#### Management method

Vectren's robust electric infrastructure improvement strategy will enhance reliability and modernize the electric grid that delivers power to southwestern Ind. These electric system improvements include upgrades to portions of Vectren's substations as well as the transmission and distribution networks. This work will also prepare the grid to accept advanced technology, improving service to customers and providing them with access to better information about their energy use. Continued electric system reliability and safety, shorter electric power outages, faster electric outage identification, quicker service and more information to improve customer control over energy use are all pieces of Vectren's plan to continue delivering reliable electric service to our 145,000 customers as part of our Smart Energy Future. In December 2017, Vectren began a year-long program to install smart meter technology to all electric customers. Smart meters will not only provide and improve system reliability and resiliency, they also enhance the customer experience by enabling quicker service, faster electric outage identification and more tools to manage energy use. Since 2008, Vectren gas modernization programs have included the replacement of bare steel and cast iron distribution pipelines as well as improvements to transmission and other gas systems assets. These efforts support the continued safe and reliable delivery of natural gas to customers in a changing climate.

#### Cost of management

#### Comment

In 2017, Vectren sought and received approval to begin enhancing our electric system by investing approximately \$450 million in new infrastructure. Encompassing more than 800 projects over the next seven years, Vectren's energy grid modernization plan is an integral part in the company's strategy to become a next generation energy company. Since 2008, Vectren has invested approximately \$581 million in the replacement of aged bare steel cast iron on the gas pipeline infrastructure in Indiana and Ohio. Vectren has also invested approximately \$233 million on improvements to its gas transmission pipeline infrastructure since 2012, and \$78 million on improvements to its gas system modernization infrastructure programs in Indiana and Ohio. Vectren's total investment in gas infrastructure modernization programs in Indiana and Ohio is approximately \$892 million.

---

#### Identifier

Risk 3

#### Where in the value chain does the risk driver occur?

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

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

**Type of financial impact driver**

Other, please specify (Increased operating costs - safety)

**Company- specific description**

A critical component of a sustainable strategy is worker safety. Vectren has identified increasing severe weather extremes as safety issue for our workers. Our workforce is working in extreme weather scenarios to maintain electric and natural gas deliveries in a reliable and safe manner during extreme weather. These conditions vary in Indiana and Ohio from extreme heat in the summer, blizzard and ice events in the winter, and storms and flooding throughout the year. We take this risk seriously and worker safety is a top priority.

**Time horizon**

Current

**Likelihood**

Very likely

**Magnitude of impact**

High

**Potential financial impact****Explanation of financial impact****Management method**

Vectren's continued investments in electric system reliability and safety result in shorter electric power outages, faster electric outage identification, quicker service. Vectren's Safety Management System (SMS) is a framework of goals, objectives, processes and procedures. It enables us to execute strategies using risk management, established controls, assessment and continuous improvement to meet safety and business objectives. It is built on processes providing more discipline in the use of data and other information for better decision making. Our SMS objectives strengthen and broaden Vectren's safety culture. Our overall safety performance will improve by making risk-reducing decisions. In December 2017, Vectren began a year-long program to install smart meter technology to all electric customers. Smart meters will not only provide and improve system reliability and resiliency, they also enhance the customer experience by enabling quicker service, faster electric outage identification and more tools to manage energy use. Since 2008, Vectren gas modernization programs have included the replacement of bare steel and cast iron distribution pipelines as well as improvements to transmission and other gas systems assets. These efforts support the continued safe and reliable delivery of natural gas to customers in a changing climate.

**Cost of management****Comment**

---

## C2.4

---

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

Yes

---

### C2.4a

---

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

**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Customer

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Move to more efficient buildings

**Type of financial impact driver**

Increased value of fixed assets (e.g., highly rated energy-efficient buildings)

**Company- specific description**

Vectren has identified opportunities to offer services through a fully owned subsidiary Energy Systems Group (ESG). Through its core business of energy performance contracting, ESG provides comprehensive design-build construction solutions for the installation of new energy efficient building systems, where guaranteed savings from operation budgets are used to finance the capital improvements. From the initial energy audit through long-term measurement and verification of project savings, ESG designs and implements infrastructure modernization solutions that fit the needs of a particular facility, including energy efficiency, renewable energy, distributed generation, water conservation and sustainable materials and operations.

**Time horizon**

Current

**Likelihood**

Virtually certain

**Magnitude of impact**

High

**Potential financial impact****Explanation of financial impact****Strategy to realize opportunity**

This opportunity is current with projects being implemented throughout the United States.

**Cost to realize opportunity****Comment**

---

**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Customer

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Move to more efficient buildings

**Type of financial impact driver**

Increased production capacity, resulting in increased revenues

**Company- specific description**

Energy efficiency (EE) has generally been accepted as a critical function of utilities to mitigate climate change, delay the need to build new generation, save customers money on their utility bills and improve customer satisfaction. Vectren's commitment to EE programs continues to achieve significant energy savings. Vectren's gas and electric EE programs encourage customers to manage their energy use through a variety of approaches including: residential and business audits which help customers identify energy savings opportunities; in-store lighting discounts which apply utility-sponsored rebates at the time of purchase; appliance recycling which encourages customers to remove their inefficient refrigerators and freezers; rebates on equipment and services which reduce the initial higher costs for efficient products; home energy reports that utilize behavioral science to influence energy usage; and commercial equipment upgrades and maintenance. Vectren continues to offer integrated EE programs, meaning that its electric and natural gas programs are jointly delivered to best penetrate customer markets. With combined efforts, the same home or business may be given deeper savings in the same retrofit rather than having to participate in separate programs. Vectren's DR program, referred to as Summer Cycler, is a voluntary energy management program which uses direct load control (DLC) switches to briefly cycle air conditioning and water heating units in customer homes during periods of peak electricity demand. Summer Cycler participants earn \$5 monthly bill credits during the cooling season of June through September. By cycling off major electric appliances for short periods of time,

peak power demand can be trimmed with little or no customer discomfort or inconvenience. With changes in technology, there are many opportunities for Vectren to position itself to provide customers with actionable steps for better managing their energy usage and costs. Vectren's EE and DR programs are expanding by integrating smart/Wi-Fi thermostats into the program mix. In 2018, Vectren's Income Qualified Weatherization and Multi-Family Programs will begin installing Nest thermostats in homes to help improve efficiency, in lieu of programmable thermostats.

**Time horizon**

Current

**Likelihood**

Virtually certain

**Magnitude of impact**

High

**Potential financial impact****Explanation of financial impact**

In 2017, the Vectren EE portfolio achieved more than 44,000 MWh electric savings and approximately 4.4 million therms for measures implemented or installed in that year. Most of these measures will continue to reap savings for many years to come. Since their inception in 2010, Vectren's electric EE programs have saved enough energy to power over 115,000 homes. Vectren's natural gas EE programs have saved enough energy to heat over 250,000 homes since their inception in 2006. In 2017, the residential electric programs achieved over 24 million kWh of savings and the natural gas residential programs achieved approximately 3.5 million therms of savings. The Commercial electric programs achieved 20 million kWh of savings and the natural gas business programs achieved an estimated 883 thousand therms of savings. As of 2017, about 23,000 residential customers have switches installed. Today, our DLC program is able to curtail 19.2 MW in peak demand savings during times of high use.

**Strategy to realize opportunity**

These programs are current and ongoing. As the market shifts towards all things smart, Vectren will also launch a "Smart Cycle" initiative. Smart Cycle encompasses various avenues for customers to participate in EE and DR related smart thermostats programs. This initiative includes the 2,000 smart thermostat units which were installed in eligible homes in 2016. Beginning in 2018, Vectren will offer two additional ways to engage customers in this initiative. 1,000 direct load control (DLC) Summer Cycler Switches will be changed out for Nest Thermostats in 2018. These thermostats provide two-way communication and serve as a strategic option for cost effective load control solutions. As an alternative to the older DLC switches, the thermostats provides customers more control over their energy use through optimization of heating and cooling of a home. Over the next decade, Vectren plans to replace all DLC switches with smart thermostats. The Bring Your Own Thermostat Program, also planned to kick off in 2018, allows customers who have their own Smart/Wi-Fi enabled device from multiple potential vendors to participate in DR and other load curtailing programs managed through the utility. Empowering and engaging the customer can significantly improve participation and satisfaction with the program.

**Cost to realize opportunity****Comment**

---

**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Supply Chain

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of supportive policy incentives

**Type of financial impact driver**

Reputational benefits resulting in increased demand for goods/services

**Company- specific description**

In future natural gas contracts, Vectren is advocating an approach for suppliers to be responsible providers committed to making an effort to reduce methane emissions across the natural gas value chain. Vectren supports the the Guiding Principles on Reducing Methane Emissions across the Natural Gas Value Chain developed in conjunction with the The Oil & Gas Methane Partnership of the Climate and Clean Air Coalition. Vectren is taking an active part with the Edison Electric Institute and the American Gas Association to support the Natural Gas Sustainability Initiative to work on advancing methane disclosure and sustainability practices across the value chain of natural gas.

**Time horizon**

Short-term

**Likelihood**

More likely than not

**Magnitude of impact**

High

**Potential financial impact****Explanation of financial impact****Strategy to realize opportunity**

Vectren will stay engaged in current industry sustainability activities related to the value chain of natural gas from wellhead to burner tip as these initiatives progress. This will allow us to have input and the most up to date information on methane reduction principles for future gas contracts.

**Cost to realize opportunity**

## Comment

---

### C2.5

---

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

	Impact	Description
Products and services	Impacted	Increased price of GHG emissions impact the products and services for Vectren. Pricing may change for those who receive services from Vectren
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	There are costs to adopt/deploy new practices and processes, and the supply chain/value chain will be impacted.
Adaptation and mitigation activities	Impacted	Vectren is impacted because it must adapt and also continue to mitigate its activities, due to the increased pricing of GHG emissions.
Investment in R&D	Impacted	Research and development is required in order for Vectren to be fully prepared and educated on climate-related risks, specifically on the increased pricing of GHG emissions.
Operations	Impacted	Operations are impacted by the climate-related risks because Vectren will have to improve its operations, in order to ensure that they adapt to risks and processes to provide quality service for its customers.
Other, please specify	Please select	

### C2.6

---

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

	Relevance	Description

	Relevance	Description
Revenues	Impacted	The Company has an enterprise Risk Management Committee composed of senior level management whose purpose is to ensure an enterprise-wide approach to managing risk and compliance. The primary responsibility of the Committee is to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities to the Audit and Risk Management Committee of the Board. Under this enterprise risk management approach, the Committee oversees and approves a comprehensive company-wide risk assessment every two years, including an assessment of which risks are significant and provides assistance to business unit managers with risk monitoring and the implementation of strategies to mitigate risk in their areas. The Committee periodically reviews and reports the following to the Audit and Risk Management Committee of the Board, as well as the full Board: 1. All material business risks; 2. The processes, procedures and controls in place to manage material risks; and 3. The overall effectiveness of the enterprise risk management process.
Operating costs	Impacted	The Company has an enterprise Risk Management Committee composed of senior level management whose purpose is to ensure an enterprise-wide approach to managing risk and compliance. The primary responsibility of the Committee is to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities to the Audit and Risk Management Committee of the Board. Under this enterprise risk management approach, the Committee oversees and approves a comprehensive company-wide risk assessment every two years, including an assessment of which risks are significant and provides assistance to business unit managers with risk monitoring and the implementation of strategies to mitigate risk in their areas. The Committee periodically reviews and reports the following to the Audit and Risk Management Committee of the Board, as well as the full Board: 1. All material business risks; 2. The processes, procedures and controls in place to manage material risks; and 3. The overall effectiveness of the enterprise risk management process.
Capital expenditures / capital allocation	Impacted	The Company has an enterprise Risk Management Committee composed of senior level management whose purpose is to ensure an enterprise-wide approach to managing risk and compliance. The primary responsibility of the Committee is to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities to the Audit and Risk Management Committee of the Board. Under this enterprise risk management approach, the Committee oversees and approves a comprehensive company-wide risk assessment every two years, including an assessment of which risks are significant and provides assistance to business unit managers with risk monitoring and the implementation of strategies to mitigate risk in their areas. The Committee periodically reviews and reports the following to the Audit and Risk Management Committee of the Board, as well as the full Board: 1. All material business risks; 2. The processes, procedures and controls in place to manage material risks; and 3. The overall effectiveness of the enterprise risk management process.
Acquisitions and divestments	Not evaluated	
Access to capital	Impacted	The Company has an enterprise Risk Management Committee composed of senior level management whose purpose is to ensure an enterprise-wide approach to managing risk and compliance. The primary responsibility of the Committee is to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities to the Audit and Risk Management Committee of the Board. Under this enterprise risk management approach, the Committee oversees and approves a comprehensive company-wide risk assessment every two years, including an assessment of which risks are significant and provides assistance to business unit managers with risk monitoring and the implementation of strategies to mitigate risk in their areas. The Committee periodically reviews and reports the following to the Audit and Risk Management Committee of the Board, as well as the full Board: 1. All material business risks; 2. The processes, procedures and controls in place to manage material risks; and 3. The overall effectiveness of the enterprise risk management process.

	Relevance	Description
Assets	Impacted	The Company has an enterprise Risk Management Committee composed of senior level management whose purpose is to ensure an enterprise-wide approach to managing risk and compliance. The primary responsibility of the Committee is to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities to the Audit and Risk Management Committee of the Board. Under this enterprise risk management approach, the Committee oversees and approves a comprehensive company-wide risk assessment every two years, including an assessment of which risks are significant and provides assistance to business unit managers with risk monitoring and the implementation of strategies to mitigate risk in their areas. The Committee periodically reviews and reports the following to the Audit and Risk Management Committee of the Board, as well as the full Board: 1. All material business risks; 2. The processes, procedures and controls in place to manage material risks; and 3. The overall effectiveness of the enterprise risk management process.
Liabilities	Impacted	The Company has an enterprise Risk Management Committee composed of senior level management whose purpose is to ensure an enterprise-wide approach to managing risk and compliance. The primary responsibility of the Committee is to anticipate, identify, prioritize and proactively manage the Company's material risks and report the results of the Committee's activities to the Audit and Risk Management Committee of the Board. Under this enterprise risk management approach, the Committee oversees and approves a comprehensive company-wide risk assessment every two years, including an assessment of which risks are significant and provides assistance to business unit managers with risk monitoring and the implementation of strategies to mitigate risk in their areas. The Committee periodically reviews and reports the following to the Audit and Risk Management Committee of the Board, as well as the full Board: 1. All material business risks; 2. The processes, procedures and controls in place to manage material risks; and 3. The overall effectiveness of the enterprise risk management process.
Other	Please select	

## C3. Business Strategy

---

### C3.1

---

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

Yes

#### C3.1 a

---

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

Yes, qualitative and quantitative

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

---

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

Please select

## C3.1c

---

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

Carbon strategy is a cornerstone in Vectren's corporate planning process. Vectren regularly assesses the risks and opportunities associated with carbon as part of our overall strategic business planning and enterprise risk management processes. Under Vectren's smart energy future transition plan the Company has identified three critical components of a sustainable carbon strategy:

1. Reducing our own emissions and compliance with environmental standards.
2. Ensuring our infrastructure is resilient to changing climate.
3. Helping our customers reduce their emissions.

In 2016, Vectren completed an extensive year-long integrated resource planning process, which considered a broad range of potential resources and variables to ensure the plan offered a long-term reliable and reasonably priced generation portfolio as well as a balanced energy mix. In arriving at a preferred generation portfolio we considered the costs to continue operating our existing coal-fired generation units in a manner that complies with current and anticipated future environmental requirements, as well as various resource alternatives, such as the use of energy efficiency programs and renewable resources as part of the overall generation portfolio. The Company received robust stakeholder participation and feedback, holding three public stakeholder meetings. Vectren's generation transition plan was presented to the public in November 2016 and includes the retirement of A.B. Brown Units 1 & 2, F.B. Culley Unit 2 and exiting joint operations of Warrick Unit 4 with Alcoa, the construction of a new natural gas-fired combined cycle unit and the addition of 54 megawatts of solar by 2025.

Vectren has a long-standing commitment to environmental performance. Since the 1990's, Vectren's coal-fired generation fleet has shown a steady reduction of sulfur dioxide, nitrogen oxide, mercury and particulate emissions through its investments in scrubbers, selective catalytic reduction technology and fabric filters. In addition to reductions of these traditional pollutants, the Company has reduced its emissions of carbon by 35% below 2005 levels (on a tonnage basis) through the retirement of F.B. Culley 1, expiration of municipal contracts, successful execution of electric conservation programs, the addition of renewable generation and the installation of more efficient dense pack turbine technology.

But our commitment to carbon emission reductions does not stop there. Once approved and with the successful execution of Vectren's electric generation transition plan, Vectren will achieve its goal of 60% reduction of carbon emissions below 2005 levels by 2024. Moreover, the carbon intensity of Vectren's generation fleet will drop from 1,950 lbs CO<sub>2</sub>/MMBtu to 980 lbs CO<sub>2</sub>/MMBtu, well below the intensity targets set in EPA's Clean Power Plan. While it is still unclear as to the short-term future of any carbon regulation, Vectren's smart energy future transition plan will position the Company to successfully comply long-term with carbon reduction requirements.

### C3.1 d

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

Climate-related scenarios	Details
IEA 450	With its smart energy future transition plan, Vectren is taking action to reduce its own carbon emissions consistent with the international community's goal of preventing global temperatures from rising more than two degrees Celsius by the year 2100. Using guidance from the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency's 450 parts per million (ppm) scenario, the Company assumes a 50% carbon emission reduction from 2005 levels by 2050 would be required to align with the IPCC goal. Vectren's actions being taken today as part of our electric generation transition plan will exceed the IPCC emission reduction targets meant to limit global temperature increases to two degrees Celsius by 2100.

## C4. Targets and performance

## C4.1

---

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

Both absolute and intensity targets

## C4.1 a

---

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

**Target reference number**

Abs 1

**Scope**

Scope 1+2 (location-based)

**% emissions in Scope**

95

**% reduction from base year**

60

**Base year**

2005

**Start year**

2017

**Base year emissions covered by target (metric tons CO2e)**

7459613

**Target year**

2024

**Is this a science-based target?**

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

**% achieved (emissions)**

30

**Target status**

New

**Please explain**

---

## C4.1b

---

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

**Target reference number**

Int 1

**Scope**

Scope 1

**% emissions in Scope**

99

**% reduction from baseline year**

50

**Metric**

Metric tons CO2e per megawatt hour (MWh)\*

**Base year**

2005

**Start year**

2017

**Normalized baseline year emissions covered by target (metric tons CO2e)**

7459613

**Target year**

2024

**Is this a science-based target?**

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

**% achieved (emissions)**

0

**Target status**

New

**Please explain**

Scope 1 intensity targets are a key component to Vectren's new energy portfolio strategy which includes transitioning to a lower emitting electric generation fleet through the use of less carbon intensive fossil fuels, implementing zero emission renewables (new utility solar

projects) into our generation mix, and continued and expanded energy efficiency programs for our customers.

**% change anticipated in absolute Scope 1+2 emissions**

-50

**% change anticipated in absolute Scope 3 emissions**

0

---

## C4.2

---

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

## C-OG4.2a

---

**(C-OG4.2a) Explain, for your oil and gas production activities, why you do not have a methane-specific emissions reduction target or do not incorporate methane into your targets reported in C4.2; and forecast how your methane emissions will change over the next five years.**

## C4.3

---

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

Yes

## C4.3a

---

**(C4.3a) Identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO<sub>2</sub>e savings.**

	Number of projects	Total estimated annual CO <sub>2</sub> e savings in metric tonnes CO <sub>2</sub> e (only for rows marked *)
Under investigation	0	
To be implemented*	6	

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Implementation commenced*	3	
Implemented*	8	
Not to be implemented	0	

## C4.3b

---

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

**Activity type**

Process emissions reductions

**Description of activity**

Changes in operations

**Estimated annual CO2e savings (metric tonnes CO2e)**

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)**

**Investment required (unit currency – as specified in CC0.4)**

**Payback period**

>25 years

**Estimated lifetime of the initiative**

>30 years

**Comment**

Today Vectren owns and operates approximately 1,000 megawatts of coal-fired generation, 245 megawatts of natural gas-fired peaking units and a 3-megawatt landfill gas-to-electricity facility. The Company also has 80 megawatts of wind power through two long-term purchase agreements and 32 megawatts of coal generation through its ownership in the Ohio Valley Electric Corporation. This portfolio, dependent largely on coal, is about to change dramatically. On February 20, 2018, Vectren filed a request with the Indiana Utility Regulatory Commission seeking authority to implement changes to its generation portfolio. These proposed changes would transition our electric generation portfolio from nearly total reliance on baseload coal to a fully diversified and balanced portfolio of fuels, including coal, natural gas and renewables. If authorized by the Indiana Utility Regulatory Commission, Vectren

plans to construct a 800-900 megawatt natural gas combined cycle plant to replace the coal-fired generation which the Company has slated for retirement.

---

**Activity type**

Low-carbon energy installation

**Description of activity**

Solar PV

**Estimated annual CO2e savings (metric tonnes CO2e)****Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)****Investment required (unit currency – as specified in CC0.4)****Payback period**

Please select

**Estimated lifetime of the initiative**

21-30 years

**Comment**

Not only is Vectren upgrading its electric system, but we are also continuing our path toward a balanced energy mix with universal solar projects. Vectren will partner with First Solar, Inc. to build a 50-megawatts (MW) solar array that will be situated on approximately 300 acres and will consist of about 150,000 solar panels. The array will be mounted on a single-axis tracking system, which enables the panels to automatically pivot to enhance energy generation as the sun's rays move across the surface of the Earth. The facility, which should be operational in the fall of 2020, is expected to generate enough power to meet the needs of more than 11,000 households per year. The project will provide up to 250 jobs at its peak, many of which will be union labor. Construction will begin after the Indiana Utility Regulatory Commission authorizes the project; a decision is expected in the first half of 2019. (2) 2MW projects that will be buildt in 2018 combined will supply enough renewable energy to power 600 homes each year.

---

**Activity type**

Energy efficiency: Processes

**Description of activity**

Other, please specify (Facility and Fleet - Energy Efficiency )

**Estimated annual CO2e savings (metric tonnes CO2e)**

**Scope**

Scope 1

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)****Investment required (unit currency – as specified in CC0.4)****Payback period**

Please select

**Estimated lifetime of the initiative**

11-15 years

**Comment**

Vectren actively monitors the consumption of energy, water and fuel to evaluate issues as they arise while simultaneously developing and implementing energy efficient plans. All new utility, corporate and remodeled buildings are designed to meet ENERGY STAR® standards and with the minimization of energy use in mind. Through the implementation of new, relevant fleet vehicle technology, Vectren continuously works towards building a more sustainable fleet with lower overall fuel consumption. In 2017, Vectren made the following improvements to our facilities:

- Replaced the variable speed drives on the HVAC units at our NP Wagner & SSC complexes to provide better control
- Replaced the boilers at the NP Wagner complex which can result in a 760 ton reduction in annual carbon output (Calculations provided by Johnson Controls per the estimated reduction in natural gas usage)
- Replaced numerous older model heaters throughout Vectren's field office garages
- Installed window tinting throughout various areas of the NP Wagner complex to reduce heat from sunlight

In 2017, the following efficiency upgrades were made to Vectren's vehicle fleet:

- Purchased 1 plug-in, hybrid electric bucket truck
- Purchased 1 plug-in, electric fork lift
- Replaced 24 light-duty vehicles with E85-complaint vehicles
- Replaced 30 medium-duty vehicles with E85-complaint vehicles
- Overall, fuel economy increased by ~0.86%

**Activity type**

Low-carbon energy installation

**Description of activity**

Other, please specify (Construct Urban Living Research Center)

**Estimated annual CO2e savings (metric tonnes CO2e)****Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)**

**Investment required (unit currency – as specified in CC0.4)**

**Payback period**

Please select

**Estimated lifetime of the initiative**

3-5 years

**Comment**

Vectren is leading multiple projects to advance the company's research and pilot emerging technologies. Vectren is leading the design of exploratory energy technologies in the new Urban Living Research Center, a mixed use development that will host a variety of emerging technologies including solar, lithium-ion battery energy storage, electric vehicle charging, high-efficiency HVAC and water heating, smart home technologies, and customer energy management solutions. The facility will demonstrate the feasibility of these technologies and provide a platform for ongoing validation and verification of the energy savings and customer benefits achievable with emerging energy technologies. Vectren will engage with independent third parties to verify the accuracy of the experimental design and to ensure consistent and reliable findings.

---

**Activity type**

Fugitive emissions reductions

**Description of activity**

Landfill methane capture

**Estimated annual CO2e savings (metric tonnes CO2e)**

**Scope**

Scope 1

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)**

**Investment required (unit currency – as specified in CC0.4)**

**Payback period**

Please select

**Estimated lifetime of the initiative**

11-15 years

**Comment**

Today Vectren owns and operates approximately a 3-megawatt landfill gas-to-electricity facility.

**Activity type**

Energy efficiency: Processes

**Description of activity**

Other, please specify (Energy Efficiency )

**Estimated annual CO2e savings (metric tonnes CO2e)**

67076

**Scope**

Scope 1

Scope 3

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)****Investment required (unit currency – as specified in CC0.4)****Payback period**

Please select

**Estimated lifetime of the initiative**

16-20 years

**Comment**

Vectren's gas and electric energy efficiency (EE) programs encourage customers to manage their energy use through a variety of approaches including: residential and business audits which help customers identify energy savings opportunities; in-store lighting discounts which apply utility-sponsored rebates at the time of purchase; appliance recycling which encourages customers to remove their inefficient refrigerators and freezers; rebates on equipment and services which reduce the initial higher costs for efficient products; home energy reports that utilize behavioral science to influence energy usage; and commercial equipment upgrades and maintenance. In 2017, the Vectren EE portfolio achieved more than 44,000 MWh electric savings and approximately 4.4 million therms for measures implemented or installed in that year.

**Activity type**

Other, please specify (Retirement of Coal Fired Plant )

**Description of activity**

<Field Hidden>

**Estimated annual CO2e savings (metric tonnes CO2e)****Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)****Investment required (unit currency – as specified in CC0.4)****Payback period**

Please select

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Vectren's – Next Generation Sustainability – which reflects the evolving direction that Vectren is taking as it transitions its electric generation portfolio from nearly total reliance on baseload coal to a fully diversified and balanced energy mix that, along with our grid modernization plan, we believe will ensure Vectren meets its long term electric supply needs in a safe and reliable manner while dramatically lowering our carbon emissions. Our plan for a diversified generation portfolio is the result of a comprehensive integrated resource planning process, which included multiple opportunities for stakeholder input, and provides for the retirement of three aging coal-fired units and exit of a fourth, replacement of those units with new highly-efficient natural gas-fired generation and investment in utility solar projects commencing as early as 2018. Our new generation portfolio is expected to reduce Vectren's emissions of carbon 60% from 2005 levels, well below the emission targets called for in international accords, as well as provide for significant reductions of other air emissions and wastewater.

**Activity type**

Low-carbon energy installation

**Description of activity**

Other, please specify (Windsources)

**Estimated annual CO2e savings (metric tonnes CO2e)****Scope**

Scope 1

Scope 2 (location-based)

**Voluntary/Mandatory**

Please select

**Annual monetary savings (unit currency – as specified in CC0.4)****Investment required (unit currency – as specified in CC0.4)****Payback period**

Please select

**Estimated lifetime of the initiative**

16-20 years

**Comment**

Vectren has approximately 90 megawatts of wind power through two long-term purchase agreements.

---

**Activity type**

Energy efficiency: Processes

**Description of activity**

Process optimization

**Estimated annual CO2e savings (metric tonnes CO2e)****Scope**

Scope 1

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)****Investment required (unit currency – as specified in CC0.4)****Payback period**

Please select

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Vectren is executing an integrated, multi-year business transformation initiative focused on the technologies, which allow us to provide excellent customer experience as well as improved strategic operations. Program ExCEL (Excellent Customer Experience Lifecycle) includes enhancements to technology systems and processes associated with electric and natural gas metering as well as customer care and billing systems. In order to support the energy grid infrastructure improvements, the strategic operations enhancements include technology added to the electric distribution system to help manage electric outage information and customer data. When fully deployed, these systems will help pinpoint causes and locations of system interference, allowing field crews to respond faster and provide better restoration times to those impacted customers. In 2017 Vectren released its future electric grid modernization plan, another significant step toward Next Generation Sustainability. Vectren's multi-year grid modernization plan consists of over 800 infrastructure projects through 2024 and joins its existing gas infrastructure investment plan to ensure Vectren continues to provide safe, reliable, service that meets the needs of its customers. Vectren also installed smart meter readings for our residential gas and electric customers.

**Activity type**

Energy efficiency: Processes

**Description of activity**

Process optimization

**Estimated annual CO2e savings (metric tonnes CO2e)****Scope**

Scope 1

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in CC0.4)****Investment required (unit currency – as specified in CC0.4)****Payback period**

Please select

**Estimated lifetime of the initiative**

6-10 years

**Comment**

As evidence of its commitment to long-term energy efficiency, in 2017, Vectren Indiana–South completed implementation of its Conservation Voltage Reduction (CVR) program. The CVR technology was deployed on the Buckwood Substation in 2017, with the plan for another substation to follow in 2020. The CVR program is an energy savings and demand response (DR) program that achieves conservation through automated monitoring and control of voltage levels provided on distribution circuits. With the CVR, the utility systematically reduces voltages in its distribution network, resulting in a proportional reduction of load on the network. Consumers receive a lower but still acceptable voltage and use less energy to accomplish the same tasks. End use customers realize lower energy and demand consumption when CVR is applied to the distribution circuit from which they are served. The CVR strategy can provide benefits for emergency load relief, sub-station voltage reduction, peak load management and customer end-use efficiency.

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

Method	Comment

Method	Comment
Compliance with regulatory requirements/standards	We use the Integrated Resource Plan process to forecast external pressures on company operations. Among those identified are risks associated with climate change. In fact, we have performed a detailed analysis of investments in additional emission control equipment for our coal-fired generation facilities or retiring them and replacing with natural gas-fired plants. We anticipate pending environmental regulations, but are not passively waiting for those to be implemented before taking action to reduce our carbon emissions and associated liabilities.
Internal price on carbon	Vectren utilizes an internal price of carbon in all generation planning decisions, which influences and encourages investment in low-carbon generation and divestment of high-carbon generation.

## C4.5

---

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

Yes

## C4.5a

---

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

**Level of aggregation**

Group of products

**Description of product/Group of products**

Energy efficiency initiatives

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

Avoided emissions

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

Other, please specify (Energy Efficiency Initiatives)

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

0

**Comment**

We do not garner revenue from promoting Energy Efficiency Initiatives

---

**Level of aggregation**

Group of products

**Description of product/Group of products**

Energy efficiency initiatives

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

Avoided emissions

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

Other, please specify (Comprehensive portfolio of demand)

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

0

**Comment**

We do not garner revenue from Promoting Energy Efficiency Initiatives

---

**Level of aggregation**

Product

**Description of product/Group of products**

Electricity produced by wind and landfill gas generating resources

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

Low-carbon product

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

Other, please specify (Electricity)

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

0

**Comment**

Electricity produced from wind and landfill gas generating resources is generally recognized as zero carbon electricity.

---

**Level of aggregation**

Product

**Description of product/Group of products**

Electricity

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

Avoided emissions

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

Other, please specify (Electricity)

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

0

**Comment**

Electricity, regardless of how it is generated, can be a substitute for fossil fuel-fired technologies in numerous end-use applications throughout the economy that will enable a third party user to reduce its GHG emissions.

---

**C-EU4.6**

---

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

**C-OG4.6**

---

**(C-OG4.6) Describe your organization's efforts to reduce methane emissions from oil and gas production activities.**

**COG4.7**

---

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

Please select

**C-OG4.8**

---

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

**C5. Emissions methodology**

---

## C5.1

---

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

### Scope 1

**Base year start**

January 1 2005

**Base year end**

December 31 2005

**Base year emissions (metric tons CO2e)**

7459612

**Comment**

### Scope 2 (location-based)

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

21432.1

**Comment**

Scope 2 includes electricity usage at Vectren owned buildings and our headquarters.

### Scope 2 (market-based)

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

## C5.2

---

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

US EPA Mandatory Greenhouse Gas Reporting Rule

## C6. Emissions data

---

### C6.1

---

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

##### Row 1

**Gross global Scope 1 emissions (metric tons CO2e)**

5443128

**End-year of reporting period**

&lt;Field Hidden&gt;

**Comment**

5,229,365 metric tons for electric generation and 213,763 for natural gas operations, as reported in 2017 Vectren Corporation Sustainability Report

##### Row 2

**Gross global Scope 1 emissions (metric tons CO2e)**

&lt;Field Hidden&gt;

**End-year of reporting period**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

##### Row 3

**Gross global Scope 1 emissions (metric tons CO2e)**

&lt;Field Hidden&gt;

**End-year of reporting period**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

##### Row 4

**Gross global Scope 1 emissions (metric tons CO2e)**

&lt;Field Hidden&gt;

**End-year of reporting period**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

**C6.2**

---

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.****Row 1****Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

Please select

**Comment****C6.3**

---

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?****Row 1****Scope 2, location-based**

21432.1

**Scope 2, market-based (if applicable)**

&lt;Field Hidden&gt;

**End-year of reporting period**

&lt;Field Hidden&gt;

**Comment**

Vectren and its operations are solely based in the United States. Scope 2 includes electricity usage at Vectren owned buildings and our headquarters.

**Row 2****Scope 2, location-based**

&lt;Field Hidden&gt;

**Scope 2, market-based (if applicable)**

<Field Hidden>

**End-year of reporting period**

<Field Hidden>

**Comment**

<Field Hidden>

**Row 3****Scope 2, location-based**

<Field Hidden>

**Scope 2, market-based (if applicable)**

<Field Hidden>

**End-year of reporting period**

<Field Hidden>

**Comment**

<Field Hidden>

**Row 4****Scope 2, location-based**

<Field Hidden>

**Scope 2, market-based (if applicable)**

<Field Hidden>

**End-year of reporting period**

<Field Hidden>

**Comment**

<Field Hidden>

**C6.4**

---

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

No

**C6.5**

---

**(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.****Purchased goods and services****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

These Scope 3 emissions are an insignificant percentage (de minimis) of our company's carbon emissions footprint. Vectren concluded this based on the guidance provided in Chapter 5 of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-an-Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3.

**Capital goods****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

These Scope 3 emissions are an insignificant percentage (de minimis) of our company's carbon emissions footprint. Vectren concluded this based on the guidance provided in Chapter 5 of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-an-Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3.

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

**Evaluation status**

Relevant, not yet calculated

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

This source category is related to the extraction, processing, and transportation of the various fuels Vectren uses for the production of electricity. Vectren does not currently attempt to estimate the Scope 3 emissions that are associated with this source category, nor does it currently have a sense of the magnitude of the emissions associated with the source category. The emissions associated with this source category are believed to be predominately carbon dioxide and methane. Vectren participates in the Natural Gas Sustainability Initiative which is working for consistent disclosure of carbon emissions across the value chain of natural gas from wellhead to burner tip. As Vectren transitions to natural gas fired generation, we gather more information on these emission sources.

**Upstream transportation and distribution****Evaluation status**

Relevant, not yet calculated

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

Vectren determined this to be relevant and is included in the fuel and energy activities category which Vectren has determined to be relevant, but has yet to estimate

**Waste generated in operations****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

Vectren concluded this based on the guidance provided in Chapter 5 of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-and-Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3. Vectren has extensive programs for handling of hazardous and non-hazardous waste as well as recycling programs. While carbon emission offsets are not calculated, Vectren recycled 767,815,920 pounds of waste in 2017

**Business travel****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

These Scope 3 emissions are an insignificant percentage of our company's carbon emissions footprint. Vectren has estimated these emissions to be below the threshold of de minimis in comparison to our Scope 1 emissions.

**Employee commuting****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

These Scope 3 emissions are an insignificant percentage (de minimis) of our company's carbon emissions footprint. Vectren concluded this based on the guidance provided in Chapter 5 of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-an-Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3.

**Upstream leased assets****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

Vectren does not have upstream leased assets.

**Downstream transportation and distribution****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

These Scope 3 emissions are an insignificant percentage (de minimis) of our company's carbon emissions footprint. Vectren concluded this based on the guidance provided in Chapter 5 of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-an-Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3.

**Processing of sold products**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

Vectren concluded this based on the guidance provided in Chapter 5 of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-an-Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3.

**Use of sold products****Evaluation status**

Not relevant, calculated

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

Vectren concluded this based on the guidance provided in Chapter 5 of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-an-Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3.

**End of life treatment of sold products****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

Vectren concluded this based on the guidance provided in Chapter 5 of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-an-Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3.

**Downstream leased assets****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

Vectren does not have downstream leased assets.

**Franchises****Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e****Emissions calculation methodology**

N/A

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

Vectren has no franchises.

**Investments****Evaluation status**

Not evaluated

**Metric tonnes CO2e**

0

**Emissions calculation methodology**

N/A

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

0

**Explanation**

N/A

**Other (upstream)****Evaluation status****Metric tonnes CO2e****Emissions calculation methodology****Percentage of emissions calculated using data obtained from suppliers or value chain partners****Explanation****Other (downstream)****Evaluation status**

Not relevant, calculated

**Metric tonnes CO2e**

7543797.5

**Emissions calculation methodology**

Based on US EPA Greenhouse Gas Reporting Program December 11, 2014 Final Rule (79 FR 73750 December 11, 2014) global warming potential for methane applied to the total amount of natural gas supplied by Vectren to downstream customers per EIA Form 176 to calculate the potential for emissions from customer owned asset combustion activities such as the use of gas furnaces and water heaters. Large customers that report their own emissions under the US EPA Mandatory Greenhouse Reporting Rule were not included in these Scope 3 calculations.

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

0

**Explanation**

The CDP Guidelines specifically refer electric utilities to the section of this document on Fuel-and Energy-Related Emissions not included in Scope 1 or 2 for guidance on which emissions should be reported under Scope 3. This emission source is not relevant to the

value chain and emissions output of Vectren. Vectren does report these Scope 3 indirect emissions on behalf of their customers under the EPA Mandatory Greenhouse Gas Reporting Rule Subpart NN. None of these emissions are considered Scope 1 as they are not direct emissions from a company owned asset.

## C6.7

---

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

No

## C6.10

---

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

**Intensity figure**

0.0026

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

5464560

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

2657300000

**Scope 2 figure used**

Location-based

**% change from previous year**

0

**Direction of change**

No change

**Reason for change**

No change.

---

## C-OG6.12

---

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

## C-OG6.13

---

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

**Oil and gas business division**

Please select

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

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

**Comment**

---

## C7. Emissions breakdowns

---

### C7.1

---

**(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?**

Yes

### C7.1a

---

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	5194825.4	IPCC Fourth Assessment Report (AR4 - 20 year)
CH4	9049.41	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	74.05	Other, please specify (EPA GHGRR 79 FR 73750 12.11.14 - GWP 298)

## C-EU7.1b

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

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives					
Combustion (Electric utilities)					
Combustion (Gas utilities)					
Combustion (Other)					
Emissions not elsewhere classified					

## C-OG7.1b

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

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives (Oil:Total)				
Fugitives (Oil: Venting)				
Fugitives (Oil: Flaring)				
Fugitives (Oil: E&P, excluding venting and flaring)				

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives (Oil: All Other)				
Fugitives (Gas: Total)				
Fugitives (Gas: Venting)				
Fugitives (Gas: Flaring)				
Fugitives (Gas: E&P, excluding venting and flaring)				
Fugitives (Gas: Midstream)				
Fugitives (Gas: All other)				
Combustion (Oil: Upstream, excluding flaring)				
Combustion (Gas: Upstream, excluding flaring)				
Combustion (Refining)				
Combustion (Chemicals production)				
Combustion (Electricity generation)				
Combustion (Other)				
Process emissions				
Emission not elsewhere classified				

## C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	5443128

## C7.3

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

By activity

## C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Electric Generation	5229365
Natural Gas Distribution	213763

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Chemicals production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Coal production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Electric utility generation activities		<Field Hidden>	
Metals and mining production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Oil and gas production activities (upstream)		<Field Hidden>	
Oil and gas production activities (downstream)		<Field Hidden>	
Steel production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Transport OEM activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Transport services activities	<Field Hidden>	<Field Hidden>	<Field Hidden>

## C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	21432.1	0	339.2	0

## C7.6

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

By facility

### C7.6b

**(C7.6b) Break down your total gross global Scope 2 emissions by business facility.**

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
S-size facility (0 - 9,999 square foot)	1262.8	
M-size facility (10,000 - 12,999 square foot)	882.2	
L-size facility (13,000 - 31,999 square foot)	2559.4	
XL-size facility (32,000 - 68,999 square foot)	1268.1	
XXL-size facility (69,000 - 174,000 square foot)	15320.1	

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

**(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-T07.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Chemicals production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Coal production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Metals and mining production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Oil and gas production activities (upstream)			
Oil and gas production activities (downstream)			
Steel production activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Transport OEM activities	<Field Hidden>	<Field Hidden>	<Field Hidden>
Transport services activities	<Field Hidden>	<Field Hidden>	<Field Hidden>

## C7.9

---

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

Increased

## C7.9a

---

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Field Hidden>		
Other emissions reduction activities		<Field Hidden>		
Divestment		<Field Hidden>		
Acquisitions		<Field Hidden>		N/A
Mergers		<Field Hidden>		N/A
Change in output	1459841	Increased	31	Vectren experienced a higher demand for electric generation in 2017. Vectren has announced an energy portfolio transition that will decrease the carbon intensity of our generation fleet by 50% in 2024.
Change in methodology		<Field Hidden>		
Change in boundary		<Field Hidden>		
Change in physical operating conditions	9123	Decreased	4	Vectren is part of the Voluntary Methane Challenge Program and has reduced the number of bare steel and cast iron miles of pipeline and services in our operation territories. This has resulted in tighter natural gas pipeline distribution systems with less methane leakage.
Unidentified	0	Please select	0	N/A
Other		<Field Hidden>	0	N/A

## C7.9b

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

Location-based

## C8. Energy

## C8.1

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

More than 45% but less than or equal to 50%

## C8.2

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

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

## C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	11670	27426	39096
Consumption of purchased or acquired electricity	<Field Hidden>	220685	4380008	4600693
Consumption of purchased or acquired heat	<Field Hidden>	<Field Hidden>	<Field Hidden>	<Field Hidden>
Consumption of purchased or acquired steam	<Field Hidden>	<Field Hidden>	<Field Hidden>	<Field Hidden>
Consumption of purchased or acquired cooling	<Field Hidden>	<Field Hidden>	<Field Hidden>	<Field Hidden>
Consumption of self-generated non-fuel renewable energy	<Field Hidden>		<Field Hidden>	

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Total energy consumption	<Field Hidden>		458755	458755

## C8.2b

---

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

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

## C8.2c

---

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

**Fuels (excluding feedstocks)**

Coal

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

458755

**MWh fuel consumed for the self-generation of electricity**

458755

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Field Hidden>

**MWh fuel consumed for self-generation of cooling**

<Field Hidden>

**MWh fuel consumed for self- cogeneration or self-trigeneration**<Field Hidden>

---

**C8.2d**

---

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

&lt;Field Hidden&gt;

**Unit**

&lt;Field Hidden&gt;

**Emission factor source**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

**Agricultural Waste****Emission factor**

&lt;Field Hidden&gt;

**Unit**

&lt;Field Hidden&gt;

**Emission factor source**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

**Alternative Kiln Fuel (Wastes)****Emission factor**

&lt;Field Hidden&gt;

**Unit**

&lt;Field Hidden&gt;

**Emission factor source**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

**Animal Fat**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Animal/Bone Meal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Anthracite Coal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Asphalt**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Aviation Gasoline**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Bagasse**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Bamboo**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Basic Oxygen Furnace Gas (LD Gas)**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Biodiesel**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Biodiesel Tallow**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Biodiesel Waste Cooking Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Bioethanol**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Biogas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Biogasoline**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Biomass Municipal Waste**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Biomethane**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Bitumen**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Bituminous Coal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Black Liquor**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Blast Furnace Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Brown Coal Briquettes (BKB)**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Burning Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Butane**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Butylene****Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Charcoal****Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Coal****Emission factor**

1923

**Unit**

lb CO<sub>2</sub>e per MWh

**Emission factor source**

Based on actual measurements on facilitates with generation system MMBtu, utilization, and gross heat rates.

**Comment****Coal Tar****Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Coke**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Coke Oven Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Coking Coal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Compressed Natural Gas (CNG)**

**Emission factor**



**Crude Oil Heavy**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Crude Oil Light**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Diesel**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Distillate Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Dried Sewage Sludge**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Ethane**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Ethylene**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Fuel Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Fuel Oil Number 1**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Fuel Oil Number 2**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Fuel Oil Number 4**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Fuel Oil Number 5**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Fuel Oil Number 6**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Gas Coke**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Gas Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Gas Works Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**GCI Coal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**General Municipal Waste**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Grass**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Hardwood**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Heavy Gas Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Hydrogen**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Industrial Wastes**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**







**Lubricants**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Marine Fuel Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Marine Gas Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Metallurgical Coal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Methane**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Motor Gasoline**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Naphtha**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Natural Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Natural Gas Liquids (NGL)**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Natural Gasoline**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Non-Biomass Municipal Waste**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Non-Biomass Waste**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Oil Sands**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Oil Shale**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Orimulsion**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Other Petroleum Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Paraffin Waxes**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Patent Fuel**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**PCI Coal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Peat**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Pentanes Plus**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Petrochemical Feedstocks**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Petrol**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Petroleum Coke**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Petroleum Products**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Pitch**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Plastics**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Primary Solid Biomass**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Propane Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Propane Liquid**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Propylene**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Refinery Feedstocks**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Refinery Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Refinery Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Residual Fuel Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Road Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**SBP**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Shale Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Sludge Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Softwood**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Solid Biomass Waste**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Special Naphtha**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Still Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Straw**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Subbituminous Coal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Sulphite Lyes**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Tar**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Tar Sands**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Thermal Coal**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Thermal Coal Commercial**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Thermal Coal Domestic**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Thermal Coal Industrial**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Tires**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Town Gas**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Unfinished Oils**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Vegetable Oil**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Waste Oils**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Waste Paper and Card**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Waste Plastics**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Waste Tires**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**White Spirit**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Wood**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Wood Chips**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Wood Logs**

**Emission factor**

<Field Hidden>

**Unit**

<Field Hidden>

**Emission factor source**

<Field Hidden>

**Comment**

<Field Hidden>

**Wood Pellets**

**Emission factor**

&lt;Field Hidden&gt;

**Unit**

&lt;Field Hidden&gt;

**Emission factor source**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

**Wood Waste****Emission factor**

&lt;Field Hidden&gt;

**Unit**

&lt;Field Hidden&gt;

**Emission factor source**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

**Other****Emission factor**

&lt;Field Hidden&gt;

**Unit**

&lt;Field Hidden&gt;

**Emission factor source**

&lt;Field Hidden&gt;

**Comment**

&lt;Field Hidden&gt;

**C8.2e**

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	4939789	44000	11670	0

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

## C-EU8.2e

---

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

### Coal – hard

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

### Lignite

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

### Oil

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

**Scope 1 emissions intensity (metric tons CO2e per GWh)****Comment****Gas****Nameplate capacity (MW)****Gross electricity generation (GWh)****Net electricity generation (GWh)****Absolute scope 1 emissions (metric tons CO2e)****Scope 1 emissions intensity (metric tons CO2e per GWh)****Comment****Biomass****Nameplate capacity (MW)****Gross electricity generation (GWh)****Net electricity generation (GWh)****Absolute scope 1 emissions (metric tons CO2e)****Scope 1 emissions intensity (metric tons CO2e per GWh)****Comment****Waste (non-biomass)****Nameplate capacity (MW)****Gross electricity generation (GWh)****Net electricity generation (GWh)****Absolute scope 1 emissions (metric tons CO2e)****Scope 1 emissions intensity (metric tons CO2e per GWh)****Comment****Nuclear****Nameplate capacity (MW)****Gross electricity generation (GWh)****Net electricity generation (GWh)****Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

### **Geothermal**

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

### **Hydroelectric**

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

### **Wind**

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

### **Solar**

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

**Other renewable**

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

**Other non-renewable**

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

**Total**

**Nameplate capacity (MW)**

**Gross electricity generation (GWh)**

**Net electricity generation (GWh)**

**Absolute scope 1 emissions (metric tons CO2e)**

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

**Comment**

## C8.2f

---

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

**Basis for applying a low-carbon emission factor**

Grid mix of renewable electricity

**Low-carbon technology type**

Solar PV

Wind

Other low-carbon technology, please specify (Landfill Gas)

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

232355

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

0

**Comment**

Found: <https://www.vectren.com/environment/renewables>

---

**Basis for applying a low-carbon emission factor**

Energy attribute certificates, Renewable Energy Certificates (RECs)

**Low-carbon technology type**

Solar PV

Wind

Other low-carbon technology, please specify (Landfill Gas)

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

232355

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

Found: <https://www.vectren.com/environment/renewables>

---

**C-EU8.4**

---

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

Please select

**C9. Additional metrics**

---

## C9.1

---

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

## C-EU9.5a

---

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

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
---------------------------------	-----------------------------------------------------	--------------------------------------------------------	------------------------	---------

## C-EU9.5b

---

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

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

## C-C09.6/C-EU9.6/C-OG9.6

---

**(C-C09.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.**

## C-OG9.7

---

**(C-OG9.7) Disclose the breakeven price (US\$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX and dividends paid/ share buybacks.**

## C10. Verification

---

### C10.1

---

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

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No emissions data provided

### C10.2

---

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

No, but we are actively considering verifying within the next two years

## C11. Carbon pricing

---

### C11.1

---

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

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

### C11.2

---

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

No

## C11.3

---

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

Yes

## C11.3a

---

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

#### Objective for implementing an internal carbon price

- Navigate GHG regulations
- Stakeholder expectations
- Drive energy efficiency
- Drive low-carbon investment
- Identify and seize low-carbon opportunities

#### GHG Scope

Scope 1

#### Application

Vectren performs an extensive year-long integrated resource planning (IRP process, which consider a broad range of potential resources and variables to ensure the plan offered a long-term reliable and reasonably priced generation portfolio as well as a balanced energy mix. Vectren performed scenario analysis around the impacts of carbon pricing as part of this effort. In arriving at a preferred generation portfolio we considered the costs to continue operating our existing coal-fired generation units in a manner that complies with current and anticipated future environmental requirements including carbon markets and constraints on emissions related to fossil fuel combustion, as well as various resource alternatives, such as the use of energy efficiency programs and renewable resources as part of the overall generation portfolio.

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

20

#### Variance of price(s) used

A base case with carbon pricing ranging from \$0-\$20 was used with pricing forecasts ending in 2036. Multiple scenarios were run with their own carbon pricing assumptions and ranges. The carbon price forecast used in Vectren's 2016 IRP is based on the delayed implementation of the Clean Power Plan assuming that most states opt into national mass-based trading. It is assumed that California continues to meet its own carbon goals that are more stringent than the Clean Power Plan and that the RGGI states conform to meeting Clean Power Plan requirements rather than stricter regional reduction requirements.

**Type of internal carbon price**

Shadow price

**Impact & implication**

Vectren received robust stakeholder participation and feedback, holding three public stakeholder meetings during our IRP process. The result of the IRP scenario modeling resulted in the development of a generation transition plan to a less carbon intensive energy portfolio. Vectren's generation transition plan was presented to the public in November 2016 and includes the retirement of A.B. Brown Units 1 & 2, F.B. Culley Unit 2 and exiting joint operations of Warrick Unit 4 with Alcoa, the construction of a new natural gas-fired combined cycle unit and the addition of 54 megawatts of solar by 2025. On February 20, 2018, Vectren filed a request with the Indiana Utility Regulatory Commission seeking authority to implement changes to its generation portfolio. These proposed changes would transition our electric generation portfolio from nearly total reliance on baseload coal to a fully diversified and balanced portfolio of fuels, including coal, natural gas and renewables. Once approved and with the successful execution of Vectren's electric generation transition plan, Vectren will achieve its goal of 60% reduction of carbon emissions below 2005 levels by 2024. Moreover, the carbon intensity of Vectren's generation fleet will drop from 1,950 lbs CO<sub>2</sub>/MMBtu to 980 lbs CO<sub>2</sub>/MMBtu, well below the intensity targets set in EPA's Clean Power Plan. While it is still unclear as to the short-term future of any carbon regulation, Vectren's smart energy future transition plan will position the Company to successfully comply long-term with carbon reduction requirements.

---

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

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

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

Compliance &amp; onboarding

**Details of engagement**

Included climate change in supplier selection / management mechanism

**% of suppliers by number**

52

**% total procurement spend (direct and indirect)**

80

**% Scope 3 emissions as reported in C6.5**

0

**Rationale for the coverage of your engagement**

Vectren is actively involved in supply chain management and vendor management to ensure Vectren is properly prepared to manage potential regulations and adapt to an ever changing operating environment. Involving supply chain at the beginning of the supplier selection ensures that Vectren key corporate strategies and initiatives are considered in all aspects of the purchasing process. Vectren key corporate strategies include: Implementing a comprehensive corporate carbon policy and strategy which includes an optimal utility compliance plan and strategy for engaging state and regional decision makers and identifies energy conservation opportunities for corporate facilities and fleet. The modernization of our gas transmission and distribution systems by investing in projects that meet customer needs, enhance safety and reliability, reduce risk or comply with regulatory mandates. Execute the plan to diversify our electric generation fleet with a focus on reliable, reasonably priced energy.

**Impact of engagement, including measures of success**

KPIs are currently under development to tie supply chain initiatives to corporate sustainability metrics to be published in a corporate sustainability score card to further expand and grow the program.

**Comment**

KPIs are currently under development to tie supply chain initiatives to corporate sustainability metrics to be published in a corporate sustainability score card to further expand and grow the program.

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

Education/information sharing

**Details of engagement**

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

**Size of engagement**

100

**% Scope 3 emissions as reported in C6.5**

0

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

Energy efficiency (EE) has generally been accepted as a critical function of utilities to mitigate climate change, delay the need to build new generation, save customers money on their utility bills and improve customer satisfaction. Vectren's commitment to EE programs continues to achieve significant energy savings. Vectren's gas and electric EE programs encourage customers to manage their energy use through a variety of approaches including: residential and business audits which help customers identify energy savings opportunities; in-store lighting discounts which apply utility-sponsored rebates at the time of purchase; appliance recycling which encourages customers to remove their inefficient refrigerators and freezers; rebates on equipment and services which reduce the initial higher costs for efficient products; home energy reports that utilize behavioral science to influence energy usage; and commercial equipment upgrades and maintenance.

**Impact of engagement, including measures of success**

In 2017, the Vectren EE portfolio achieved more than 44,000 MWh electric savings and approximately 4.4 million therms for measures implemented or installed in that year. Most of these measures will continue to reap savings for many years to come. Since their inception in 2010, Vectren's electric EE programs have saved enough energy to power over 115,000 homes. Vectren's natural gas EE programs have saved enough energy to heat over 250,000 homes since their inception in 2006. Vectren's EE programs are generally separated into two groups: residential and commercial. In 2017, the residential electric programs achieved over 24 million kWh of savings and the natural gas residential programs achieved approximately 3.5 million therms of savings. The Commercial electric programs achieved 20 million kWh of savings and the natural gas business programs achieved an estimated 883 thousand therms of savings.

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

Vectren is actively involved in supply chain management and vendor management to ensure Vectren is properly prepared to manage potential regulations and adapt to an ever changing operating environment. Involving supply chain at the beginning of the supplier selection ensures that Vectren key corporate strategies and initiatives are considered in all aspects of the purchasing process. Vectren key corporate strategies include:

Implementing a comprehensive corporate carbon policy and strategy which includes an optimal utility compliance plan and strategy for engaging state and regional decision makers and identifies energy conservation opportunities for corporate facilities and fleet

The modernization of our gas transmission and distribution systems by investing in projects that meet customer needs, enhance safety and reliability, reduce risk or comply with regulatory mandates

Execute the plan to diversify our electric generation fleet with a focus on reliable, reasonably priced energy

## C12.3

---

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

Direct engagement with policy makers

Trade associations

## C12.3a

---

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Regulation of methane emissions	Support with minor exceptions	Vectren is a founding member of the U.S. Environmental Protection Agency's Natural Gas STAR Methane Challenge Program, whereby natural gas utilities are working on an effort to reduce carbon emissions through voluntary commitments to reduce methane emissions. The natural gas companies participating in the program represent 66% of the natural gas customers served in the United States.	With the STAR Methane Challenge Program, Vectren supports methane emission disclosure, and therefore does not have any proposed legislative solution.

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support with minor exceptions	Vectren has actively reported GHGs under the US EPA Mandatory Greenhouse Gas Reporting Program and as required programs under the Clean Air Act.	Vectren support the currently required mandatory reporting of GHGs to the EPA with the provision that as emissions factors continue to be revised for more accuracy that they there is a clear mechanism to get these updated.
Energy efficiency	Support with minor exceptions	Vectren is actively engaged on matters related to energy efficiency standards at a state and federal level.	Vectren supports reasonable energy efficiency standards that include an open public stake holder process, allow for regional differences, and support a diverse fuel portfolio.
Cap and trade	Please select		

## C12.3b

---

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

Yes

## C12.3c

---

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

### **Trade association**

We strive to educate public officials about our businesses, the impacts of potential policy decisions and participate in industry trade associations to assist in developing industry-wide positions, including memberships in the Edison Electric Institute, American Gas Association, Indiana Energy Association and Ohio Gas Association

### **Is your position on climate change consistent with theirs?**

Consistent

### **Please explain the trade association's position**

In general the utility trade organizations recognize the acute and chronic changes in weather patterns from changes in the climate as primary and ongoing risk to the physical energy infrastructure of their members. These groups promote adaptation and physical resiliency of

energy infrastructure. These groups have actively worked to comply with and improve US EPA carbon emission reporting programs.

**How have you, or are you attempting to, influence the position?**

Vectren is engaged on member committees within the trade organizations to advocate for positions that support safe and reliable service to our customers as trade organization policy is developed on all matters including those related to climate change.

---

## C12.3f

---

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

Public policy decisions can affect businesses, and at Vectren we believe engaging in the political process is in the best interest of our company, employees and stakeholders. We track proposed legislation at the federal, state and local level and advocate our positions when appropriate. We strive to educate public officials about our businesses, the impacts of potential policy decisions and participate in industry trade associations to assist in developing industry-wide positions, including memberships in the Edison Electric Institute, American Gas Association, Indiana Energy Association and Ohio Gas Association. As part of our commitment to contemporary governance practices, we regularly report our corporate political activities to the Board's Corporate Responsibility and Sustainability Committee.

## C12.4

---

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

**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

[2017 Vectren Susty Report.pdf](#)

**Content elements**

Governance

Strategy

Risks &amp; opportunities

Emissions figures

Emission targets

Other metrics

---

**C14. Signoff**

---

**C-FI**

---

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

**C14.1**

---

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

	Job title	Corresponding job category
Row 1	Manager, Carbon Policy & Corporate Sustainability	Environment/Sustainability manager

---

**Submit your response**

---

**In which language are you submitting your response?**

English

**Please confirm below**

I have read and accept the applicable Terms