

C0. Introduction

C0.1

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

Headquartered in Akron, Ohio, FirstEnergy is a fully regulated electric utility with over 12,000 employees dedicated to integrity, safety, reliability and operational excellence. Our subsidiaries are involved in the transmission, distribution and regulated generation of electricity. Our 10 electric distribution companies form one of the nation's largest investor-owned electric systems, based on serving more than 6 million customers in Ohio, Pennsylvania, New Jersey, West Virginia, Maryland and New York. The company's transmission subsidiaries operate approximately 24,000 miles of transmission lines connecting the Midwest and Mid-Atlantic regions. FirstEnergy's Mon Power subsidiary controls 3,580 megawatts of generating capacity from two regulated coal plants and one pumped-storage hydro facility.

For the purposes of this CDP report, all financial and emissions information is based on FirstEnergy's 2021 year-end portfolio.

This report contains forward looking statements based on information available to the company. For more information, including our full forward-looking statement please visit: <https://www.firstenergycorp.com/content/fecorp/investor/engagement.html>.

*As of 3/12/21, Jersey Central Power & Light (JCP&L) completed the sale of its interest in the Yards Creek pumped-storage hydro plant to Yards Creek Energy, LLC.

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
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

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 chosen approach for consolidating your GHG 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

- Electricity generation
- Transmission
- Distribution

Other divisions

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	US3379321074

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	The CEO, a member of the Board of Directors, has direct responsibility for climate-related issues, including the implementation of FirstEnergy's Climate Strategy.
Board-level committee	The Board of Directors has oversight of ESG topics, including Climate Strategy and climate risks and opportunities. FirstEnergy's Operations and Safety Oversight Committee of the Board of Directors, in coordination with the Corporate Governance, Corporate Responsibility and Political Oversight Committee, reviews and monitors the company's environmental strategy, initiatives and policies, including in the areas of climate change, environmental protection and sustainability. This Board Committee met 12 time in 2021.

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	Scope of board-level oversight	Please explain
Scheduled – all meetings	<ul style="list-style-type: none"> 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 	<Not Applicable>	FirstEnergy's Operations and Safety Oversight Committee of the Board of Directors oversees our company's climate-focused initiatives and strategies. For example, this Committee oversees our thoughtful transition from coal generation facilities and enhancements to our transmission and distribution system to allow for the expansion of a low-carbon economy.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	At least one member of our Board has extensive experience with energy transition, clean energy, and energy sustainability. This individual is a member of the Corporate Governance, Corporate Responsibility and Political Oversight Committee.	<Not Applicable>	<Not Applicable>

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Corporate responsibility committee <i>Executive Steering Committee</i>	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Financial Officer (CFO) <i>SVP, CFO & Strategy</i>	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Risks Officer (CRO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (Vice President, Investor Relations & Communications)	<Not Applicable>	Assessing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (Senior Vice President, FirstEnergy Utilities)	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	As important matters arise

C1.2a

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

The Senior Vice President (SVP), CFO & Strategy, is the highest-level management position responsible for the company’s corporate responsibility strategy and management, including the company’s Climate Strategy and related efforts. Additionally, the SVP, Operations, oversees transmission, distribution and generation fleet operations, including the execution of many of FirstEnergy’s climate-related initiatives. Both of these positions report to the CEO.

The VP, Investor Relations and Communications, reports to the SVP, CFO & Strategy, and is responsible for overseeing the company’s Corporate Responsibility department. Monthly meetings are used to discuss ESG initiatives including climate-related activities that the department conducts.

At the senior management level, FirstEnergy’s Corporate Responsibility Executive-Level Steering Committee oversees the company’s approach to corporate responsibility and the development and execution of related initiatives. Members include senior leaders from the company’s five organizational pillars – Finance & Strategy, Customer, Operations, Legal, and Human Resources & Corporate Services. This executive-level steering committee meets regularly with members of the Corporate Responsibility department and typically discusses climate-related issues and opportunities at every meeting. The committee’s regular oversight of climate topics guides the climate-related activities of the Corporate Responsibility department and helps determine the actions or steps the company can take to address climate-related issues. Formally, representatives from this executive-level steering committee review climate-related information with FirstEnergy’s Operations and Safety Oversight Committee of the Board of Directors, in coordination with the Corporate Governance, Corporate Responsibility and Political Oversight Committee.

Climate-related risks are incorporated into FirstEnergy’s overall enterprise risk management (ERM) process. Our executive-level Enterprise Risk Management Committee, comprising the Vice President and Chief Risk Officer, Vice President of Internal Audit, and other senior executive officers, provides oversight and monitoring to ensure that appropriate risk policies and management processes – including with respect to climate – are established and executed in accordance with selected limits and approval levels.

The Vice President and Chief Risk Officer has the highest executive-level oversight of day-to-day risk management efforts and prepares enterprise-wide risk management reports for presentation to the Audit Committee and the whole Board. Additional timely reports on significant risk issues are provided as appropriate to employees, management, senior executive officers, the Board and its respective committees.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	No, not currently but we plan to introduce them in the next two years	FirstEnergy is evaluating the inclusion of climate-focused incentives.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	5	
Long-term	5		

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

FirstEnergy identifies substantive financial and/or strategic risks through an assessment process that includes several factors. Examples of these factors include, but are not limited to:

- Injury or health exposure
- Direct financial loss
- Violation of applicable laws or regulations
- Adverse impact to customers
- Interruption to core business operations
- Adverse reputational impact
- Adverse environmental impact

To determine whether the risk is substantive, FirstEnergy evaluates the possible impact for each of these factors, as well as the likelihood of occurrence. A substantive impact of relatively high magnitude could include any combination of risk factors

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

We operate in a business environment that involves significant risks, many of which are beyond our control. Management regularly evaluates the most significant risks and reviews those risks with the FirstEnergy Board of Directors or appropriate Board Committees.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The United States Environmental Protection Act (EPA) has begun to regulate GHG emissions by publishing the final Affordable Clean Energy rule (ACE Rule) to repeal and replace the Clean Power Plan. This plan requires states to develop emissions standards for current and new fossil-fuelled power plants. These regulations affect FirstEnergy's operations and are fully incorporated into our risk consideration.
Emerging regulation	Relevant, always included	Emerging statutes, regulations, or EPA actions under existing rules could be impactful to FE operations. New statutes, regulations, or EPA actions are reviewed by the appropriate departments to determine potential impacts to the company's operations. FirstEnergy monitors and reviews applicable policies for potential impacts to current operations and future decision making. The recent vacatur of the ACE rule leaves a level of uncertainty around the future of climate regulations. If regulations are set aggressively, cost and expense for compliance with those regulations may outpace FirstEnergy's current climate-related goals.
Technology	Relevant, always included	Advances in technology may change consumer behaviour and accelerate widespread electrification. The unknown trajectory of technologies like electric vehicles, renewable generation, and battery storage will provide additional stress on FirstEnergy's delivery system. These increased demands could require development of additional transmission and distribution systems. FirstEnergy's Energizing the Future and Grid of the Future initiatives were developed to address these risks.
Legal	Relevant, always included	Legal risks, especially involving compliance with environmental requirements, have the potential to impact the company financially and reputationally. For example, the SEC has proposed and is reviewing comments regarding the disclosure of climate-related information. The rules, once finalized, may require external audits or data not currently tracked and disclosed today by FirstEnergy. FirstEnergy strives to remain in compliance with all potential regulations and is actively building capabilities to meet future disclosure requirement.
Market	Relevant, always included	FirstEnergy assesses risks to ensure we are meeting market demands for energy, which vary with weather conditions, temperature, and humidity. For residential customers, heating and cooling represent the largest usage of energy in a household. Thus, sustained climate-related changes in weather patterns could affect the market demand for energy and cause FirstEnergy to adjust operations and infrastructure to meet these demands.
Reputation	Relevant, always included	FirstEnergy takes reputational risk very seriously across all facets of the organization. How the company responds to communities and stakeholders regarding environmental and climate-related risks must be balanced with the considerations of current policies, regulations, data transparency, and potential financial impact.
Acute physical	Relevant, always included	The uncertainty of weather patterns and extreme weather events are difficult to predict until they occur, but we do know that increasingly severe weather brought on by climate change poses a physical risk to utility and energy infrastructure. Physical risks such as asset deterioration or damage could potentially impact utilities' ability to provide reliable service to customers. This presents a variety of operational, reputational, and financial risks for FirstEnergy to assess. Our Energizing the Future transmission program and Grid of the Future distribution program help us to prepare our system for these risks.
Chronic physical	Relevant, always included	Long-term changes in temperature will affect our customers' demand for electricity, which in turn impacts our cashflows. Increasing extreme weather events will require continued execution of our improvement projects to further harden our infrastructure and ensure energy reliability.

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 & Primary climate-related risk driver

Current regulation	Mandates on and regulation of existing products and services
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Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

In 2019, FirstEnergy conducted a two-degree scenario analysis. This analysis revealed that changes to legislation and regulation of GHG emissions at both the state and federal levels may prematurely lead to write-offs, asset impairment, and early retirement of existing coal plants that are not in alignment with our current Climate Strategy. If GHG reduction targets become more aggressive, FirstEnergy could also face additional compliance risks to the extent new compliance targets outpace our planned investment.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

FirstEnergy cannot currently estimate the financial impact of state and federal legislation aimed at reducing GHG emissions, although they could have a negative impact on FirstEnergy's revenues and operations.

Cost of response to risk

Description of response and explanation of cost calculation

To manage this risk, we are committing to a thoughtful transition of our regulated coal generation fleet. We also continue to explore near-term opportunities to reduce emissions, incorporate renewable resources and implement emerging technologies that support our company's mission. Throughout the process, FirstEnergy will engage with state regulators, customers, and other stakeholders to evaluate the future operation of these plants.

Comment

Our business plan incorporates costs associated with management of climate-related policy and related legal risks

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Technology	Other, please specify (Investment of electric grid enhancement)
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Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

The scenario analysis FirstEnergy conducted envisions a future with widespread electrification, including extensive use of electric vehicles and widespread conversion to heat pumps in residential, commercial and industrial buildings. This increase would result in the need to accommodate dramatic increases in load during peak and non-peak hours, thereby potentially causing an operational risk to the transmission and distribution system. In a highly electrified economy such as the one described in the scenario analysis, the loss of power would not just mean loss of lighting and refrigeration; it would also mean losing the ability to heat homes and businesses, power transportation and communication systems, and operate water and sewage pumps. According to FirstEnergy's analysis, transportation load on the electric system increases from virtually zero today to more than 95 million MWh per year by 2050 across the six-state region (Ohio, Pennsylvania, New Jersey, Maryland, West Virginia, and New York) where we operate. To put that in perspective, 95 million MWh represents an approximately 20 percent increase over total current electric consumption within the region.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

FirstEnergy cannot currently estimate the financial impact of operational risks, but recognizes their potential to increase costs for our company and customers.

Cost of response to risk

Description of response and explanation of cost calculation

Our risk management approach includes FirstEnergy's Energizing the Future transmission program and comparable distribution investments, which are critical to providing a more flexible system that can respond to the continually changing demand and power flows on the system. From 2021 to 2025, we plan to invest \$17 billion to strengthen the grid and enable the energy transition. Strategic Investments aim to This includes, harden our transmission system and increase resiliency, Electric Vehicle Charging Station pilots in Maryland and New Jersey (pending), and explore renewable generation projects, transmission upgrades to support incremental renewable generation projects, including our proposed solar generation project of at least 50 megawatts in West Virginia.

We realize that a low-carbon future depends on a robust and reliable transmission system. FirstEnergy continues to work with developers, researchers, and policymakers to better understand these related risks and help advance new technologies that are critical to the effective and efficient operation of the changing transmission and distribution system.

Comment

The costs of this climate-related risk are part of existing management practices.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Mandates on and regulation of existing products and services
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Primary potential financial impact

Other, please specify (Financial impact of non-compliance for state energy efficiency mandates)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

FirstEnergy's customers are actively seeking opportunities to reduce their energy consumption. Advancements in education and technology have provided customers access to increased energy efficiency opportunities. In addition, many state legislatures, such as Pennsylvania, Ohio, and Maryland, have set energy efficiency targets. Failure to meet these requirements may subject FirstEnergy to significant financial penalties and reputational risk. Beyond energy efficiency programs, other factors could adversely affect FirstEnergy's revenues, including distributed energy resources (DERs), customer owned renewables, and other developments that decrease electricity sales.

Time horizon

Short-term

Likelihood

Exceptionally unlikely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

160000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Failure to meet state targets may subject the company to financial penalties (that vary by jurisdiction) of up to \$20 million per offense (max potential is \$160 million per state). Additionally, FirstEnergy's distribution revenues in certain jurisdictions will be lower because of reduced usage arising from its Energy Efficiency programs.

Cost of response to risk

71000000

Description of response and explanation of cost calculation

FirstEnergy developed a dedicated Energy Efficiency department that manages all programs in response to state requirements. In 2021, FirstEnergy invested \$71 million to support customer-centered energy efficiency programs. Our energy efficiency programs have a strong track record of meeting or significantly exceeding state targets.

Comment

Revenue impacts based on Energy Efficiency and Peak Demand Reduction programs in Maryland and Pennsylvania can only be adjusted during base rate case proceedings. It is exceptionally unlikely that FirstEnergy would incur being fined the full \$160 million in potential fines; however reduced revenues are likely in various jurisdictions until the operating companies hold a base rate case.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market	Changing customer behavior
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Primary potential financial impact

Decreased access to capital

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Risks associated with owning coal-fired generation plants may have an adverse impact on our business operations, financial condition, and cash flow. Recently, certain members of the investment community have adopted investment policies promoting the divestment of coal-fired generation or otherwise restricting new investments in coal-fired generation. The impact of such efforts may adversely affect the demand for and price of our common stock and impact our and Mon Power's access to the capital and financial markets. Further, certain insurance companies have established policies limiting coal-related underwriting and investment. While we expect to transition away from our coal generation fleet by 2050, these policies aimed at coal-fired generation could in the meantime have a material adverse impact on our business operations, financial condition, and cash flows.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

FirstEnergy cannot estimate the financial impact on our business operations, financial condition and cash flows.

Cost of response to risk**Description of response and explanation of cost calculation**

We continue to evaluate opportunities for regulated renewable generation sources. In 2022, the Public Service Commission of West Virginia conditionally approved five projects to be completed by the end of 2025, which will together total at least 50 megawatts of renewable solar generation. FirstEnergy plans to thoughtfully transition away from our regulated coal generation fleet in West Virginia no later than 2050, and we have announced our plans to begin a broad stakeholder dialogue regarding our planned operational end dates of 2035 and 2040 for Fort Martin and Harrison, respectively. In the meantime, Mon Power and Potomac Edison have filed with the Public Service Commission of West Virginia for approval to undertake a multiyear environmental compliance program at our two plants. The approximately \$142 million investment would enable new wastewater treatment projects necessary to meet the U.S. Environmental Protection Agency's effluent limitation guideline requirements for plants operating beyond 2028.

Comment

C2.4

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

Yes

C2.4a

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

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

FirstEnergy views electrification as an opportunity to significantly reduce our region's carbon footprint by replacing fossil fuel use with low- and zero-carbon electricity in various energy-intensive industries, such as transportation, manufacturing, and food processing. It also represents an opportunity to increase electricity demand, and therefore our revenues. For these reasons, FirstEnergy is supporting transportation electrification and advocating for the buildout of EV charging infrastructure in our service area. We are also helping commercial and industrial customers embrace electrification through equipment and fleet upgrades.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

In Maryland, our \$5.9 million program includes installation and ownership of up to 59 EV chargers and a rebate program for residential and multi-unit dwellings. A \$49.92

million EV infrastructure program in New Jersey that was approved in June 2022. We are currently evaluating additional programs but cannot yet estimate the financial impact.

Cost to realize opportunity

55820000

Strategy to realize opportunity and explanation of cost calculation

Potomac Edison is installing up to 59 utility-owned public electric vehicle charging stations for public use throughout the Maryland and our recently approved electric vehicle charging stations in New Jersey. These programs will help us gain knowledge about EV charging patterns and corresponding distribution system impacts in preparation for the continued growth of transportation electrification across our service area.

Comment

FirstEnergy cannot fully currently estimate the cost to realize this opportunity.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Participation in renewable energy programs and adoption of energy-efficiency measures

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

Our utility operating companies helped customers better manage their energy use through the energy efficiency programs they offered via EnergySave Maryland, EnergySave Ohio, and EnergySave Pennsylvania. These programs also played a key role in helping the companies meet state energy efficiency mandates. Our operating companies offered a portfolio of programs for residential, commercial, and industrial customers. Our programs for residential customers included discounted compact fluorescent light and LED bulbs; rebates on the purchase of new, efficient appliances and products; rebates on the cost of home energy audits and heating, ventilation and air conditioning replacements; incentives to recycle older, less efficient refrigerators, freezers and room air conditioners; home energy usage reports and energy efficiency kits; and targeted programs for low-income customers. Our programs for commercial and industrial customers provided incentives to install efficient lighting, HVAC motors, and other energy-efficient equipment and processes. Through our customer energy-efficiency programs, FirstEnergy expects to help customers achieve cumulative reductions in electricity savings in excess of 7.5 million MWh and lower their demand on the electric grid during peak usage hours by 400 MW between 2021 and 2025. In 2021, we realized about 400,000 MWhs in incremental annual electricity savings from our energy efficiency measures.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

FirstEnergy is committed to our mission of making our customers' lives brighter, the environment better and our communities stronger. To support this, FirstEnergy continues to maintain a dedicated Energy Efficiency department offering energy savings programs with the goal of surpassing energy efficiency targets set by states and regulatory agencies. FirstEnergy's Energy Efficiency department conducted monthly progress reviews and forecasted performance of energy efficiency programs. Through our energy-efficiency programs, FirstEnergy aims to help customers achieve cumulative reductions in electricity savings in excess of 7.5 million MWh and lower their demand on the electric grid during peak usage hours by 400 MW between 2021 and 2025.

Comment

FirstEnergy cannot currently estimate the costs to realize this opportunity.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient modes of transport

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

To further support our stance on widespread electrification, FirstEnergy has committed to only purchase electric or hybrid light-duty and aerial trucks to replace combustion engine vehicles.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

FirstEnergy plans for 100% of new purchases for its light-duty and aerial truck fleet to be electric or hybrid vehicles moving forward, with a goal of reaching 30% fleet electrification by 2030. This effort will eliminate 10000 metric tons of GHG by 2030.

Comment

FirstEnergy cannot currently estimate the costs to realize this opportunity.

C3. Business Strategy

C3.1

(C3.1) Does your organization’s strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

Publicly available transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)

<Not Applicable>

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

While our transition plan will meet the 1.5°C goal to become carbon neutral by 2050, many components of our current plan do not meet the criteria of a credible transition plan as defined. Additional components our company will pursue over the next two years include, disclosing time-bound financial planning details, such as Science Based Targets (SBT), and third-party verified emissions data for Scope 1, 2 and 3.

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario		Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios	IEA 2DS	Company-wide	<Not Applicable>	In 2019, FirstEnergy published a climate report that included a two-degree scenario analysis. The analysis is based on the International Energy Agency’s 2DS (IEA 2DS). In selecting a scenario to study, our objective was to evaluate a 2DS with sufficient detail to provide meaningful insights for our business and geography. We also prioritized a publicly available analysis to promote greater transparency in the process. The structure of our analysis was guided by recommendations from the TCFD as well as a report published by Ceres and authored by MJ Bradley & Associates (MJB&A). We also took into consideration other third-party produced 2-degree scenarios, including “beyond 2-degree” scenarios that are consistent with an October 6, 2018, Special Report on Global Warming of 1.5°C from the Intergovernmental Panel on Climate Change. While the IEA 2DS publication provided a strong basis for this analysis, we engaged a consultant to develop state-level detail from the IEA 2DS for the six states where FirstEnergy primarily operates: OH, PA, WV, NJ, MD, and NY. The IEA 2DS envisions that a 90% reduction in multi-sector U.S. CO2 emissions by 2060, along with other reductions across the globe, would be necessary to limit global temperature rise to below 2 degrees Celsius. When applied to our operating states, the scenario results show significant changes in energy use across all sectors of the economy, with the largest contribution from electricity generation and transportation sectors.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

How will meeting 2DS require FirstEnergy to change our business model and how will we assist our region in meeting emission goals?

Results of the climate-related scenario analysis with respect to the focal questions

IEA’s 2DS describes the rapid and widespread electrification of end-use technologies, including motor vehicles and heatpumps, required to achieve a 90% reduction in U.S. CO2 emissions. Additionally, it assumes that renewables and other zero-carbon resources dominate the generation mix by 2050. Achieving this level of decarbonization would require significant increase in utility-scale renewable energy projects. These findings emphasize the idea that FirstEnergy needs to increase investments in transmission and distribution network, including investments in a smarter, more flexible grid.

A highly electrified economy will increase the load on our system dramatically. The results of IEA’s 2DS showed us that we should expect approximately 20% load increase in MWh per year by 2050 in the territories which we serve. Utilities, such as FirstEnergy, will play a central role in modernizing and hardening systems to meet service obligations, accommodating a changing generation mix, and moving towards electrification of end-use technologies.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	FirstEnergy recognizes that customer behaviors are beginning to change due to climate concerns. Customers want to have more understanding of and control over their energy usage. In response, we provide several energy efficiencies programs: Home Energy analyzer, appliance recycling, appliance and HVAC rebates, energy audits, energy efficiency kits, and energy saving programs geared towards customers with limited income. Additionally, we plan to install smart meters for two-thirds of our customers by 2025. Smart meters provide customers with more real-time information about their usage, leading to more informed decisions about their energy use.
Supply chain and/or value chain	Yes	FirstEnergy’s Supply Chain mission includes working with supply chain partners to advance mutually beneficial ESG goals. In alignment with our commitment to meet the challenges of climate change and build a more sustainable energy future, our Supply Chain objectives include seeking sustainability-focused partners and asking suppliers in RFPs to provide the most sustainable version of their products, even if specifications did note that requirement.
Investment in R&D	Yes	FirstEnergy is making investments to monitor and assess technology trends that could help us enable a carbon-neutral future. For example, FirstEnergy is an active member of many EPRI programs that research low-carbon technologies and environmental policies. We are a member of EPRI’s Solar Generation Program, which provides research on solar technology, best practices to manage a solar plant, and evolving industry trends. FirstEnergy also participates in venture capital investments through the Energy Impact Partners (EIP) coalition, which invests in companies focused on building the clean energy future. One example of a current investment is EIP’s Deep Decarbonization Frontier Fund that is focused on distributed energy resource (DER) technologies.
Operations	Yes	From an operational perspective, risks are reviewed using a top-down and bottom-up approach. Top down: The Strategic Plan includes an annual risk assessment to evaluate potential risks at the inherent and residual level and determine financial implications. Bottom up: The business unit performs project level risk assessments to ensure goals and objectives are achievable. All risks and opportunities are reviewed to ensure alignment with strategic goals.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Access to capital Assets Liabilities	<p>Enterprise Risk Management ("ERM") and Internal Auditing ("IA") have established a continuous review of risks and governance processes to assist the company in achieving its objectives by effectively managing risks. The process utilizes a single risk universe for the Company to engage key stakeholders and subject matter experts in an on-going dialogue regarding risks. Our risk management strategy categorizes risks as those to avoid, mitigate, transfer or accept the risk. The ERM framework is used in activities from strategic and financial planning to down to individual projects, so risks can be effectively identified and managed. This assists in preparing resources to minimize the risks and seize opportunities to successfully achieve goals. The ERM process is supported by FirstEnergy leadership including, but not limited to, the Board of Directors, the Audit Committee, the Finance Committee, and the Operations and Safety Oversight Committee. To facilitate the risk oversight process, risks can be reported by current year and out years to apprise these oversight committees of significant risks facing the company in the short and long term.</p> <p>The risk severity, probability and velocity will determine the urgency for quantifying and managing the risk. Project Risk Management ("PRM") is a systemic and structured analysis of project risks and is required on all major projects. PRM is tailored to the requirements of the project (i.e., budget, scope, schedule) and ERM adjusts the process to match the specific project challenges. Project risk assessment deliverables are also tailored to the requirements of the project, but usually include a risk register with a categorical list of risks, risk descriptions, risk owners, risk quantification, and risk mitigation strategies. Project risk assessments are used to allocate resources to address significant risks facing the project and FE. They can be used to support a decision to fund or not fund business decisions including but not limited to staffing levels, reporting requirements, accruals, and outsourcing third-party support (i.e. legal, external contractor, or consultants).</p> <p>Our Strategic Plan illustrates how climate-related risks and opportunities have influenced our financial planning. Our strategy for addressing climate change includes reaching carbon neutrality by 2050. To achieve carbon neutrality, we will execute our fleet electrification plans, replace aging transmission equipment, implement operational flexibilities at our generating plants, and thoughtfully transition away from our regulated coal generation. FirstEnergy filed plans with the WVPSC to comply with EPA ELG rules that would keep generation plants responsibly operating beyond 2028, however, we intend to begin a broad stakeholder dialogue regarding planned operational end dates of 2035 and 2040 for Ft. Martin and Harrison, respectively, which further supports our Climate Strategy. In addition, by modernizing our transmission and distribution systems, supporting widespread electrification, and incorporating emerging smart technologies, we will enable our customers and communities to thrive in a low-carbon economy.</p>

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Year target was set

2020

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e)

18102068

Base year Scope 2 emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

18102068

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

<Not Applicable>

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

30

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

12671447.6

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

15913845

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

15913845

% of target achieved relative to base year [auto-calculated]

40.2941623391685

Target status in reporting year

Underway

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

<Not Applicable>

Please explain target coverage and identify any exclusions

In 2020, FirstEnergy updated our GHG reduction goal. We believe this new greenhouse gas reduction goal aligns with our electric utility industry peers and our company's long-term strategy. We have chosen a challenging near-term 2019 baseline, as opposed to a more traditional 2005 starting point. And to reflect our transformation to a regulated utility, we've included emissions associated with our transmission and distribution operations as well as our generation. The new goal also aligns with the Paris Agreement.

Plan for achieving target, and progress made to the end of the reporting year

FirstEnergy has taken key steps toward reducing our emissions and improving the sustainability of our operations as outlined in our Climate Strategy. This includes, replacing aging equipment, electrifying our vehicle fleet, and utilizing operational flexibilities at our generation facilities.

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

Target reference number

Abs 2

Year target was set

2020

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e)

18102068

Base year Scope 2 emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

18102068

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

<Not Applicable>

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2050

Targeted reduction from base year (%)

100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

15913845

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

15913845

% of target achieved relative to base year [auto-calculated]

12.0882487017505

Target status in reporting year

Underway

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

<Not Applicable>

Please explain target coverage and identify any exclusions

In 2020, FirstEnergy updated our GHG reduction goal and introduced a 2050 carbon-neutral target. We believe this new carbon neutral goal aligns with our electric utility industry peers and our company's long-term strategy. We have chosen a challenging near-term 2019. And to reflect our transformation to a regulated utility, we've included emissions associated with our transmission and distribution operations as well as our generation facilities. The carbon neutral goal also aligns with the intent of the Paris Agreement.

Plan for achieving target, and progress made to the end of the reporting year

To meet our carbon-neutrality target by 2050, FirstEnergy continues to evaluate and detail a thoughtful transition away from our coal generation fleet.

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

C4.2**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Target(s) to increase low-carbon energy consumption or production

Net-zero target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2020

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Base year

2020

Consumption or production of selected energy carrier in base year (MWh)

18123469

% share of low-carbon or renewable energy in base year

0.3

Target year

2025

% share of low-carbon or renewable energy in target year

% share of low-carbon or renewable energy in reporting year

% of target achieved relative to base year [auto-calculated]

<Calculated field>

Target status in reporting year

Underway

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

FirstEnergy has obtained approval to own at least 50 MW of solar generation in West Virginia by 2025, it is unknown at this time how much MWh is expected from this 50 MW of solar energy.

Plan for achieving target, and progress made to the end of the reporting year

In 2022, West Virginia approved our plan for 50MW of solar generation to be completed by 12/31/2025

List the actions which contributed most to achieving this target

<Not Applicable>

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs2

Target year for achieving net zero

2050

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions

To achieve carbon neutrality, FirstEnergy expects to execute our fleet electrification plans, replace aging transmission equipment, implement operational flexibilities at our generating plants, and thoughtfully transition away from our regulated coal generation fleet. Planned operational end dates of 2035 and 2040 for Ft. Martin and Harrison, respectively.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Unsure

Planned milestones and/or near-term investments for neutralization at target year

<Not Applicable>

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*	1	
Implemented*	2	1326100
Not to be implemented		

C4.3b

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

Initiative category & Initiative type

Transportation	Company fleet vehicle replacement
----------------	-----------------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

1100

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

0

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

5000000

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

Initiative category & Initiative type

Other, please specify	Other, please specify (Customer Energy Efficiency)
-----------------------	---

Estimated annual CO2e savings (metric tonnes CO2e)

1325000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3: Other (downstream)

Voluntary/Mandatory

Mandatory

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

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

Payback period

4-10 years

Estimated lifetime of the initiative

Ongoing

Comment

Initiative category & Initiative type

Fugitive emissions reductions	Other, please specify (Replacement of aging equipment)
-------------------------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

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

Payback period

No payback

Estimated lifetime of the initiative

>30 years

Comment

By responsibly replacing aging equipment, such as circuit breakers and substation buses, we aim to avoid fugitive emissions of SF6. We are unable to calculate the annual emissions saved as it can vary year to year as equipment is not replaced on a set schedule.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Compliance with regulatory requirements is regarded as a high priority for funding. Energy efficiency and/or peak demand reduction policies have been established in certain states to meet long-term customer and community sustainability needs. These states established annual incremental energy efficiency targets of up to 2% of total customers' usage. As a result, we began offering a suite of energy efficiency programs to meet or exceed the reduction targets, while also supporting system reliability and lowering customers' electricity costs.
Dedicated budget for energy efficiency	We are focused on helping our customers reduce their overall energy consumption including gasoline and natural gas along with electricity. In addition, FirstEnergy supports EPRI research to better understand efficiency opportunities in emerging technologies, such as next-generation heat pumps, advanced data center infrastructure, smart thermostat developments and advanced building design. Emerging options can help us inform electricity consumption behaviors, improve energy efficiency, reduce carbon footprints and lower energy bills.
Other (Investments in low-carbon start-ups)	FirstEnergy is a limited partner with Energy Impact Partners (EIP), a venture capital firm. EIP was named the largest investor in clean technology in 2019 by Business Insider. EIP is focused on investing in clean energy technologies and advancing the transformation of the energy industry.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

No

C-EU4.6

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

FirstEnergy's generating fleet does not utilize natural gas in our operations, therefore methane emissions are not relevant to our organization's operations.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

Name of organization(s) acquired, divested from, or merged with

<Not Applicable>

Details of structural change(s), including completion dates

<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.2

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

Scope 1**Base year start**

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

18102068

Comment

The 2019 base year emissions represent FirstEnergy's Scope 1 emissions.

Scope 2 (location-based)**Base year start**

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

1099865

Comment

The office facilities (both owned and leased), transmission and distribution lines, and substations and other electrical infrastructure that fall within the operational boundary and report electricity consumption are included in the calculation of our 2019 Scope 2 emissions. These Scope 2 emissions were calculated using kwh purchased for FirstEnergy's corporate locations. Regional specific emission factors were used based on the location of the buildings.

Scope 2 (market-based)**Base year start**

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

1156210

Comment

The office facilities (both owned and leased), transmission and distribution lines, and substations and other electrical infrastructure that fall within the operational boundary and report electricity consumption are included in the calculation of 2019 Scope 2 emissions. 2019 Scope 2 market-based emissions were calculated using kwh purchased for FirstEnergy's corporate locations. The corporate facilities are within FirstEnergy's operating company territories; therefore, FirstEnergy's operating company specific emissions intensity rates were used.

Scope 3 category 1: Purchased goods and services**Base year start****Base year end****Base year emissions (metric tons CO2e)****Comment****Scope 3 category 2: Capital goods****Base year start****Base year end****Base year emissions (metric tons CO2e)****Comment****Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)****Base year start**

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

31927583

Comment**Scope 3 category 4: Upstream transportation and distribution****Base year start****Base year end****Base year emissions (metric tons CO2e)****Comment**

Scope 3 category 5: Waste generated in operations

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

20096

Comment

Scope 3 category 6: Business travel

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

7481

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

US EPA Mandatory Greenhouse Gas Reporting Rule

US EPA Emissions & Generation Resource Integrated Database (eGRID)

Other, please specify (The World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol and supplements and the Electric Power Sector (EPS) Protocol)

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

15913845

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

Our Scope 1 emissions include, stationary combustion, mobile sources, and fugitive emission (SF6). This excludes emissions from natural gas and other fuels used in boilers to provide heating to facilities, leakage of refrigerants to provide cooling to office facilities, and stagnant piles of coal sitting prior to use in stationary combustion.

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

This excludes emissions from the leakage of refrigerants to provide cooling to office facilities, in addition to natural gas and other fuels used in boilers to provide heating to facilities.

C6.3

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

Reporting year

Scope 2, location-based

1263267

Scope 2, market-based (if applicable)

1390858

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.4

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

No

C6.5

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

Purchased goods and services

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As determined by GHGP Scope 3 Technical Guidance, utilities are encouraged to account for the emissions generated from raw material extraction and combustion in category 3: fuel and energy-related activities. Therefore, this category is not relevant for FirstEnergy.

Capital goods

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As determined by GHGP Scope 3 Technical Guidance, if major capital purchases occur only once every few years, Scope 3 emissions from capital goods fluctuate significantly from year to year. As emissions from capital goods are dependent on the expenditures incurred during the fiscal year, this is not expected to be a material source of emissions for Scope 3 activities and, therefore, is not relevant to FirstEnergy's emissions footprint.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

30262689

Emissions calculation methodology

Supplier-specific method
Average data method

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

0

Please explain

Based on the definition of "Applicability" as defined by GHGP Scope 3 Technical Guidance, for each of the activities, Activity A "Upstream emissions of purchased fuels" and Activity D "Generation of purchased electricity that is sold to end users" are applicable to utility companies and energy retailers. Therefore, these activities are both relevant for FirstEnergy.

It was determined that emissions under Activity B "Upstream emissions of purchased electricity" were not applicable based on the GHGP Scope 3 Technical Guidance definition. First, FirstEnergy supplies electricity to owned and leased office facilities and, therefore, acts as its own customer. As emissions "Generated of purchased electricity that is sold to end users" fall under Activity D and FirstEnergy is its own customer, it was determined that these emissions are already reported under Activity D. Additionally, emissions from electricity that are consumed by the generating facilities as a part of maintaining operations are captured under Scope 1 calculations, and, therefore, are excluded from Scope 3 reporting categories.

Additionally, Activity C "Transmission and distribution (T&D) losses" are accounted for as a part of the Scope 2 emissions calculations. Therefore, emissions from Activity C are excluded from Scope 3 calculations to avoid double counting of emissions.

Upstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Transportation of fuels and energy consumed by the reporting company should be captured under Category 3: Fuel and energy related activities. As determined by GHGP Scope 3 Technical Guidance, transportation and distribution of logistical products are likely not significant sources of Scope 3 emissions for FirstEnergy, as these products would be for maintaining ongoing workplace operations.

Waste generated in operations

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO₂e)

19296

Emissions calculation methodology

Waste-type-specific method

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

100

Please explain

Each month, vendors send waste data to FirstEnergy and categorize each type of waste. Several of our generation plants utilize a legacy database to track waste data. The environmental coordinators at each plant submit data to a central database to which the waste process owner has access. Some waste items are excluded from the legacy database due to operations at the plant (e.g., no scrap metal bins at the plant). Waste generated in operations does not represent a significant source of emissions for FirstEnergy, which indicates the business's primary operations do not correlate with waste generation. However, as the data is readily available to calculate Scope 3 emissions, FirstEnergy will continue to calculate and report Scope 3 emissions for waste generated in operations.

Business travel

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO₂e)

7903

Emissions calculation methodology

Distance-based method

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

100

Please explain

The primary emissions generating activity for this category involves employee travel, which can be tracked by a vendor, the travel agency, used by FirstEnergy. As this activity is not critical to the operations of FirstEnergy and most likely will not result in a material impact on Scope 3 emissions

Employee commuting

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As determined by GHGP Scope 3 Technical Guidance, the locations of employee dwellings and chosen methods of commuting are highly variable and typically outside the influence of their employer. As such, there are likely no significant emission reductions initiatives that could be undertaken by FirstEnergy for this category. We conclude that this category is not relevant.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

FirstEnergy leases a small percentage of facilities for its operations and thus will not be a significant source of Scope 3 emissions.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

The primary product sold by FirstEnergy is electricity. The transportation and distribution of sold electricity occurs on power lines owned or controlled by FirstEnergy. Additionally, the emissions associated with the transportation and distribution of electricity (transmission & distribution losses) are captured under Scope 1.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

FirstEnergy is involved in the business of delivering electricity to consumers. Electricity is not processed, transformed, or included in another product prior to being delivered to the end consumer.

Use of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Emissions associated with the generation of electricity are captured under Scope 1. Reporting emissions under this category would result in double counting of emissions.

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

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

FirstEnergy is involved in the business of delivering electricity to consumers. Electricity is consumed, which does not result in any emissions from waste disposal or required end-of-life treatment.

Downstream leased assets**Evaluation status**

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

FirstEnergy does not lease any downstream assets.

Franchises**Evaluation status**

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

FirstEnergy does not own any franchises

Investments**Evaluation status**

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Any relevant GHG emissions associated with FirstEnergy's investments would be captured in Scope 1 or Scope 2 emissions.

Other (upstream)**Evaluation status**

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

No additional Scope 3 downstream GHGs are considered relevant for FirstEnergy.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

No additional Scope 3 downstream GHGs are considered relevant for FirstEnergy.

C6.7

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

No

C6.10

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

Intensity figure

0.95

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

17177113

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

18123469

Scope 2 figure used

Location-based

% change from previous year

0.05

Direction of change

Increased

Reason for change

The small increase in intensity is due to the necessity of increased coal generation to meet demand.

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	15747098	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	81702	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	669	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	183	IPCC Fourth Assessment Report (AR4 - 100 year)

C-EU7.1b

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

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	3.58	81702	
Combustion (Electric utilities)	15700741	3.76	0	15785373	The gross Scope 1 emissions associated with FirstEnergy's combustion include CO2, CH4 and N2O.
Combustion (Gas utilities)	0	0	0	0	FirstEnergy does not have gas utilities.
Combustion (Other)	0	0	0	0	FirstEnergy does not have other combustion sources.
Emissions not elsewhere classified	46357	0.55	0	46770.48	Corporate vehicles and jets. The gross Scope 1 includes CO2, CH4 and N2O.

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	15913845

C7.3

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

- By facility
- By activity

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Fort Martin Power Station	4831631	39.423859	-79.553991
Harrison Power Station	10953742	39.230213	-80.195185

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Stationary	15785373
Fugitive (SF6)	81702
Mobile Services	46770

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	15913845	<Not Applicable>	
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

(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 renewable energy consumption	0	No change	0	
Other emissions reduction activities	0	No change	0	
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	1181900	Increased	8	This represents an increase in emissions from Stationary Combustion attributed to coal generation.
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

C7.9b

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

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?
More than 0% but less than or equal to 5%

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
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 (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	18073459	18073459
Consumption of purchased or acquired electricity	<Not Applicable>		322186	322186
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	50010	<Not Applicable>	50010
Total energy consumption	<Not Applicable>	50010	18395645	18445655

C8.2b

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

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	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.

Sustainable biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

FirstEnergy does not use Sustainable biomass in electricity generation.

Other biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

FirstEnergy does not use biomass in electricity generation.

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

FirstEnergy does not use renewable fuels in electricity generation.

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

18073459

MWh fuel consumed for self-generation of electricity

18073459

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Oil

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

FirstEnergy does not use oil in electricity generation.

Gas

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

FirstEnergy does not use gas in electricity generation.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

FirstEnergy does not use other non-renewable fuels in electricity generation.

Total fuel**Heating value**
HHV**Total fuel MWh consumed by the organization**
18073459**MWh fuel consumed for self-generation of electricity**
18073459**MWh fuel consumed for self-generation of heat**
0**MWh fuel consumed for self-generation of steam**
<Not Applicable>**MWh fuel consumed for self-generation of cooling**
<Not Applicable>**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>**Comment****C-EU8.2d**

(C-EU8.2d) 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)**
3082**Gross electricity generation (GWh)**
18073**Net electricity generation (GWh)**
16703**Absolute scope 1 emissions (metric tons CO2e)**
15785373**Scope 1 emissions intensity (metric tons CO2e per GWh)**
873**Comment**
Scope 1 emission and intensity calculated on Stationary combustion only**Lignite****Nameplate capacity (MW)**
0**Gross electricity generation (GWh)**
0**Net electricity generation (GWh)**
0**Absolute scope 1 emissions (metric tons CO2e)**
0**Scope 1 emissions intensity (metric tons CO2e per GWh)**
0**Comment****Oil****Nameplate capacity (MW)**
0**Gross electricity generation (GWh)**
0**Net electricity generation (GWh)**
0**Absolute scope 1 emissions (metric tons CO2e)**
0**Scope 1 emissions intensity (metric tons CO2e per GWh)**
0**Comment**

Gas

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Sustainable biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Nuclear

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Hydropower

Nameplate capacity (MW)

487

Gross electricity generation (GWh)

50

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

net generation was -15 GWh, we were unable to place a negative number in the system.

Wind

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Solar

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Total

Nameplate capacity (MW)

3569

Gross electricity generation (GWh)

18123

Net electricity generation (GWh)

16687

Absolute scope 1 emissions (metric tons CO2e)

15913845

Scope 1 emissions intensity (metric tons CO2e per GWh)

878

Comment

Scope 1 emission is and intensity calculated on Stationary combustion only

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

United States of America

Consumption of electricity (MWh)

18445655

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

18445655

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

C-EU8.4

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

Yes

C-EU8.4a

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

Country/Region

United States of America

Voltage level

Transmission (high voltage)

Annual load (GWh)

47527

Annual energy losses (% of annual load)

5.5

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)

1127955

Length of network (km)

38624

Number of connections

6192000

Area covered (km2)

1683492

Comment

FirstEnergy calculates transmission and distribution losses as part of Scope 2 and does not provide a breakdown between the two entities. For the purposes of this CDP report, our total combined Scope 2 location-based T&D emissions, energy losses, and annual load. Number of connections is based on customers served.

Country/Region

United States of America

Voltage level

Distribution (low voltage)

Annual load (GWh)

47527

Annual energy losses (% of annual load)

5.5

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)

1127955

Length of network (km)

432913

Number of connections

6192000

Area covered (km2)

1683492

Comment

FirstEnergy calculates transmission and distribution losses as part of the Scope 2 and does not provide a breakdown between the two entities. For the purposes of this CDP report, our total combined Scope 2 location-based T&D emissions, energy losses, and annual load. Number of connections is based on customers served.

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

2784615

Metric numerator

Coal Combustion Residuals (CCR) Generated (MT)

Metric denominator (intensity metric only)

Gross MWh generated

% change from previous year

7

Direction of change

Increased

Please explain

Due to increased coal generation to meet demand, waste from the coal generating process increased. These materials are transported to state-of-the-art dry disposal facilities that use liners and leachate collection systems, as well as extensive groundwater monitoring, to ensure environmental protection. We maintain a coal combustion residual (CCR) management program to meet all compliance requirements of the Federal Coal Combustion Residual regulations. When possible, we also strive to beneficially use CCRs, which are common ingredients in concrete roads, drywall and a wide variety of other construction materials. By diverting CCRs from landfill to more beneficial uses, we reduce the need for waste disposal sites. In 2021, for instance, our continued beneficial use efforts helped us to divert about 20% of our CCR waste from landfills.

C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

Coal – hard

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

We do not separately account for our coal assets. On December 17, 2021 MonPower and Potomac Edison filed with the WVPSC for approval of environmental compliance projects at the Ft. Martin and Harrison Power Stations to comply with the EPA's ELG and operate these plants beyond 2028. The request includes an expected \$142 million in capital investment.

Lignite

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Oil

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Gas

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Sustainable biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Other biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Waste (non-biomass)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Nuclear

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Geothermal

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Hydropower

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Wind

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Solar

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Marine

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Fossil-fuel plants fitted with CCS

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Other renewable (e.g. renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Other non-renewable (e.g. non-renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

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
Smart grid	Grid Modernization, Advanced Distribution Management System	615000000	40	2025
Charging networks	Number also represents Smart metering	370000000	25	2025
Prosumer services	Energy efficiency programs	460000000	30	2025
Other, please specify (Solar generation)		105000000	7	2025

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	FirstEnergy sponsors research through EPRI on a variety of low carbon technologies and applications

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Unable to disaggregate by technology area	<Not Applicable>	41-60%		FirstEnergy supports many low-carbon EPRI initiatives including solar generation, wind generation, and DERs. We also sponsor EPRI's Low-Carbon Resource Initiative.

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 third-party verification or assurance

C10.2

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

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

C11. Carbon pricing

C11.1

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

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

C11.2

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

No

C11.3

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

Yes

C11.3a

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

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations

GHG Scope

Scope 1

Application

Starting in 2020, FirstEnergy began using Wood Mackenzie as an external provider of the Long-Term Price Forecast. The most recently approved forecast from Wood Mackenzie is their 2020 H1 Reference Case. That forecast is used in long-term planning, including our Integrated Resource Plan in West Virginia. Per Wood Mackenzie, "This outlook assumes a federal carbon price in the US starting 2028. This will also serve as a backstop floor price for all states under regional programs in the future. The backstop floor price starts at \$2/ton (2020 Real) in 2028 with a \$2/ton annual growth rate to 2040, then continues to increase \$1.5/ton annually from 2041 to 2045, before topping out at \$30/ton post 2045."

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

0

Variance of price(s) used

Reference Case: zero variance is assumed; however, we assume the price grows at a very aggressive rate reflective of current applicable state and federal regulations and policy trends.

Type of internal carbon price

Shadow price
Other, please specify (See application description.)

Impact & implication

As a regulated utility, we are investing in our infrastructure to enable emerging technologies and electrification. We are also making the switch to a cleaner energy future by transitioning to renewable energy sources, deploying smart technologies, and meeting our customers' energy needs in a more environmentally sustainable way. We're also accelerating efforts to improve the environmental performance of our operations in the years ahead. We've established a goal to achieve carbon neutrality by 2050, with an interim 30% GHG reduction target by 2030 (based on 2019 levels). These goals improve on our previous goal of 90% CO2 reductions by 2045.

C12. Engagement

C12.1

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

Yes, our customers/clients

C12.1b

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

Type of engagement & Details of engagement

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

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

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

FirstEnergy offers multiple programs to residential, commercial, and industrial customers to help them better manage their energy use. These include major electricity end uses, such as HVAC equipment, lighting and building technologies, and commercial and industrial equipment, in addition to consumer energy use behavior programs.

Impact of engagement, including measures of success

Through our customer energy-efficiency programs, FirstEnergy will help customers achieve cumulative reductions in electricity savings in excess of 7.5 million MWh and lower their demand on the electric grid during peak usage hours by 400 MW between 2021 and 2025.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, and we do not plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, and we do not plan to have one in the next two years

Attach commitment or position statement(s)

<Not Applicable>

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

We seek insight from various stakeholder groups as we develop FirstEnergy's strategies, programs and policies on a variety of issues. This includes discussing energy-related matters with local, state and federal policymakers, as well as consumer and small-business advocates, peer utilities, customers, investors, nongovernmental organizations, chambers and trade organizations. We are committed to considering and balancing our company's strategies and goals, including those related to climate change, in the assessment and development of our positions on proposed legislation and regulations.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization

Non-Governmental Organization (NGO) or charitable organization

State the organization to which you provided funding

National Association of Regulatory Utility Commissioners (NARUC)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

3950

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

NARUC has adopted various positions related to climate, including encouraging state regulators, state and local government entities, power generators, and others to consider, where appropriate and/or cost-effective, the benefits provided by low- or no-carbon technologies, including mitigation measures and energy efficiency.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Type of organization

Non-Governmental Organization (NGO) or charitable organization

State the organization to which you provided funding

Chamber of Commerce – Pennsylvania Business & Industry

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

42190

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

The Chamber supports efforts in Pennsylvania which balance societal, environmental, energy and economic objectives; fit rationally within national or international strategies; and capitalize on the availability of Pennsylvania's diverse natural resources to facilitate economic development in the Commonwealth. The Chamber believes human activity is a major contributing factor to our changing climate and recognizes that climate change presents significant challenges to Pennsylvania and the United States. It also believes addressing this challenge will necessarily involve private sector development of innovative solutions, practices and technologies.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Type of organization

Non-Governmental Organization (NGO) or charitable organization

State the organization to which you provided funding

Chamber of Commerce – West Virginia

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

26000

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

West Virginia economic development groups and officials – from the local level to the federal level – must send clear and unambiguous signals to potential investors that West Virginia is welcoming of all types of energy investment. Affordable, abundant, and reliable energy resources are critical to the state's future economy. These resources can be the catalyst that unlocks the full potential of that economy

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Type of organization

Non-Governmental Organization (NGO) or charitable organization

State the organization to which you provided funding

Edison Electric Institute (EEI)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

2209755

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

EEI recognizes that global climate change presents one of the biggest energy and environmental policy challenges the United States has ever faced. EEI believes that policies to address climate change should seek to minimize impacts on consumers and avoid harm to U.S. industry and the economy. In addition, EEI has stated its support of the Biden Administration's executive order on climate.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Type of organization

Non-Governmental Organization (NGO) or charitable organization

State the organization to which you provided funding

Energy Association of Pennsylvania (EAP)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

284239

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

The EAP has not issued formal policy positions on topics like climate change. As a trade association representing both electric and natural gas distribution utilities, not electric generators, the EAP is focused on routine topics affecting the distribution companies, such as workforce safety, cost recovery, electric affordability, ratemaking, service reliability and infrastructure investments

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Type of organization

Non-Governmental Organization (NGO) or charitable organization

State the organization to which you provided funding

New Jersey Utilities Association, Inc. (NJUA)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

84162

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

NJUA does not have a stated climate policy, but it has been supportive of the deployment of renewable energy, energy efficiency programs, and electric vehicles and associated charging infrastructure. NJUA has also expressed public support for Governor Murphy's Energy Master Plan, which establishes a broad spectrum of aggressive goals to facilitate reduction of greenhouse gas emissions. The plan has a primary goal of 100% clean energy by 2050.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Type of organization

Non-Governmental Organization (NGO) or charitable organization

State the organization to which you provided funding

North American Electric Reliability Corp. (NERC)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

206667

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

NERC understands that the shift to a low carbon future requires a reliable and safe energy grid. NERC established the "Reliability Impacts of Climate Change Task Force" to assess the reliability consideration of climate initiatives, and to ensure a smooth transition to a low carbon future

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

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

Publication

In voluntary communications

Status

Complete

Attach the document

Page/Section reference

<https://www.fecorporateresponsibility.com/>

Content elements

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

Comment

This represents our Corporate Responsibility Website

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

2021TCFDRReport.pdf

Page/Section reference

Content elements

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

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

2021ESGDataTables.pdf

Page/Section reference

Content elements

- Emissions figures
- Other metrics

Comment

ESG Data Table

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, executive management-level responsibility	As part of our commitment to environmental stewardship, our Vegetation Management group employs an Integrated Vegetation Management (IVM) program across the rights-of-way that we manage. IVM enables managers to selectively remove incompatible vegetation that would threaten the integrity of our electric service, while cultivating compatible, low-growing, biodiverse vegetation that provides food and cover for insects, pollinators and wildlife. By managing both incompatible and compatible plant communities, we achieve our primary goal of delivering safe and reliable electricity to our customers while conserving and enhancing wildlife habitat.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments only	Commitment to No Net Loss Adoption of the mitigation hierarchy approach Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species Other, please specify (Use increasingly selective IVM best management practices to establish and maintain a mosaic of compatible, early successional grass and shrubland habitats)	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Yes, we assess impacts on biodiversity in our downstream value chain only	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Species management Education & awareness Livelihood, economic & other incentives

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Other, please specify (FirstEnergy Transmission VM group has developed standalone vegetation monitoring protocols for the purpose of understanding composition through time and quality of habitat on selected sites within our transmission service territory.)

C15.6

(C15.6) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Risks and opportunities Biodiversity strategy	https://www.fecorporateresponsibility.com/environmental/biodiversity-and-conservation/

C16. 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.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	SVP, CFO & Strategy	Chief Financial Officer (CFO)

SC. Supply chain module

SC0.0

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

Not at this time

SC0.1

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

	Annual Revenue
Row 1	11132000000

SC1.1

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

Requesting member

Parker-Hannifin Corporation

Scope of emissions

Scope 1

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

Uncertainty (±%)

1

Major sources of emissions

Fossil fuel fired Electric Generating Units

Verified

No

Allocation method

Other, please specify (Total KWh hour used)

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Megawatt hours (MWh)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

To derive values, you will need to gather the total MWh used and collect FirstEnergy's emissions factor. Find the information at FirstEnergy's EEI Customer report portal. Link: <https://www.eei.org/Pages/CO2Emissions.aspx>.

SC1.2

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

Values were derived using FirstEnergy's EEI Customer report portal. Link: <https://www.eei.org/Pages/CO2Emissions.aspx>.

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Managing the different emission factors of diverse and numerous geographies makes calculating total footprint difficult	Customers would have to have their specific electricity usage in particular relevant geographies

SC1.4

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

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

FirstEnergy is part of an industry initiative to provide GHG emissions and electricity mix data to customers through the Edison Electric Institute.

SC2.1

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

Requesting member

Parker-Hannifin Corporation

Group type of project

New product or service

Type of project

New product or service that has a lower upstream emissions footprint

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

3-5 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

FirstEnergy interested in partnering with customers on renewable energy projects as feasible

SC2.2

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

No

SC4.1

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

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms

