

# Welcome to your CDP Climate Change Questionnaire 2022

## C0. Introduction

### C0.1

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

American Electric Power, based in Columbus, Ohio, is focused on building a smarter energy infrastructure and delivering new technologies and custom energy solutions to our customers. AEP's approximately 16,700 employees operate and maintain the nation's largest electricity transmission system of 40,000 miles and more than 224,000 miles of distribution lines to efficiently deliver safe, reliable power to approximately 5.5 million regulated customers in 11 states. AEP also is one of the nation's largest electricity producers with approximately 26,000 megawatts (MW) of owned generating capacity, including more than 4,000 MW of renewable energy. More than 20,600 MW of renewable energy is interconnected across the U.S. via AEP's transmission network. By 2030, our current resource plans call for our regulated utilities to add up to 6,629 MW of solar, and up to 8,552 MW of wind. We expect renewables will represent approximately 50% of our generating resource mix by 2030. In 2021, AEP's carbon emissions were 70% below 2000 levels (baseline), while SO<sub>2</sub> and NO<sub>x</sub> emissions were reduced 98% and 95%, respectively, during the same timeframe. AEP's family of companies includes utilities AEP Ohio, AEP Texas, Appalachian Power (in Virginia and West Virginia), AEP Appalachian Power (in Tennessee), Indiana Michigan Power, Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana, east Texas and the Texas Panhandle). AEP also owns AEP Energy Supply, which provides innovative competitive energy solutions nationwide. For more information, visit [AEPsustainability.com](http://AEPsustainability.com).

### 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
Reporting year	January 1, 2021	December 31, 2021	No

## 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.**

Equity share

## C-EU0.7

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

Row 1

### Electric utilities value chain

Electricity generation

Transmission

Distribution

### Other divisions

Smart grids / demand response

Battery storage

Micro grids

## 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	0255371017
Yes, a Ticker symbol	AEP

## 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
Board Chair	<p>Due to the carbon intensive nature of our business, AEP's Chairman, President and CEO is directly responsible for decision making and managing AEP's response to climate change risk. As Chair of the Board of Directors, he has direct oversight over corporate strategy, structure and management. The Committee on Directors &amp; Corporate Governance of AEP's Board of Directors has oversight over sustainability and ESG performance reporting, which includes the company's strategy for addressing climate change, and provides input and guidance to management on selected issues. The board holds management accountable for sustainability and financial performance, as described in a board statement that we publish every year online (<a href="https://aepsustainability.com/performance/board-statement/">https://aepsustainability.com/performance/board-statement/</a>) and in our annual Corporate Sustainability Report (<a href="http://www.aepsustainability.com/">http://www.aepsustainability.com/</a>). The board receives regular updates on our progress. These updates help the board make decisions about climate related initiatives</p>
Director on board	<p>AEP's Board of Directors is actively engaged in working with management to oversee the company's planning and response to climate impacts. The Board understands the importance of climate change issues and their significance to our employees, customers, investors and other stakeholders. The Board regularly discusses issues related to climate change, including carbon reduction goals, public policy and legislation, renewable investments and AEP's strategy for a clean energy transition.</p> <p>The Committee on Directors and Corporate Governance leads the governance sustainability and ESG, which includes climate risks. The full Board is engaged in approving AEP's strategy to invest in renewable energy, reduce carbon emissions, and support our local communities and regional economies.</p> <p>While sustainability and ESG issues are discussed by the Board of Directors throughout the year, the Chief Sustainability Officer reports to the Committee on Directors and Corporate Governance on our sustainability-related activities at least twice per year. In addition, the Lead Director of AEP's Board of Directors conducts</p>

	<p>annual outreach with our largest institutional shareholders. The Chairman of the Board also engages on these issues throughout the year with investors and other stakeholders.</p> <p>Executive leadership and the Board made the decision that accountability for advancing AEP's clean energy strategy is supported by both short-term and long-term incentive compensation. For many years, AEP has tied a portion of short-term incentive compensation to the development of renewable generation. Beginning in 2020, AEP adopted a new long-term incentive compensation measure for AEP management that is aligned with increasing carbon-free generation capacity in the AEP fleet. This incentive measure is aligned with and supports our strategy for achieving 80% reduction in CO2 emissions by 2030 and net-zero by 2050. The targets for this measure are reviewed annually and expected to increase as we execute our strategy.</p> <p>Powering Forward to Net-Zero climate impact analysis report: <a href="https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf">https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</a></p> <p>And in our 2022 Corporate Sustainability Report: Strategy: <a href="http://www.aepsustainability.com/governance/strategy/">http://www.aepsustainability.com/governance/strategy/</a> Decarbonization Strategy: <a href="http://www.aepsustainability.com/decarbonization/strategy/">http://www.aepsustainability.com/decarbonization/strategy/</a></p>
Chief Executive Officer (CEO)	<p>Due to the carbon intensive nature of our business, AEP's Chairman, President and CEO is directly responsible for managing AEP's response to climate change risk. As Chair of the Board of Directors, he has direct oversight over corporate strategy, structure and management. The Committee on Directors &amp; Corporate Governance of AEP's Board of Directors has oversight over sustainability performance reporting, which includes the company's strategy for addressing climate change, and provides input and guidance to management on selected issues. The board holds management accountable for sustainability and financial performance, as described in a board statement that we publish every year online (<a href="https://aepsustainability.com/performance/board-statement/">https://aepsustainability.com/performance/board-statement/</a>) and in our annual Corporate Sustainability Report (<a href="http://www.aepsustainability.com/">http://www.aepsustainability.com/</a>). The board receives twice-annual updates on our progress, although discussion occurs throughout the year.</p>

## C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy	AEP's board and board committees consider climate-related issues when reviewing and guiding their

	<p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>development of business strategy, major plans of action, risk management policies, annual budgets, and budget plans as well as, setting the organization's performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures throughout the year.</p> <p>One of the key responsibilities of AEP's Board of Directors is overseeing the Company's strategy to create long-term value for AEP's shareholders. ESG-related policies can impact the Company's strategy. As a result, the Board regularly engages with senior management in the oversight of ESG issues, including climate change, the efficient use of energy, renewable energy and technology advances in the industry. As AEP continues to transition its business, the Board works with the senior management team to adjust plans as needed to respond to rapid changes in the industry, including technology and public policy. Management and the Board identify and incorporate significant ESG issues, including climate change impacts, into the business strategy.</p> <p>As part of its oversight role, the Board monitors climate risks and reviews opportunities that may be realized with climate change. The Board regularly discusses issues related to climate change, including carbon reduction goals, public policy and legislation, renewable investments and AEP's strategy for a clean energy transition. The Board also receives an environmental report from management at regularly scheduled Board meetings. In addition, the Board holds extended meetings twice a year, to provide extra time for a more robust review of the Company's strategy. Discussions about carbon-related risks and opportunities occur during Board meetings and those strategic planning sessions.</p> <p>Accountability for advancing AEP's clean energy strategy is supported by short-term and long-term incentive compensation. For many years, AEP has tied a portion of short-term incentive compensation to the development of renewable generation. Beginning in 2020, AEP adopted a new long-term incentive compensation measure for AEP management that is</p>
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		<p>aligned with increasing carbon-free generation capacity in the AEP fleet. This incentive measure is aligned with and supports our strategy for achieving 80% reduction in CO2 emissions by 2030. The targets for this measure are reviewed annually and expected to increase as we execute our strategy.</p> <p>The Board has delegated responsibility for overseeing the Company's annual Corporate Sustainability Report to its Committee on Directors and Corporate Governance. The Committee reviews and approves the annual CSR, which in 2022 included the company's sustainability goals, cyber and physical security practices, and its decarbonization strategy.</p>
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## C1.1d

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

	<b>Board member(s) have competence on climate-related issues</b>	<b>Criteria used to assess competence of board member(s) on climate-related issues</b>
Row 1	Yes	<p>AEP's board and board committees consider climate-related issues when reviewing and guiding their development of business strategy, major plans of action, risk management policies, annual budgets, and budget plans as well as, setting the organization's performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures.</p> <p>AEP's Board of Directors oversees the Company's strategy to create long-term value for AEP's shareholders. ESG-related policies can impact the Company's strategy. The Board regularly engages with senior management in the oversight of ESG issues, including climate change, the efficient use of energy, renewable energy and technology advances in the industry. The Board works with the senior management team to adjust plans as needed to respond to rapid changes in the industry, including technology and public policy. Management and the Board identify and incorporate significant ESG issues into the business strategy.</p> <p>The Board monitors climate risks and reviews opportunities that may be realized with climate change. The Board regularly discusses issues related to climate change, including carbon reduction goals, public policy, renewable investments and AEP's strategy for a clean energy</p>

		<p>transition. The Board receives an environmental report from management at regularly scheduled Board meetings. In addition, the Board holds extended meetings twice a year, to provide extra time for a more robust review of the Company’s strategy. Discussions about carbon-related risks and opportunities occur during Board meetings.</p> <p>Accountability for advancing AEP’s clean energy strategy is supported by short-term and long-term incentive compensation. AEP ties a portion of short-term incentive compensation to the development of renewable generation. Beginning in 2020, AEP adopted a new long-term incentive compensation measure for AEP management that is aligned with increasing carbon-free generation capacity in the AEP fleet. This incentive measure is aligned with our strategy for achieving 80% reduction in CO2 emissions by 2030.</p> <p>The Board has delegated responsibility for overseeing the Company’s annual Corporate Sustainability Report to its Committee on Directors and Corporate Governance. The Committee reviews and approves the annual CSR, which in 2022 included the company’s sustainability goals, cyber/physical security practices, and its decarbonization strategy.</p>
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## C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Sustainability committee	Assessing climate-related risks and opportunities	Not reported to the board
Chief Operating Officer (COO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

## C1.2a

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

AEP's CEO and CFO are members of the Executive Council which includes AEP's top executives; the group meets regularly to discuss all major business decisions affecting AEP's operations, employees, customers and investors. Climate-related issues are often discussed in these meetings, including climate policy risks and opportunities as well as stakeholder engagement on climate issues. The Executive Council also reviews AEP's Corporate Sustainability Report before it is presented to the Board of Directors.

AEP's Board of Directors works closely with our executive team to ensure we continually meet or exceed the highest standards of performance, innovation, ethics and service. In addition, the Board receives educational presentations from outside experts and board members attend external educational sessions.

In 2022, AEP announced the new Role of Chief Sustainability Officer (CSO) to lead the company's sustainability and environmental, social and governance (ESG) strategy, corporate stakeholder engagement, and annual sustainability and ESG performance reporting and risk monitoring.

Through our Enterprise Sustainability Council (ESC) – with oversight from executive management and the Committee on Directors and Corporate Governance of the Board of Directors – we have clear guidance on our ESG responsibilities for sustainable business development. ESC members, who represent all aspects of our business, serve as strategic ambassadors, providing guidance and support to ensure the success of our sustainable development strategy. They do this by enabling integration of sustainability across the enterprise and in corporate strategy.

The fast-paced growth of ESG investing prompted an expanded and more granular focus on how we manage our ESG performance and disclosure. We have a dedicated cross-functional Corporate ESG Committee that meets monthly to monitor new and emerging ESG issues and develop strategies for responding to them. Because ESG performance is also a business risk, we added it to our risk summary report and are integrating it with our corporate strategy.

In addition to the ESC and Corporate ESG Committee, the Committee on Directors and Corporate Governance of the Board of Directors reviews the Corporate Accountability Report annually and monitors our ESG performance. The Board Committee provides feedback and develops a Statement supporting our commitment to sustainable business development and performance accountability. In addition, since 2010, AEP's internal Audit Services team has conducted a limited review of selected company performance statements. The combined internal audit and governance from the Board of Directors, executive management and the ESC helps us ensure our disclosure undergoes a disciplined review and validation process.



While ESG issues are discussed by the Board of Directors throughout the year, we formally report to the Committee on Directors and Corporate Governance on our sustainability-related activities at least twice per year. In addition, the Lead Director of AEP’s Board of Directors conducts annual outreach with our largest shareholders to engage with investors on important ESG matters. The Chairman of the Board also engages throughout the year with investors and other stakeholders.

Accountability for advancing AEP’s clean energy strategy is supported by both short-term and long-term incentive compensation. For many years, AEP has tied a portion of short-term incentive compensation to the development of renewable generation. Beginning in 2020, AEP adopted a new long-term incentive compensation measure for AEP management that is aligned with increasing carbon-free generation capacity in the AEP fleet. This incentive measure is aligned with and supports our strategy for achieving 80% reduction in CO2 emissions by 2030. The targets for this measure are reviewed annually and expected to increase substantially as we execute our strategy.

### 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	Yes	<p>Accountability for advancing AEP’s clean energy strategy is also supported by both short-term and long-term incentive compensation. For many years, AEP has tied a portion of short-term incentive compensation to the development of renewable generation. For the first time, in 2020, AEP’s Board established a new Carbon-Free Capacity Mix goal as part of the company’s long-term incentive compensation plan because it is an actionable goal tied to the company’s Future Forward clean energy strategy. This incentive measure is aligned with and supports our strategy for achieving 80% reduction in CO2 emissions by 2030. The targets for this measure are reviewed annually and expected to increase substantially as we execute our strategy.</p> <p>View AEP’s 2022 Proxy pages 50-54  <a href="https://www.aep.com/assets/docs/investors/AnnualReportsProxies/docs/21annrep/2022ProxyStatement.pdf">https://www.aep.com/assets/docs/investors/AnnualReportsProxies/docs/21annrep/2022ProxyStatement.pdf</a></p>

## C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
All employees	Monetary reward	Emissions reduction target	<p>AEP's compensation program is based on the fundamental premise of pay for performance. This compensation can come in several forms including base pay and incentive pay. AEP offers both annual and long-term incentive programs to reward outstanding performance and achievement of business goals. In 2020, AEP's annual incentive program included a component for strategic initiatives. For 2021 annual incentive compensation, operating earnings per share will have a 60 percent weight, Safety and Compliance (including Environmental Compliance) has a 10 percent weight, and Strategic initiatives has a 30 percent weight. Within this goal includes AEP's clean energy transition; specifically renewable energy growth (regulated and competitive), as well as other targets tied to performance related to investing in infrastructure for the benefits of our customers. This includes transmission and distribution and investments to make the grid more resilient. This incentive is tied directly to AEP's clean energy transition strategy. AEP's business goals include achieving financial goals as well as longer-term strategic goals. Achieving annual financial goals are predicated upon successful execution of AEP's business strategy, which includes proactive deployment of emission abatement measures such as energy efficiency, highly-efficient new generation and renewable energy. Furthermore, AEP's strategic goals are based on core commitments to AEP's business model. While these may have less of an immediate financial return as part of its incentive compensation plan, they are essential to AEP's long-term strategic vision. (<a href="https://www.aep.com/about/mission/">https://www.aep.com/about/mission/</a>).</p>
Corporate executive team	Monetary reward	Emissions reduction project	<p>AEP's compensation program is based on the fundamental premise of pay for performance. This compensation can come in several forms including, base pay and incentive pay. AEP offers both annual and long-term incentive programs to reward outstanding performance and achievement of business goals.</p> <p>In 2021, the HR Committee of the Board selected a carbon-free capacity measure with a 10% weight. Carbon-free capacity includes nuclear, hydro, wind, solar, energy efficiency, demand response and storage capacity owned or contracted by the Company as a percentage of AEP's total owned and contracted generating capacity. This performance factor measures the increase in the Company's carbon free capacity as a percentage of total generation capacity from January 1, 2021 to December</p>

		<p>31, 2023. This goal was included to encourage management to further seek out and develop opportunities to increase the percentage of the Company's generation capacity that does not emit carbon, which is aligned with the Company's long-term strategy and commitment to invest substantial resources to reduce greenhouse gas emissions. As of January 1, 2021 (the beginning of the performance period), 26.0% of AEP's total capacity was carbon free.</p> <p>View AEP's 2022 Proxy pages 50-54 <a href="https://www.aep.com/assets/docs/investors/AnnualReportsProxies/docs/21annrep/2022ProxyStatement.pdf">https://www.aep.com/assets/docs/investors/AnnualReportsProxies/docs/21annrep/2022ProxyStatement.pdf</a></p>
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## 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	3	
Medium-term	3	10	
Long-term	10	50	

#### C2.1b

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

AEP assesses all risks through a structured risk framework in coordination with business units and operating companies. Enterprise Risk Oversight (ERO) defines and oversees the consistent application of AEP's risk management process and engages our multi-level governance structure to develop the collective risk profile of the company. Business unit risks are reported to ERO. The Chief Risk Officer reports a summary of risks to the Risk Executive Committee, which consists of senior leaders, to illustrate risk ranking and planned mitigations. This summary of risks is then discussed and reviewed by the Audit Committee of the Board of Directors.

Through this process, we can identify strategic, financial, operational and regulatory risks, assess the threats and controls, evaluate the risk, plan mitigation strategies and monitor risks

for changing conditions. In evaluating risk, AEP considers potential events that could affect our business. In 2019, climate change was assessed using AEP's risk management framework and added to the summary view of risks reported to the Risk Executive Committee and Audit Committee.

As a matter of principle, substantive financial matters are defined as financial impacts of over \$1 million. These material impacts come under the oversight of members of the Executive Council for review and approval. Factors examined in assessing materiality of issues include both the size and scope of the impact financially, operationally, legally or otherwise. Reputational factors are also considered of strategic importance to AEP. Climate Change is one of many risks that are included on AEP's Material Risk Watch List which is reviewed regularly with the Board of Directors.

For more information, read the Managing and Mitigating Risk Section of the Climate Impact Analysis (pg. 15): <http://www.aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis.pdf> In addition, potential climate-related risks, opportunities and impacts are covered in the same report on pages 18-19.

Additional Risk Information is included in AEP's Corporate Sustainability Report:  
<http://www.aepsustainability.com/governance/risk/>

## C2.2

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

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#### **Value chain stage(s) covered**

Direct operations  
Upstream  
Downstream

#### **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**

Enterprise Risk Oversight (ERO) defines and oversees the consistent application of AEP's risk management process and engages our multi-level governance structure to develop the collective risk profile of the company. Business unit risks are reported to ERO. The Chief Risk Officer reports a summary of risks to the Risk Executive

Committee, which consists of senior leaders, to illustrate risk ranking and planned mitigations. This summary of risks is then discussed and reviewed by the Audit Committee of the Board of Directors.

Identifying and reducing the likelihood of risks occurring is one part of the equation; it is equally important to be prepared to respond to and recover from risks in the event they do materialize. This aims to reduce the severity of the impact from the worst possible case to something less severe.

Our Enterprise Resilience team functions on a 24/ 7 basis, 365 days a year and is charged with sustaining the enterprise's emergency management and business continuity capabilities. Our Emergency Management Core Plan aligns with the National Incident Management System and adopts the principles of the incident command system, which government agencies across the U.S. use to respond to local emergencies and large disasters. Our emergency management framework is an integral part of how we efficiently respond to and manage events to keep critical operations functioning.

To prepare, the Enterprise Resilience team works closely with ERO to identify the drivers that could trigger an event; the controls for preventing it or reducing the frequency of it occurring; and mitigation strategies in the case it does occur. We try to anticipate high-impact, high-probability events to prepare for the ripple effects they could have and to limit the negative consequences.

We've established business-unit-based and hazard-specific plans aligned to our emergency management framework to manage the strategic response. Business unit and operating company-specific resilience plans are in place to protect our critical and non-critical processes to support continuity of operations during business disruptions.

Our business continuity plans evaluate and plan for a variety of needs:

- Preparing our workforce with training and tools to respond and recover when an event occurs. This gives our workforce the ability to adjust in real time, as needed.
- Prioritization of critical business process recovery with consideration for special circumstances or cyclical events that may worsen the impacts of the disruption.
- Staffing considerations for critical business processes and identification of niche or highly specialized skillsets.
- Adequacy of workarounds specific to the event's complexity and estimated time to recover critical business processes.

Third-party vendors, contractors/consultants and outsourced partners are also key to our business continuity in a crisis. Business units and operating companies within AEP that own these relationships must review the external party's business resilience plans

to determine whether or not they meet our criteria and to guide adjustments that may be required to our response and business recovery capabilities.

For more information, read the Managing and Mitigating Risk Section of the Climate Impact Analysis (pg. 15):

<http://www.aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis.pdf>

## 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 U.S. EPA has begun to regulate GHG emissions through the Clean Air Act (CAA) through its Prevention of Significant Deterioration/New Source Review (PSD/NSR) programs and New Source Performance Standards for GHGs for new and existing sources. These regulations affect AEP's operations.
Emerging regulation	Relevant, always included	Changes to regulations, such as the GHG regulations established under the Clean Air Act, have the ability to affect AEP's operations and financial performance in the future.
Technology	Relevant, always included	The cost, maturity and availability of various low- and no-carbon energy technologies will play a large role in AEP's emissions and risk profile going forward.
Legal	Relevant, always included	Legal challenges involving regulations, particularly those governing GHG emissions, have the potential to change regulatory frameworks. These are also a reputation risk.
Market	Relevant, always included	Market dynamics shape the way AEP produces and delivers energy as well as AEP's emission profile.
Reputation	Relevant, always included	Customers, investors, insurers, lenders, and other stakeholders are increasingly considering AEP's carbon footprint in evaluations.
Acute physical	Relevant, always included	Given the exposed nature of AEP's infrastructure, physical risks from natural forces are always assessed and re-evaluated as additional information is obtained. This can lead to changes in design standards, mitigation efforts or other actions.
Chronic physical	Relevant, always included	AEP has evaluated the potential impact of long-term changes of temperature on demand for electricity.

## 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.**

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**Identifier**

Risk 1

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

Direct operations

**Risk type & Primary climate-related risk driver**

Emerging regulation  
Carbon pricing mechanisms

**Primary potential financial impact**

Increased indirect (operating) costs

**Company-specific description**

Regulations that impose a cost of GHGs either through a cap-and-trade program or a carbon tax would result in additional operational costs and higher costs for customers.

**Time horizon**

Medium-term

**Likelihood**

About as likely as not

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

765,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

A hypothetical carbon tax of ~\$15/ton would result in \$765 million per year in additional expenditures with AEP's 2021 annual CO2 emission profile of ~51 million metric tons. The actual tax level could vary and other carbon pricing mechanisms, such as a cap-and-trade system with free allocation of allowances could mitigate the financial impact significantly. Additionally, for AEP's cost-of-service regulated operating subsidiaries, it is assumed that most of the financial impact would be passed directly on to customers.

### **Cost of response to risk**

2,000,000

### **Description of response and explanation of cost calculation**

AEP has actively managed its GHG profile for more than decade, aggressively investing in renewable energy and energy efficiency while retiring older and less efficient coal-fired generators. Through 2021, we reduced our carbon emissions by 70% from a 2000 baseline (AEP's baseline year for its carbon goals). AEP plans to continue to manage its emission profile downward. Additionally, AEP is an active participant in all dialogues surrounding future carbon pricing and regulation to reduce financial/regulatory implications. Cost of risk management is an estimate of internal resources dedicated to examining and mitigating climate transition risk.

### **Comment**

Management cost is an approximation of man-hours associated with issue management and does not include emission abatement activities.

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### **Identifier**

Risk 2

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

Downstream

### **Risk type & Primary climate-related risk driver**

Market  
Changing customer behavior

### **Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

### **Company-specific description**

AEP has increasingly seen customers seek to deploy low- or no-carbon generation resources as a means of replacing, augmenting, or offsetting electricity provided by AEP. Deployment of customer-sited generation or distributed resources decreases AEP's overall net load, resulting in shifts in operating costs among customers and potentially stifling the demand for more efficient utility-scale renewable generation.

### **Time horizon**

Short-term



**Likelihood**

Very likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

Approximate financial impact is based on a single customer utilizing a 1 MW solar system with 25% capacity factor to reduce their electric demand, which would cost approximately \$80/MWh normally. The actual potential impact will vary by the number of customers seeking alternative solutions. In cost-of-service jurisdictions, some of the lost revenue would be eligible for collection through increased customer's rates.

**Cost of response to risk**

10,000,000

**Description of response and explanation of cost calculation**

Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation. Additionally, we eliminated growth capital in the Generation & Marketing segment as we have begun the process to sell some or all of our unregulated renewable assets. This will provide additional capital to invest in our core regulated businesses to support rebuilding and reinforcing the grid and enhancing service for customers.

By 2030, our current resource plans call for our regulated utilities to add up to ~16 MW of wind and solar generation. We expect renewables will represent approximately 50% of our generating resource mix by 2030.

**Case Study:**

In Oklahoma, the North Central Energy Facilities (NCEF) began commercial operation in 2021. The Maverick and Sundance wind farms began generating clean, reliable electricity and reducing bill impacts for customers. A third facility, named Traverse, came online in March 2022. The Traverse project is the largest single wind farm built at one time in North America.

Together, the wind farms provide 1,484 MW of clean energy to customers of Public Service Company of Oklahoma and the Southwestern Electric Power Company, which is estimated to save them approximately \$3 billion in electricity costs over the next 30 years.

### **Comment**

Management cost is an approximation of man-hours associated with customer, public policy and regulatory issue management and engagement and does not count direct expenditures to provide customers with lower-carbon energy solutions.

---

### **Identifier**

Risk 3

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

Direct operations

### **Risk type & Primary climate-related risk driver**

Emerging regulation

Mandates on and regulation of existing products and services

### **Primary potential financial impact**

Increased direct costs

### **Company-specific description**

As a regulated utility company, AEP faces a number of regulations and mandates at the federal and state levels regarding the type of service it provides to customers. These include potential mandates on the amount of renewable energy provided through a clean energy standard or related mechanism.

### **Time horizon**

Medium-term

### **Likelihood**

More likely than not

### **Magnitude of impact**

Medium-high

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

105,800,000

### **Potential financial impact figure – minimum (currency)**

### **Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

In 2021, AEP's Vertically Integrated Utilities provided approximately 105.8 million MWh of electricity. If a policy was put in place that required an additional 10% of retail load be served by renewable energy, this could impose an incremental cost to AEP's customers up to \$105.8 million per year.

### **Cost of response to risk**

2,000,000

### **Description of response and explanation of cost calculation**

AEP has managed its climate-related transition risk, by aggressively investing in renewable energy and energy efficiency while retiring older and less efficient coal-fired generators. Through 2021, we reduced our carbon emissions by 70% (from a 2000 baseline), a decade ahead of our original goal to reduce carbon emissions by 70% by 2030. In February 2021, we announced a new goal to reduce our carbon footprint by 80% by 2030 and achieve net-zero by 2050. Additionally, AEP is an active participant in all dialogues surrounding future carbon pricing and regulation to reduce financial/regulatory implications. Cost of risk management is an estimate of internal resources dedicated to examining and mitigating climate transition risk.

### **Comment**

AEP is monitoring emerging regulations

## **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**

Resource efficiency

### **Primary climate-related opportunity driver**

Use of more efficient modes of transport

### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

### **Company-specific description**

AEP is actively pursuing opportunities for electrification, including those related to the transport sector. With electrification of the transport sector, AEP's sales will increase resulting in additional revenues as well as the ability to potentially invest additional capital into AEP's system. We're working with our customers and communities to help them realize the benefits of electric transportation through community outreach, assessment tools, guides, customer programs and incentives, and low-cost off-peak charging rates. Customer program offerings span our service territory and include infrastructure deployment rebates, off-peak charging programs, energy efficiency rebates and consultative services. In addition, AEP set a goal to accelerate its electric vehicle purchases with the goal of replacing 100% of its 2,300 cars and light-duty truck by 2030. AEP will begin transitioning medium- and heavy-duty vehicles, as well as off-road equipment, as electric and hybrid alternatives become available. AEP estimates this will avoid using more than 10 million gallons of fuel, amounting to a \$40 million savings in fuel costs and avoided CO2 emissions over the life of the vehicles.

### **Time horizon**

Long-term

### **Likelihood**

Very likely

### **Magnitude of impact**

High

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

100,000,000

### **Potential financial impact figure – minimum (currency)**

### **Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

A 1% increase in electricity sales due to electrification of the transport sectors has the potential to increase AEP's annual revenues by over \$100,000,000 per year.

### **Cost to realize opportunity**

200,000

### **Strategy to realize opportunity and explanation of cost calculation**

AEP has partnered with the Electric Power Research Institute (EPRI) on Electrification Research and Development and has conducted outreach to a number of customers.

AEP was instrumental in industry research and use of standards and methodologies created by EPRI to deploy a network of vehicle charging stations at workplaces in an economical way.

In 2018, AEP signed on as a partner to the Transportation Electrification Accord, which is supported by the auto industry, environmental groups, companies, and others. AEP's electric transportation mission is to increase adoption of electric vehicles in our service territory and provide customer charging options that optimize the use of the grid for the benefit of all customers.

AEP was instrumental in establishing the National Electric Highway Coalition (NEHC). The NEHC is a collaborative of more than 60 U.S. power companies serving more than 120 million customers across 48 states plus Washington, D.C. The members of NEHC are committed to providing EV fast-charging stations that will allow the public to drive EVs with confidence along major U.S. travel corridors by the end of 2023. Sites along major highway routes with easy highway access and amenities for travellers are being considered as coalition members work to determine final charging station locations. Charging stations will provide DC fast chargers that are capable of getting drivers back on the road in approximately 20 to 30 minutes.

Several of AEP's operating companies also offer programs to support customers in their adoption of EVs. Indiana Michigan Power's IM Plugged In program offers incentive payments and discounted overnight rates for EV charging for residents and small commercial customers in both Indiana and Michigan. IM Plugged also has EV charging incentives in both states for commercial and industrial workplace, fleet, and multi-unit dwelling customers planning to install EV chargers.

We are also supporting our customers that are seeking assistance in deploying EV charging solutions to support their fleet electrification initiatives.

-Public Service Company of Oklahoma (PSO) is partnering with ChargePoint, an EV charging network. to identify business customers with EV charging needs and support them

-Appalachian Power awarded \$2.1 million in grants to five school systems across southwest and central Virginia toward the purchase of nine energy-efficient buses powered by electricity. AEP Ohio and I&M plan to make similar awards in 2022.

### **Comment**

Cost is only reflective of AEP's annual expense for EPRI Electrification R&D work.

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### **Identifier**

Opp2

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

Direct operations

### **Opportunity type**

Resilience

**Primary climate-related opportunity driver**

Other, please specify

Customers desire for more reliable electricity

**Primary potential financial impact**

Returns on investment in low-emission technology

**Company-specific description**

For more than a century, AEP has invested capital to ensure its system is reliable and resilient. As the generation fleet transitions to lower carbon and intermittent resources at the same time other infrastructure ages, additional capital investment is needed for resiliency. Additionally, public discourse about climate-related weather events has prompted public interest in resiliency investment. AEP's investments in grid resiliency go hand-in-hand with grid modernization, including transmission and distribution infrastructure. AEP offers customer solutions that provide resilience for customers as well as the power grid.

Between 2022 and 2026, approximately 65% of AEP's \$38 Billion capital forecast will be allocated to investments in transmission and distribution. Significant additional investments in transmission and distribution will support our clean energy transition by making the electric power grid more resilient and reliable and able to support the electrification of the economy.

**Time horizon**

Short-term

**Likelihood**

Virtually certain

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1,240,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

At a high level, assuming a 50/50 debt/equity ratio and an ROE of 10% AEP will earn an annual return of \$1,240,000,000 from its \$24.8 billion investment in its transmission and distribution systems in 2022-2026.

### **Cost to realize opportunity**

24,800,000,000

### **Strategy to realize opportunity and explanation of cost calculation**

Having a modern, reliable, resilient and secure grid is critical to our clean energy transformation. Our transmission strategy focuses on leveraging technical innovation to deliver low-cost, high-value solutions as rapidly and efficiently as possible. From 2022 through 2026, AEP plans to invest \$14.4 billion, or approximately 50% of transmission capital investment, to modernize the transmission grid and enhance reliability and resilience. Our five-year transmission capital investment portfolio will deliver significant customer benefits across AEP's broad geographic footprint and four regional energy markets. Benefits include optimizing the grid's performance, reducing congestion, enabling the deployment of new technology, improving reliability and resilience, lowering energy costs and directly connecting renewables and other generation to the grid. Investments in transmission also enable public policies and customer demand for clean energy, as well as economic development.

We are also leveraging data analytics and digital technology, such as Geographic Information System (GIS), to reduce system failures, increase safety, improve grid reliability and minimize risks. Approximately \$2.7 billion of annual on-system capital investment is required to replace and enhance all transmission assets beyond life expectancy over the next 10 years. This is determined based on performance, condition and risk. AEP's Asset Health Center (AHC) uses operational and predictive data as an indicator for proactive system maintenance and equipment replacement needs. We minimize risk by identifying safety issues in real time and by prioritizing urgent needs to maintain a robust grid.

Reliably delivering electricity to our customers' homes and businesses requires investments in our distribution system. From 2022 through 2026, we are allocating \$10.4 billion to improve the reliability of our distribution systems. Distribution investments will be focused on renewing and replacing assets; responding to customer requests such as new services or upgrades; implementing technology automation; performing storm restoration; installing smart meters; investing in fiber to provide broadband to rural communities; and investing in energy efficiency and supporting electric charging vehicle charging infrastructure.

Learn more about Grid modernization at AEP:

<http://www.aepsustainability.com/decarbonization/grid-modernization/>

### **Comment**

AEP's total planned investment in its transmission and distribution systems during 2022-2026 is ~\$24.8 billion. This represents the cost to realize this opportunity.

---

### **Identifier**

Opp3

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

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of lower-emission sources of energy

**Primary potential financial impact**

Returns on investment in low-emission technology

**Company-specific description**

The increased stakeholder demand for clean energy combined with approximately 8 GW of planned retirements and expiring purchase power agreements (PPAs) between 2022-2030, is creating economic energy opportunities and driving renewable energy growth. By 2030, our current resource plans call for our regulated utilities to add up to ~16 MW of wind and solar generation. We expect renewables will represent approximately 50% of our generating resource mix by 2030.

Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation. Additionally, we eliminated growth capital in the Generation & Marketing segment as we have begun the process to sell some or all of our unregulated renewable assets. This will provide additional capital to invest in our core regulated businesses to support rebuilding and reinforcing the grid and enhancing service for customers.

**Case Study:**

In Oklahoma, the North Central Energy Facilities (NCEF) began commercial operation in 2021. The Maverick and Sundance wind farms began generating clean, reliable electricity and reducing bill impacts for customers. A third facility, named Traverse, came online in March 2022. The Traverse project is the largest single wind farm built at one time in North America.

Together, the wind farms provide 1,484 MW of clean energy to customers of Public Service Company of Oklahoma and the Southwestern Electric Power Company, which is estimated to save them approximately \$3 billion in electricity costs over the next 30 .

To learn more about AEP's Renewable energy plans, please visit:  
<http://www.aepsustainability.com/decarbonization/strategy/>

**Time horizon**

Short-term

**Likelihood**



Virtually certain

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

410,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

AEP's total planned investment in renewable energy during 2022-2026 is approximately \$8.2 billion. Assuming a 50/50 debt/equity ratio and an ROE of 10% AEP will earn an annual return of \$410,000,000 from this investment

**Cost to realize opportunity**

8,200,000,000

**Strategy to realize opportunity and explanation of cost calculation**

AEP is actively pursuing development of renewable resources both within its regulated footprint and through its competitive AEP Energy Supply subsidiary.

**Comment**

Cost is total capital investment which will be collected from customers.

## 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

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**Transition plan**

Yes, we have a transition plan which aligns with a 1.5°C world

**Publicly available transition plan**

Yes

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

We have a different feedback mechanism in place

**Description of feedback mechanism**

AEP routinely meets with shareholders to discuss climate related plans and other ESG matters.

**Frequency of feedback collection**

More frequently than annually

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

AEP's Climate Impact Analysis

 AEPs Climate Impact Analysis 2021.pdf

**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	
Row 1	Yes, qualitative and quantitative

**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 Customized publicly available transition scenario	Company-wide	1.5°C	<p>AEP evaluated potential climate transition scenarios that could be indicative of possible future GHG emission reduction strategies and the associated electric generation profiles for each.</p> <p>The scenarios were modeled through 2050. AEP did not consider changes to the distribution or transmission grid that might be needed due to customer load and resource mix. Those changes will be examined in future modeling, in conjunction with entities responsible for reliability of the bulk electric system, as generation resource changes become clearer. Our focus for this exercise was on AEP’s generation fleet.</p> <p>The use of scenarios helps us to better understand the medium- and long-term challenges of the low carbon transition.</p> <p>These scenarios may be indicative of AEP’s future</p>

			<p>generation profile. However, they are not meant to predict the future; rather, they are simply “plausible representations of uncertain future states.” The output from our scenario modeling provides a future snapshot of what may occur given different variables, such as changes in support for more aggressive emission reduction goals and what is plausible for others.</p> <p>Scenario 1: 100% Clean Energy              - accelerated AEP coal retirements with a \$30/ton + 3.5%/year carbon price beginning in 2028              - restrictions on natural gas build and 100% Clean Energy by 2050.</p> <p>In addition, for the Fast Transition scenario AEP assumed that the Donald C. Cook Nuclear Plant would extend its operating license for a third time.</p> <p>Our analysis was guided by the TCFD framework, setting specific parameters related to geography and macro-economic variables. Also, in accordance with TCFD, we developed assumptions related to technology development/deployment, energy mix, price of key commodities or inputs, timing of potential impacts, and potential policy changes. Finally, we considered which scenarios to use as a guide, time horizons, and supporting data and models. These scenarios also align with UNSDG 13 - Climate Action.</p> <p>More info in AEP's Climate Report pg. 22-34:  <a href="https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf">https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</a></p>
Physical climate scenarios Customized publicly available physical scenario	Company-wide	1.6°C – 2°C	<p>AEP evaluated potential climate transition scenarios that could be indicative of possible future GHG emission reduction strategies and the associated electric generation profiles for each.</p> <p>The scenarios were modeled through 2050. AEP did not consider changes to the distribution or transmission grid that might be needed due to customer load and resource mix. Those changes will be examined in future modeling, in conjunction with entities responsible for reliability of the bulk electric system, as generation resource changes become clearer. Our focus for this exercise was on AEP’s generation fleet.</p>

			<p>Scenario 2: Fast Transition                  CO2 price: \$30/ton + 3.5%/year escalation, starting 2028                  Energy Efficiency: More aggressive                  Electrification: More                  EV Penetration: Mid-point                  AEP Coal Unit Retirements: Book Life less 5 years, or 2040                  Technology Costs: EIA forecasts</p> <p>The use of scenarios helps us to better understand the medium- and long-term challenges of the low carbon transition.</p> <p>These scenarios may be indicative of AEP’s future generation profile. However, they are not meant to predict the future; rather, they are simply “plausible representations of uncertain future states.” The output from our scenario modeling provides a future snapshot of what may occur given different variables, such as changes in support for more aggressive emission reduction goals and what is plausible for others.</p> <p>Our analysis was guided by the TCFD framework, setting specific parameters related to geography and macro-economic variables. Also, in accordance with TCFD, we developed assumptions related to technology development/deployment, energy mix, price of key commodities or inputs, timing of potential impacts, and potential policy changes. Finally, we considered which scenarios to use as a guide, time horizons, and supporting data and models. These scenarios also align with UNSDG 13 - Climate Action.</p> <p>More info in AEP's Climate Report pg. 22-34:  <a href="https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf">https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</a></p>
Transition scenarios Customized publicly available transition scenario	Company-wide	4.1°C and above	<p>AEP evaluated potential climate transition scenarios that could be indicative of possible future GHG emission reduction strategies and the associated electric generation profiles for each.</p> <p>The scenarios were modeled through 2050. AEP did not consider changes to the distribution or transmission grid that might be needed due to customer load and resource mix. Those changes will be examined in future modeling, in conjunction with entities responsible for reliability of the bulk</p>

			<p>electric system, as generation resource changes become clearer. Our focus for this exercise was on AEP’s generation fleet.</p> <p>Scenario 3: Business as Usual                  CO2 price: \$15/ton + 3.5%/year escalation, starting 2028                  Energy Efficiency: Embedded in load                  Electrification: Some                  EV Penetration: Business as Usual                  AEP Coal Unit Retirements: Book life                  Technology Costs: EIA forecasts</p> <p>The use of scenarios helps us to better understand the medium- and long-term challenges of the low carbon transition.</p> <p>These scenarios may be indicative of AEP’s future generation profile. However, they are not meant to predict the future; rather, they are simply “plausible representations of uncertain future states.” The output from our scenario modeling provides a future snapshot of what may occur given different variables, such as changes in support for more aggressive emission reduction goals and what is plausible for others.</p> <p>Our analysis was guided by the TCFD framework, setting specific parameters related to geography and macro-economic variables. Also, in accordance with TCFD, we developed assumptions related to technology development/deployment, energy mix, price of key commodities or inputs, timing of potential impacts, and potential policy changes. Finally, we considered which scenarios to use as a guide, time horizons, and supporting data and models. These scenarios also align with UNSDG 13 - Climate Action.</p> <p>More info in AEP’s Climate Report pg. 22-34:  <a href="https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf">https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</a></p>
Physical climate scenarios Customized publicly available	Company-wide	Unknown	Climate change presents physical risks for the AEP system as well as business opportunities. AEP operates a large, interconnected network of facilities that generate, transport, and deliver electricity across the United States to serve approximately 5.5 million customers. Within these diverse operations, equipment, facilities operations, and employees are exposed to environmental variables that may be

<p>physical scenario</p>		<p>influenced by a changing climate. We highlight potential physical risks and opportunities posed by climate change, risk mitigation measures and lessons learned from past events, and how interrelated factors may affect our long-term business strategy.</p> <p>Changes that cause the most concern are generally subtle but are more severe in extremes. For example, the frequency of storms may be slightly higher, but the severity of them is increasing. These variations, which are geographically dispersed, are gaining attention from insurance underwriters, investors, lenders and others who are concerned about financial and operational risks associated with the physical aspects of climate change.</p> <p>We examined the potential impacts to physical assets, such as buildings, substations, poles and generating units, as well as what we've learned through experience of more than a century of severe weather events.</p> <p>Case Study:          The February 2021 deep freeze that crippled the Texas energy system is a sobering reminder of the critical need for specific policy changes and investments to support reliability and resilience of the power grid. The industry must be better prepared to counteract the frequency, intensity and impact of severe weather.</p> <p>Our analysis of physical risk revealed vulnerabilities that we are addressing. It showed us that our efforts to harden and build resilience into the system are essential. Our capital investment strategy, changes to design standards for vulnerable infrastructure, increased automation and digitalization, and efforts to have critical spare parts at the ready are all part of our grid modernization plan to enable the clean energy transition.</p> <p>The analysis also pointed to business opportunities. For example, our regulated utilities stand to gain from increased load due to electrification of other sectors. This would have positive effects on the environment as well as the revenues of our utilities.</p> <p>AEP's Climate Report pg. 47-73:</p>
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			<a href="https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf">https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</a>
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## 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

1. To identify risks and opportunities related to climate change
2. To help Inform capital investment and regulatory strategies
3. Advance electrification and electric vehicles
4. Explore impacts of potential future climate policy pathways
5. Inform strategic planning for the corporation
  - Transforming our fossil fleet for a net-zero carbon future;
  - Scenario planning for the future;
  - Investing to ensure reliability, resilience, affordability and security of the grid;
  - Engaging in the public policy process;
  - Engaging employees and supporting those impacted by the transition
6. Inform future emission reduction and renewable Energy Goals

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

The scenarios developed represented a unique approach to examining potential carbon emissions and generating fleet changes for AEP's operations. With increased constraints on carbon emissions through carbon pricing and accelerated coal retirements, renewable energy dominated the future energy portfolio and emissions trended significantly lower. However, even in the Business-as-Usual Case, emissions are projected to be only a small fraction of historic levels. This reflects AEP's current strategy to transition to clean resources. In both scenarios, emissions are reduced more than 90% below 2000 levels enterprise-wide by the mid-2030s.

With varied assumptions on carbon pricing, it is very possible to get to less than 5% of our 2000 CO2 emission levels. However, we were not quite able to get to zero emissions given the assumptions. That is because the modeling required some level of natural gas-fueled capacity to provide energy, albeit in a very limited capacity. We will continue to seek a viable 100% clean energy scenario to model in future efforts, as we also look to advanced energy storage and green hydrogen to further reduce emissions.

The 100% Clean Energy option, although not completed in this exercise, provided important insights into what will be required and what still needs to be done to achieve net-zero carbon by 2050. The scenarios developed and the outcomes of the BAU and Fast Transition scenarios are well-aligned with the Paris Agreement.

AEP is committed to an annual review of our carbon goals, as we learn more about developing technologies, resources, changing policies, and energy prices, etc. In 2021, AEP achieved a 70% reduction in carbon emissions (from a 2000 baseline) — exceeding our 2030 goal a decade ahead of schedule. Based on our most recent analysis, we are revising our carbon goals to cut more emissions sooner. This reflects the progress AEP is making toward a clean energy future, as we have accelerated our carbon emission reduction targets each of the past three years.

The decision to adopt a net-zero goal was made with the understanding that we don't have every step of the way mapped out. We do know that additional technology development will be critical and that it will be more expensive than near-zero, based on today's economics. We believe setting a net-zero goal is the right decision for AEP given the policy shifts related to climate change and doing so will give us the opportunity to shape our nation's energy future.

We are on a pathway to net-zero carbon emissions, but how quickly that occurs and how much it will cost remains uncertain. This analysis represents our first in depth evaluation about how we might transition to net-zero operations. We have been an industry leader in technology, efficiency, and ingenuity for 115 years, and we intend to continue leading the way while.

More info, View AEP's Climate Report:  
<https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf>

### 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	<p>AEP continues to reduce its greenhouse gas footprint and add renewable energy to its system as a means of reducing climate transition risk and providing an opportunity for capital investment and shareholder return as part of our corporate strategy.</p> <p>2021 marked an important milestone in AEP's clean energy transition when the company announced a plan to shift our generation portfolio from majority fossil fuel to majority renewables by the end of this</p>



		<p>decade. The strategy proposes adding approximately 16 gigawatts of new regulated renewable resources by 2030. We continue the process of filing plans within our state jurisdictions to advance this strategy.</p> <p>By 2030, our current resource plans call for our regulated utilities to add up to 6,629 MW of solar, and up to 8,552 MW of winds. We expect renewables will represent approximately 50% of our generating resource mix by 2030.</p> <p>In Oklahoma, the North Central Energy Facilities (NCEF) began commercial operation in 2021. The Maverick and Sundance wind farms began generating clean, reliable electricity and reducing bill impacts for customers. A third facility, named Traverse, came online in March 2022. The Traverse project is the largest single wind farm built at one time in North America.</p> <p>Together, the wind farms provide 1,484 MW of clean energy to customers of Public Service Company of Oklahoma and the Southwestern Electric Power Company, which is estimated to save them approximately \$3 billion in electricity costs over the next 30 years.</p> <p>Indiana Michigan Power (I&amp;M) intends to significantly expand its clean energy generation as part of its Powering the Next Tomorrow plan, calling for the addition of 2,100 MW of wind and solar energy generation by 2028. The plan was submitted to state regulatory commissions in both Indiana and Michigan in 2022. I&amp;M expects up to 1,300 MWs of new renewable resources to be online as early as the end of 2024. The scheduled retirement of I&amp;M's coal-fueled Rockport Plant by the end of 2028 supports AEP's goal of net-zero emissions by 2050.</p> <p>Public Service Company of Oklahoma is also seeking regulatory approval for additional renewable resources, including up to 2,800 MW of wind and 1,350 MW of solar generation resources with optional battery-energy storage systems.</p> <p>More Information: <a href="https://aepsustainability.com/decarbonization/strategy/">https://aepsustainability.com/decarbonization/strategy/</a></p>
Supply chain and/or value chain	Yes	AEP's customers are also in many cases suppliers and often have an interest in reducing their emissions profile with AEP's help. This customer demand for cleaner electricity helps inform AEP's decisions around generation planning. As a result, AEP's renewable generating

		<p>portfolio will represent approximately 50% our total capacity by 2030. AEP also has jurisdictions where it offers a green tariff that allows customers to sign up for 100% renewable energy. Our suppliers are often our customers as well, so we share a mutual interest in looking at climate risks and opportunities holistically.</p>
<p>Investment in R&amp;D</p>	<p>Yes</p>	<p>AEP believes a number of low carbon technologies are in need of further research, development and deployment to help meet global aspirations around climate change in a cost effective manner.</p> <p>Low Carbon Resource Initiative:              To further advance these technologies, AEP has committed \$5 million to the Low Carbon Resource Initiative (LCRI), which is a collaborative low carbon R&amp;D effort lead by EPRI and the Gas Technology Institute. This 5-year effort will look at opportunities around carbon capture and storage, hydrogen production and electrification among other low carbon technologies.              Link to LCRI: <a href="https://www.epri.com/lcri">https://www.epri.com/lcri</a></p> <p>Gulf Coast Carbon Collaborative              AEP is a member of the Gulf Coast Carbon Collaborative (GCCC), a multi-industry decarbonization effort in the Gulf region, led by the U.S. Business Council for Sustainable Development, with a goal to reduce carbon emissions while preserving and enhancing the region's economic vitality. The Collaborative is seeking to identify strategies to advance equipment modernization; technology and operating improvements; electrification; shifts to renewable energy sources; land-based sequestration; and CCUS.              Link to learn more about the GCCC: <a href="https://carbon-collaborative.org/">https://carbon-collaborative.org/</a></p> <p>Global Sustainable Energy Partnership              AEP is a long-time member of the Global Sustainable Electricity Partnership (GSEP). This CEO-led alliance of leading global electricity companies advocates and promotes clean energy-sourced electrification and social advancement globally, including in their own businesses and communities. AEP Chairman, President &amp; CEO Nick Akins served as the 2020–2021 Chair of GSEP. Under his leadership members are collaborated with customers and end users of electricity to learn how they want to accelerate the electrification of their businesses. The results were released globally in May 2021. Link to Report: <a href="https://www.globalelectricity.org/news/unlocking-beneficial-electrification-download-report-and-watch-event/">https://www.globalelectricity.org/news/unlocking-beneficial-electrification-download-report-and-watch-event/</a></p> <p>Ttechnology section of AEP's Climate Impact analysis:  <a href="https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf">https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</a></p>

		Decarbonization section of AEP's 2022 CSR: <a href="https://aepsustainability.com/decarbonization/strategy/">https://aepsustainability.com/decarbonization/strategy/</a>
Operations	Yes	<p>AEP is continuously looking for ways to optimize operations to deliver safe, affordable and reliable energy. As some of our fossil units reach the end of their useful life given exposure to climate regulations and other factors (e.g., economics, age, etc.), AEP's clean energy strategy supports the transition to clean energy. AEP has been proactively reducing capital investments in those units and diverting it towards non-emitting technologies such as renewable energy and transmission improvements. Since 2011, we have retired, sold or converted to natural gas nearly 13,700 MW of coal-fueled generation. We recently announced plans to retire an additional 5,300 MW of coal generation from 2022 through 2028.</p> <p>AEP is also currently looking at ways to operate generating units only on a seasonal basis, which allow them to meet customer needs at peak times while reducing their emissions profile at times when electricity is not in high demand. These efforts are expected to produce tangible customer savings both short-term and long-term, as well as result in lower emissions.</p> <p>More Information: <a href="https://aepsustainability.com/decarbonization/strategy/">https://aepsustainability.com/decarbonization/strategy/</a></p>

### 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 Capital allocation Acquisitions and divestments	<p>Our vision for a clean energy future focuses on promoting and investing in regulated and contracted renewables. As renewable resources become more affordable due to advances in technology and support from federal tax credits, we see these clean options capturing larger shares of our integrated resource plans (IRPs).</p> <p>IRPs are planning documents that allow utilities to plan for future needs to meet peak loads and energy obligations for a period of time, such as 15 years, and they are based on the best information available at the time they are prepared. They are planning documents and are not intended to represent firm commitments or financial decisions about specific future</p>

<p>Access to capital</p> <p>Assets</p> <p>Liabilities</p>	<p>generation resources.</p> <p>AEP integrates a carbon price in its commodity forecasting as a proxy for future climate regulation. The carbon price begins in 2028 at approximately \$15/metric ton of CO2 emissions, escalating at 3.5% per year on a nominal basis. In the Fast Transition scenario for AEP's climate report, we used a carbon price beginning at \$30/metric ton, which escalated 3.5% per year on a nominal basis.</p> <p>Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation. Additionally, we eliminated growth capital in the Generation &amp; Marketing segment as we have begun the process to sell some or all of our unregulated renewable assets. This will provide additional capital to invest in our core regulated businesses to support rebuilding and reinforcing the grid and enhancing service for customers.</p> <p>Between 2022 and 2026, approximately 65% of AEP's capital forecast will be allocated to investments in transmission and distribution. Significant additional investments in transmission and distribution will support our clean energy transition by making the electric power grid more resilient and reliable and able to support the electrification of the economy. Currently, approximately 20,600 MW of renewable generation is interconnected across the U.S. via AEP's transmission system. Learn more about our Grid Modernization efforts.</p> <p>By 2030, our current resource plans call for our regulated utilities to add up to 6,629 MW of solar, and up to 8,552 MW of winds. We expect renewables will represent approximately 50% of our generating resource mix by 2030.</p> <p>North Central Wind Energy Facilities Project:              In Oklahoma, the North Central Energy Facilities (NCEF) began commercial operation in 2021. The Maverick and Sundance wind farms began generating clean, reliable electricity and reducing bill impacts for customers. A third facility, named Traverse, came online in March 2022. The Traverse project is the largest single wind farm built at one time in North America.</p> <p>Together, the wind farms provide 1,484 MW of clean energy to customers of Public Service Company of Oklahoma and the Southwestern Electric Power Company, which is estimated to save them approximately \$3 billion in electricity costs over the next 30 years</p> <p>Learn More: <a href="https://aepsustainability.com/decarbonization/strategy/">https://aepsustainability.com/decarbonization/strategy/</a></p>
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		Distributed Energy Resources: Distributed Energy Resources (DERs) include technologies such as solar panels, wind turbines and battery storage systems. DERs can provide a self-sufficient generation resource that can be isolated from the rest of the grid in the event of an outage. AEP is increasingly evaluating DERs as a cost-effective solution, at times of peak demand. Learn more: <a href="http://www.aepsustainability.com/social/customer-experience/">http://www.aepsustainability.com/social/customer-experience/</a>
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## C3.5

**(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?**

No, but we plan to in the next two years

## 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**

**Scope 3 category(ies)**

**Base year**

2000

**Base year Scope 1 emissions covered by target (metric tons CO<sub>2</sub>e)**

167,000,000

**Base year Scope 2 emissions covered by target (metric tons CO<sub>2</sub>e)**

**Base year Scope 3 emissions covered by target (metric tons CO<sub>2</sub>e)**

**Total base year emissions covered by target in all selected Scopes (metric tons CO<sub>2</sub>e)**

167,000,000

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

99

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

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

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

99

**Target year**

2030

**Targeted reduction from base year (%)**

80

**Total emissions in target year covered by target in all selected Scopes (metric tons CO<sub>2</sub>e) [auto-calculated]**

33,400,000

**Scope 1 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

50,790,329

**Scope 2 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Total emissions in reporting year covered by target in all selected scopes  
(metric tons CO<sub>2</sub>e)**

50,790,329

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

86.9832866766

**Target status in reporting year**

Underway

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

No, but we anticipate setting one in the next 2 years

**Target ambition**

**Please explain target coverage and identify any exclusions**

In mid-2017, in response to ongoing engagement on these issues with various stakeholders, AEP began to develop new intermediate and long-term carbon reduction goals.

In 2020, we undertook a year-long Climate Impact Analysis effort to analyze the risks to our company from climate change, as well as potential business opportunities it might create. The report reflects our commitment to working toward 100% clean energy while also addressing the physical risks to infrastructure and people from a changing climate and the socio-economic effects that coal-fueled power plant closures have on the workforce as well as local and regional economies. We reviewed our carbon emission reduction goals as part of this process and have accelerated them to achieve an 80% reduction by 2030 and net-zero emissions by 2050 (from a 2000 baseline). The climate scenarios we conducted showed that we can reach more than 95% toward zero by 2050 with conventional technologies, and we remain hopeful that emerging technologies such as advanced nuclear, carbon capture, hydrogen and energy storage will help us close that gap. Through the end of 2021, AEP has reduced its carbon emissions 70% from 2000 levels. We are committed to periodically reviewing these goals as we work toward a clean energy future.

We have long believed that our clean energy transformation strategy is aligned with the Paris Agreement. The climate scenario analysis we undertook demonstrates that our strategy is on course with achieving the goals of the Paris Agreement. And, it reminds us that the transition must build resilience into the system to handle extremes. It also shows us that there are still many uncertainties about technology, resources and the pace and cost of the transition. Our path forward will evolve, and, as it does, we will continue to engage our stakeholders.

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

Through 2021, we reduced our carbon emissions by 70% from a 2000 baseline. In 2021, emissions increased relative to 2020 due to the post-pandemic economic recovery and surge in natural gas prices. Despite the 2021 increase in CO<sub>2</sub> emissions,

AEP is still on track to meet our goals of 80% reduction by 2030 and net-zero by 2050. We are committed to periodically reviewing these goals as we work toward a clean energy future.

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

## 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)

Other climate-related 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**

2021

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

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

26



**Target year**

2023

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

35.4

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

30

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

42.5531914894

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

yes- Aligning compensation with Renewable Energy Generation Goals

**Is this target part of an overarching initiative?**

Other, please specify

Aligning compensation with Renewable Energy Generation Goals

**Please explain target coverage and identify any exclusions**

In 2021, the HR Committee selected a carbon free capacity measure with a 10% weight. Carbon free capacity includes nuclear, hydro, wind, solar, energy efficiency, demand response and storage capacity owned or contracted by the Company as a percentage of AEP's total owned and contracted generating capacity. This performance factor measures the increase in the Company's carbon free capacity as a percentage of total generation capacity from January 1, 2021 to December 31, 2023. This goal was included to encourage management to further seek out and develop opportunities to increase the percentage of the Company's generation capacity that does not emit carbon, which is aligned with the Company's long-term strategy and commitment to invest substantial resources to reduce greenhouse gas emissions. As of January 1, 2021 (the beginning of the performance period), 26.0% of AEP's total capacity was carbon free.

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

Our ability to execute our strategy and the pace of change are contingent upon securing support from regulators. As we invest in the clean energy transition, we are also investing in grid modernization to empower customers with more choices and greater control over their energy use. Many of our large customers have clean energy goals and some will not expand or relocate without access to 100% clean energy.

Increased stakeholder demand for clean energy combined with approximately 8 GW of planned retirements and expiring purchase power agreements (PPAs) between 2022-2030, is creating economic energy opportunities and driving renewable energy growth. By 2030, our resource plans indicate an opportunity to add approximately 16 GW of regulated renewable energy, which will represent approximately half of our generating capacity.

Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation.

**Case Studies:**

In Oklahoma, the North Central Energy Facilities began commercial operation in 2021. The Maverick and Sundance wind farms began generating clean, reliable electricity and reducing bill impacts for customers. A third facility, named Traverse, came online in March 2022. The Traverse project is the largest single wind farm built at one time in North America.

Together, the wind farms provide 1,484 MW of clean energy to customers of Public Service Company of Oklahoma and the Southwestern Electric Power Company, which is estimated to save them approximately \$3 billion in electricity costs over the next 30 years.

In addition, Indiana Michigan Power intends to significantly expand its clean energy generation as part of its Powering the Next Tomorrow plan, calling for the addition of 2,100 MW of wind and solar energy generation by 2028.

Virginia's Clean Economy Act requires Appalachian Power to file an annual plan with the Virginia State Corporation Commission outlining how it will meet key mandates as it reaches carbon-free status by 2050. Appalachian Power petitioned regulators to add nearly 500 MW of solar and wind power to the company's renewables portfolio by 2025.

Decarbonization Section 2022 CSR:

<https://aepsustainability.com/decarbonization/strategy/>

**List the actions which contributed most to achieving this target**

## C4.2b

**(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.**

---

**Target reference number**

Oth 1

**Year target was set**

2020

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Absolute

**Target type: category & Metric (target numerator if reporting an intensity target)**

Other, please specify

Other, please specify

AEP has a goal to electrify 40% of our entire on-road vehicle fleet by 2030

**Target denominator (intensity targets only)**

**Base year**

2020

**Figure or percentage in base year**

1.1

**Target year**

2030

**Figure or percentage in target year**

40

**Figure or percentage in reporting year**

4.3

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

8.2262210797

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

Fleet electrification is part of our effort to reduce CO2 emissions by 80% by 2030 and achieve net-zero by 2050. We have already made significant progress.

**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**

By converting a portion of medium- and heavy-duty vehicles with electric or hybrid models, AEP has set a goal of electrifying 40% of our entire on-road vehicle fleet by 2030.

Transitioning light-duty vehicles to EVs is standard practice across all of our business units. We'll begin to transition medium- and heavy-duty vehicles, as well as off-road equipment, when electric and hybrid alternatives become available. In addition, we will

electrify 50% of forklifts by 2030. The fleet transformation is estimated to avoid 8 million gallons of fuel and to result in savings of \$3.8 million over the life of the vehicles: this is in addition to avoided CO2 emissions.

Fleet electrification is part of our effort to reduce CO2 emissions by 80% by 2030 and achieve net-zero by 2050. We have already made significant progress.

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

By 2030, AEP has plans to procure 100% of cars and light-duty trucks with Electric Vehicle (EV) alternatives as a tactic to meet our 40% total goal.

#### **New Market Opportunities**

- Strong probability that the three-quarter ton pickup truck market will have EV platforms available in 2025, leverage new platform offering
- In 2024 longer range EV Cargo options are expected to enter the Market (BrightDrop, Stellantis), providing an opportunity to convert cargo vans
- By 2025 Big "3" automakers expect to have EV half-ton pickup trucks with ranges from 320 miles to 500 miles. Ford is entering the market 2022/2023 with an EV F-150 Lightning 320 miles; in 2024 GM Silverado 1500 is expected on the market with a range of 300 & 400 miles.
- There is an increase of offerings in the small SUV market expected in 2023/2024. Presently, there is one provider which was unable to support our 2022 orders.

### **List the actions which contributed most to achieving this target**

## **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**

Abs1

#### **Target year for achieving net zero**

2050

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

No, but we anticipate setting one in the next 2 years

#### **Please explain target coverage and identify any exclusions**

In 2020, we initiated a climate scenario analysis to expand our understanding of how various scenarios can affect the company now and in the future. This informs our strategic planning, risk management and how fast we can go. We have long believed that our clean energy transformation strategy is aligned with the Paris Agreement. Our analysis reminds us that the transition must build resilience into the system to handle extremes. It also shows us that there are still many uncertainties about technology, resources and the pace and cost of the transition. Our path forward will evolve, and, as it does, we will continue to engage our stakeholders.

Our goal is to reduce AEP's carbon emissions from directly owned generation (scope 1) 80% by 2030 compared to 2000 levels and to achieve net-zero emissions by 2050 (scopes 1 and 2). The climate scenarios we conducted showed that we can reach more than 95% toward zero by 2050 with conventional technologies, and we remain hopeful that emerging technologies such as advanced nuclear, carbon capture, hydrogen and energy storage will help us close that gap. Through the end of 2021, AEP has reduced its carbon emissions 70% from 2000 levels. We are committed to periodically reviewing these goals as we work toward a clean energy future.

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

Yes

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

We continue to work toward achieving our near-term goal of reducing CO<sub>2</sub> emissions 80% by 2030. AEP's goals and our strategy for transitioning are driven by our integrated resource plans, which are overseen by state regulators. Increasingly, we have seen renewables become more cost competitive, enabling AEP to invest in economical clean energy resources that also reduce our carbon footprint. In addition, many of our customers want clean energy for their homes and businesses.

AEP has retired or sold more than 13,700 MW of coal-fueled generation, and we have plans to retire another 5,300 MW between 2022 and 2028. That will leave five remaining coal plants on our system totaling 6,500 MW. The timing for full retirement of coal-fueled generation assets will be based on a combination of factors, including expected investments for operations, overall economics, useful asset life and depreciation rates, and reliability factors highlighted in our integrated resource plans. In addition, we rely on our partnerships with our state regulators and local communities to assess the economics, timing and impacts.

2021 marked an important milestone in AEP's clean energy transition when the company announced a plan to shift our generation portfolio from majority fossil fuel to majority renewables by the end of this decade. The strategy proposes adding approximately 16 gigawatts of new regulated renewable resources by 2030. We continue the process of filing plans within our state jurisdictions to advance this strategy.

Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation.

Between 2022 and 2026, approximately 65% of AEP’s capital forecast will be allocated to investments in transmission and distribution. Significant additional investments in transmission and distribution will support our clean energy transition by making the electric power grid more resilient and reliable and able to support the electrification of the economy. Currently, approximately 20,600 MW of renewable generation is interconnected across the U.S. via AEP’s transmission system. Learn more about our Grid Modernization efforts.

**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*	2	
Implemented*		
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**

Other, please specify

Other, please specify

Implementing Energy Efficiency Programs: Various Lighting, Heat and Appliance Technologies

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

477,475

**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)**

30,000,000

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

150,000,000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

AEP's operating companies continue to help customers implement energy efficiency measures to help reduce the energy consumption of our customers. Annual savings are based on a five-year simple payback and are disclosed in AEP's Corporate Sustainability Report.

Link: <https://aepsustainability.com/social/customer-experience/>

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**Initiative category & Initiative type**

Other, please specify

Other, please specify

Retirement of Coal-Fired Generating Units

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

3,542,782

**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)**

67,000,000

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Part of the conversation we have with some stakeholders is the question of when AEP will be fully out of coal-fueled generation. In total, from 2011 to 2021, AEP has retired or sold more than 13,700 MW of coal-fueled generation, and we have plans to retire another 5,300 MW between 2022 and 2028. That will leave five remaining coal plants on our system totaling 6,500 MW. The timing for full retirement of coal-fueled generation assets will be based on a combination of factors, including expected investments for operations, overall economics, useful asset life and depreciation rates, and reliability factors highlighted in our integrated resource plans. In addition, we rely on our partnerships with our state regulators and local communities to assess the economics, timing and impacts.

Link: <https://aepsustainability.com/decarbonization/strategy>

**C4.3c**

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

Method	Comment
Compliance with regulatory requirements/standards	Since our electric rates are regulated, we are only allowed to pass along costs to customers for activities that are deemed to be economically prudent or mandated by law. EPA regulations governing emissions from existing electric generators could drive significant investment in the future.
Employee engagement	<p>Many AEP employees are involved in forums, regular communications, competitions and opportunities and innovative partnerships in the U.S. and around the world to scout new technologies, validate them quickly, demonstrate their benefits to customers and policymakers, and secure timely regulatory support or contractual approvals for development and deployment. Partnerships include:</p> <p>Electric Power Research Institute (EPRI) – an independent, nonprofit energy research and development organization.</p> <p>Edison Electric Institute (EEI) – an association that represents all U.S. investor-owned electric companies, providing public policy leadership,</p>



	<p>strategic business intelligence, and essential conferences and forums.</p> <p>American Clean Power (ACP) – support companies from across the clean power sector in their efforts to provide cost-effective solutions to the climate crisis while creating jobs, spurring massive investment in the U.S. economy, and driving high-tech innovation across the nation.</p> <p>WIRES Group – a trade association that promotes investment in the North American electric transmission system through development and dissemination of information, strategic advocacy, and innovation in regulatory, policy making, industry, and education forums.</p> <p>Free Electrons – a global energy accelerator with the mission to create the future of energy.</p> <p>Global Sustainable Electricity Partnership (GSEP) – a CEO-led alliance of the world’s largest electricity companies committed to leading the transformation of the global electricity industry and the energy transition through accelerated clean energy electrification.</p> <p>Various Original Equipment Manufacturers (OEMs) – AEP directly works with the OEMs to learn about technologies that are commercially available today and what will be available in the near future, especially relating to low-carbon technologies.</p> <p>Collaborating with stakeholders enables low-carbon, affordable, resilient and reliable electricity to be the lifeline of a modern decarbonized global economy and the backbone of digital and connected cities of the future. We are committed to actively engaging with our stakeholders and appreciate two-way conversations that provide value to us and them. Below is a list of the stakeholders with whom we engage most frequently, the topics of interest and how we engage.</p>
<p>Internal price on carbon</p>	<p>Integrated Resource Plans (IRPs) are planning documents that allow utilities to plan for future needs to meet peak loads and energy obligations for a set period of time, such as 15 years, and they are based on the best information available at the time they are prepared. They are planning documents and are not intended to represent firm commitments or financial decisions about specific future generation resources.</p> <p>AEP has integrated a carbon price in its commodity forecasting as a proxy for future climate regulation. The carbon price begins in 2028 at approximately \$15/metric ton of CO2 emissions, escalating at 3.5% per year on a nominal basis. In the Fast Transition scenario for this report, we used a carbon price beginning at \$30/metric ton, which escalated 3.5% per year on a nominal basis.</p>

	<p>For more information, please visit: <a href="https://www.aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf">https://www.aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</a></p>
<p>Partnering with governments on technology development</p>	<p>Partnership Examples: AEP was instrumental in establishing the National Electric Highway Coalition (NEHC). The NEHC is a collaborative of more than 60 U.S. power companies serving more than 120 million customers across 48 states plus Washington, D.C. The members of NEHC are committed to providing EV fast-charging stations that will allow the public to drive EVs with confidence along major U.S. travel corridors by the end of 2023.</p> <p>We are looking for opportunities to support our local communities to electrify their fleet. As part of a New Source Review settlement with the EPA, Appalachian Power awarded \$2.1 million in grants to five school systems across southwest and central Virginia toward the purchase of nine energy-efficient buses powered by electricity. AEP Ohio and I&amp;M plan to make similar awards in 2022. Electric school buses are quieter and less expensive to maintain and operate. In addition, they reduce children's exposure to harmful diesel exhaust fumes and particles.</p> <p>In 2022, AEP received the Edison Electric Institute Advocacy Excellence Award, recognizing AEP's efforts to expand broadband access throughout Virginia and West Virginia. In December 2021, the first of these projects came to fruition when the Elk Creek Volunteer Fire Department became the first customer to receive high-speed internet service in rural Grayson County, Virginia. More than 6,000 customers identified in the Grayson County project area are expected to gain access to broadband over the next year. Construction is also underway in Logan and Mingo counties that will make broadband access available to more than 15,000 unserved customers in West Virginia.</p> <p>For more information, please visit: <a href="https://aepsustainability.com/social/broadband-accessibility/">https://aepsustainability.com/social/broadband-accessibility/</a> <a href="https://aepsustainability.com/social/customer-experience/">https://aepsustainability.com/social/customer-experience/</a> <a href="https://aepsustainability.com/decarbonization/electrification/">https://aepsustainability.com/decarbonization/electrification/</a></p>
<p>Dedicated budget for energy efficiency</p>	<p>Each of AEP's subsidiaries (where energy efficiency programs are in place) has a budget dedicated to energy efficiency programs in the company's jurisdiction. Energy efficiency goals are submitted annually and progress is updated quarterly. Annual demand reduction, conservation and avoided CO2 emissions from energy efficiency are reported in AEP's Corporate Sustainability Report.</p> <p>Today, we offer customers 150+ programs across nearly all of our 11-state service territory. In 2020, our energy efficiency programs reduced energy</p>

	<p>usage by more than 406 million KWh and avoided more than 204 US tons of CO2 emissions.</p> <p>Energy Efficiency/Demand Response:                  As we introduce more renewable generation into our energy mix, the need to invest in energy storage grows. Energy storage can help smooth the flow of power as generation from intermittent resources such as wind and solar varies over time. Storage technology supports local reliability and demand response for our customers, and it is integrated into our distribution and resource planning processes. AEP's competitive businesses executed and finalized two energy storage projects with the City of Martinsville, Virginia, and South River, New Jersey. Each project consists of Li-Ion batteries that will directly serve customers to reduce their electric costs during peak load events. The projects will be placed into service in the first half of 2022.</p> <p>Case Study:                  AEP's energy efficiency programs and efforts have been recognized among some of the best in the industry for several years. In 2022, the U.S. Environmental Protection Agency (EPA) announced its ENERGY STAR® Partner of the Year awards for businesses and organizations that have made outstanding contributions to protecting the environment through superior energy efficiency achievements. AEP Texas, Public Service Company of Oklahoma and Southwestern Electric Power Company (SWEPCO – Arkansas) were named ENERGY STAR Partner of the Year – Sustained Excellence winners. SWEPCO (Louisiana and Texas) was recognized for the ENERGY STAR Partner of the Year – Energy Efficiency Program Delivery award, and Appalachian Power received the Award for Excellence in ENERGY STAR Marketing.</p> <p>For more information, please visit:  <a href="http://www.aepsustainability.com/social/customer-experience/">http://www.aepsustainability.com/social/customer-experience/</a></p>
<p>Financial optimization calculations</p>	<p>All AEP investments are optimized using a carbon price and other assumptions related to regulatory risk, including those presented by carbon.</p> <p>In 2020, we conducted a climate scenario analysis. AEP's analysis included a Business as Usual (BAU) and a Fast Transition Scenario. Both scenarios included a carbon tax to influence the outcome. The BAU scenario employed a CO2 dispatch burden on all fossil generating units that escalates 3.5% per year from \$15 per metric ton starting in 2028. The CO2 burden was increased to \$30 per metric ton in the Fast Transition scenario, this resulted in uptick in power prices. AEP has also begun using a \$40 carbon price during our IRP process to accurately portray potential future events.</p>

	<p>At AEP, our ability to execute our strategy and the pace of change are contingent upon securing support from regulators. We have a responsibility to provide reliable, affordable electricity to our customers, but how we do it is changing. As we invest in the clean energy transition, we are also investing in grid modernization to empower customers with more choices and greater control over their energy use. Our clean energy transition plan is as critical to enabling economic growth in our service territory as it is to reducing our carbon footprint.</p> <p>The increased stakeholder demand for clean energy combined with approximately 8 GW of planned retirements and expiring purchase power agreements between 2022-2030, creates economic energy opportunities and drives renewable energy growth. By 2030, our plans indicate an opportunity to add approximately 16 GW of regulated renewable energy, which will represent approximately half of our generating capacity.</p> <p>Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation.</p> <p>For more information, please visit: <a href="http://www.aepsustainability.com/decarbonization/strategy/">http://www.aepsustainability.com/decarbonization/strategy/</a></p>
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## C4.5

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

Yes

## C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.**

---

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Green Bond Principles (ICMA)

**Type of product(s) or service(s)**

Power

Onshore wind

### **Description of product(s) or service(s)**

in 2021, AEP has developed a Sustainable Finance Framework under which any AEP subsidiary will be able to issue Green, Social and Sustainability Bonds, Loans, or other financial instruments such as Letters of Credit in relation to the Green and Social Use of Proceeds. This Framework was developed in alignment with the ICMA Green Bond Principles (GBP), 2021, the LSTA Green Loan Principles (GLP), the ICMA Social Bond Principles (SBP), 2021 and the ICMA Sustainability Bond Guidelines (SBG), 2021.

### **MANAGEMENT OF PROCEEDS**

An amount equivalent to the net proceeds of each Financing Instrument will be earmarked for allocation against the Portfolio of Eligible Projects. The net proceeds from the Financing Instruments will be tracked internally. Eligible Projects are those that fit criteria outlined by this Framework and have been disbursed in the last 24 months prior to the issuance date or expenditures in the following 24 months .

### **Case Study:**

In Oklahoma, the North Central Energy Facilities (NCEF) began commercial operation in 2021. These wind farms provide 1,484 MW of clean energy to customers of Public Service Company of Oklahoma and the Southwestern Electric Power Company, which is estimated to save them approximately \$3 billion in electricity costs over 30 years. \$1.4 billion was provided by AEP's Sustainability Bonds to support NCEF.

AEP's Sustainable Finance Framework:

<https://www.aep.com/assets/docs/investors/esg/AEPSustainableFinanceFramework.pdf>

### **Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

### **Methodology used to calculate avoided emissions**

Other, please specify

This Framework has been developed in alignment with the ICMA Green Bond Principles ("GBP"), 2021, the LSTA Green Loan Principles (GLP), the ICMA Social Bond Principles ("SBP"), 2021 and the ICMA Sustainability Bond Guidelines ("SBG"), 2021.

### **Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

### **Functional unit used**

### **Reference product/service or baseline scenario used**

PWC conducted a Management Assertion of American Electric Power Company, Inc. (AEP) that the total net proceeds of \$1,432.9 million from the following issuances was disbursed by AEP or any of its issuing subsidiaries during the period from August 13,

2019 through March 31, 2022 to finance or refinance, (whole/part) new/existing Eligible Projects as included in the AEP Eligible Projects Disbursement Report.

Link: <https://www.aep.com/assets/docs/investors/esg/AEPGreenBondsReport5-20-22.pdf>

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

**Explain your calculation of avoided emissions, including any assumptions**

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

---

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Other, please specify

Renewable Energy

**Type of product(s) or service(s)**

Power

Solar PV

**Description of product(s) or service(s)**

From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital. This includes investing \$8.2 billion in regulated renewable generation.

State and federal energy policies, are key drivers of our clean energy strategy. Our operating companies are seeking regulatory approval or issuing requests for proposals to add more renewable generation to our portfolio. Appalachian Power has petitioned regulators to add nearly 500 MW of solar and wind power to the company's renewables portfolio by 2025. This is part of its long-range plan to meet the renewable energy targets established by Virginia's Clean Economy Act (requiring Appalachian Power to file an annual plan with the Virginia State Corporation Commission outlining plans to meet mandates toward 100 percent carbon-free status by 2050.)

Indiana Michigan Power intends to expand its clean energy generation as part of its

Powering the Next Tomorrow plan, calling for the addition of 2,100 MW of wind and solar energy generation by 2028. This plan was submitted to state regulatory commissions in both Indiana and Michigan in 2022. I&M expects up to 1,300 MWs of new renewable resources to be online as early as the end of 2024.

Public Service Company of Oklahoma is also seeking regulatory approval for renewable resources, including ~2,800 MW of wind and 1,350 MW of solar resources with optional battery storage systems.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

**Functional unit used**

**Reference product/service or baseline scenario used**

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

**Explain your calculation of avoided emissions, including any assumptions**

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

## **C-EU4.6**

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

AEP actively manages its facilities to ensure that any air emissions are limited, particularly in the case of methane which is a source of fuel for our natural gas-fueled facilities. As this fuel carries a cost, we make every effort to ensure that it is 100% combusted in the electric

generation process to provide value to our customers. AEP estimates that direct methane emissions from natural gas infrastructure are negligible.

AEP is also committed to doing our part to operate more efficiently while reducing our carbon footprint through ongoing reduction of energy consumption within our operations and facilities. In 2021, we reduced our kilowatt-hour (kWh) usage, normalized for weather, by approximately 38%, compared with the 2007 baseline, in nearly 215 buildings. This resulted in approximately \$7.9 million in cost savings. Energy consumption reductions are mostly achieved through equipment investments, such as new lighting, heating and cooling systems, control systems installations, and employee education. More recently, however, the shift to remote work and a decrease in the number of AEP facilities also contributed to the reduction in energy usage at some of our facilities.

We have made significant long-term investments in environmental controls to reduce the environmental impact of how we generate electricity. From 2000 through 2021, we invested approximately \$9.1 billion in environmental controls, primarily related to the Clean Air Act. These investments subsequently resulted in significant emissions reductions. Since 1990, we have reduced our annual emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>) by approximately 98% and 95%, respectively. Since 2001, we have reduced our annual mercury emissions by approximately 97%. Additional information about mercury is located within the [Toxics Release Inventory program](https://www.aep.com/requiredpostings/tri/): <https://www.aep.com/requiredpostings/tri/>

AEP has 18 LEED-certified company facilities across our service territory, demonstrating our commitment to reducing carbon emissions, improving efficiency, saving money and creating healthy workspaces for our employees. In addition, since 2016, we have installed a total of 275 electric vehicle (EV) charging stations at several of our facilities across our service territory, making charging easy, accessible and efficient for our employees.

## 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



## 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?	
Row 1	No

## C5.2

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

### Scope 1

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

167,000,000

**Comment**

### Scope 2 (location-based)

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

### Scope 2 (market-based)

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

**Scope 3 category 1: Purchased goods and services**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

**Scope 3 category 2: Capital goods**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

**Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

**Scope 3 category 4: Upstream transportation and distribution**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

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

**Comment**

Was not reported in base year.

**Scope 3 category 5: Waste generated in operations**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

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

**Comment**

Was not reported in base year.

**Scope 3 category 6: Business travel**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

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

**Comment**

Was not reported in base year.

**Scope 3 category 7: Employee commuting**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

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

**Comment**

Was not reported in base year.

**Scope 3 category 8: Upstream leased assets**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

**Scope 3 category 9: Downstream transportation and distribution**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

**Scope 3 category 10: Processing of sold products**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

**Scope 3 category 11: Use of sold products**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

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

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

### **Scope 3 category 13: Downstream leased assets**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

### **Scope 3 category 14: Franchises**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

Was not reported in base year.

### **Scope 3 category 15: Investments**

---

**Base year start**

January 1, 2000

**Base year end**

December 31, 2000

### **Base year emissions (metric tons CO<sub>2</sub>e)**

#### **Comment**

Was not reported in base year.

### **Scope 3: Other (upstream)**

---

#### **Base year start**

January 1, 2000

#### **Base year end**

December 31, 2000

### **Base year emissions (metric tons CO<sub>2</sub>e)**

#### **Comment**

Was not reported in base year.

### **Scope 3: Other (downstream)**

---

#### **Base year start**

January 1, 2000

#### **Base year end**

December 31, 2000

### **Base year emissions (metric tons CO<sub>2</sub>e)**

#### **Comment**

Was not reported in base year.

## **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

## **C6. Emissions data**

### **C6.1**

#### **(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

## Reporting year

---

### Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)

56,401,080

### Comment

EPA Continuous Emission Monitoring System (CEMS) Relative Accuracy Tests Audits (RATA) procedures certify monitors to within +/- 10%. These emissions are shared with US EPA and thus are verified to comply with federally enforceable emission limits.

## 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

Location Based Uncertainty:

Business Unit (BU) energy consumption to support operations and energy consumption as a result of line losses are from the FERC Form 1 filing and are considered high quality. These items are totalled and eGRID factors are used to determine BU emissions. If BU is a self-generator and its generation exceeds the losses - then losses are part of the BU Scope 1 emissions and are not included in the Scope 2 emissions. AEP uses the most recent EPA's eGRID regional emission rates available in scope emission calculations.

Market Based Uncertainty:

Business Unit (BU) energy consumption to support operations and energy consumption as a result of line losses are from the FERC Form 1 filing and are considered high quality. The company is working to develop complete market based rates for each BU. Known emission factors are applied to their associated energy and the balance of energy uses the regional eGRID averages. If BU is a self generator and its generation exceeds the losses - then losses are part of the BU Scope 1 emissions and are not included in the Scope 2 emissions. AEP uses the most recent EPA eGRID regional emission rates available in scope emission calculations.

## C6.3

### (C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?

#### Reporting year

---

**Scope 2, location-based**

318,776

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

323,580

**Comment**

Scope 2 emissions are the result of purchased power being consumed internally. Line losses are only included if a business unit is not a self generator. For BU's that are self generators- line losses are included as part of Scope 1.

## C6.4

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

Yes

## C6.4a

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

---

**Source**

Kerosene fueled torpedo heaters (mobile) and emergency equipment

**Relevance of Scope 1 emissions from this source**

Emissions are not relevant

**Relevance of location-based Scope 2 emissions from this source**

Emissions are not relevant

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

Emissions are not relevant

**Explain why this source is excluded**

EPA's 40 CFR Part 98 does not require that CO<sub>2</sub>e emissions be reported for mobile torpedo heaters. AEP emissions for these sources have been estimated at less than 2,000 metric tons. Emergency equipment is exempt from eGGRT GHG reporting.

**Estimated percentage of total Scope 1+2 emissions this excluded source represents**

0

**Explain how you estimated the percentage of emissions this excluded source represents**



The equipment named above typically only operates a couple hours a month for test runs and are small/miniscule in scale compared to a power plant emissions. Their emissions are a very small fraction of an electric utilities total scope emissions.

## 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**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

595,845

**Emissions calculation methodology**

Supplier-specific method

Other, please specify

Estimated transportation adder

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

10

**Please explain**

Consumable data related to the power generation business are available. In discussions with the purchasing department, it was determined that AEP does not currently have a way to collect meaningful corporate data on goods and services other than power generation consumables.

### Capital goods

---

**Evaluation status**

Not evaluated

**Please explain**

No meaningful corporate data collected on capital good purchases.

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

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

34,962,336

**Emissions calculation methodology**

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

50

**Please explain**

Qty of fuel consumed combined with lifecycle production emissions factors from Worldwatch Institute to estimate emissions from Production and Transportation of fuels. Purchased and resold energy had eGRID regional factors applied to estimate emissions

**Upstream transportation and distribution**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Fuel and material transportation is already included in the life cycle analysis used for other category.

**Waste generated in operations**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

0

**Emissions calculation methodology**

Other, please specify  
Estimated using EPA WARM Model

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

0

**Please explain**

A breakdown of AEP waste streams was used in EPA's WARM model. The value is actually negative (-1,405,050 metric tons CO<sub>2</sub>e) due to recycling efforts (particularly metal recycling) and the extensive beneficial reuse of Coal Combustion Products (ash).

**Business travel**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

6,215

**Emissions calculation methodology**

Supplier-specific method

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

100

**Please explain**

Internal records of business travel were kept for air travel, rental cars, hotel stays, employee vehicle miles for business travel, and corporate jets. Travel agency emission numbers were used when supplied. All business travel emissions are based at least in part on value partner supplied data.

**Employee commuting**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

25,081

**Emissions calculation methodology**

Other, please specify  
See explanation below

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

0

**Please explain**

Commuting data was based on details from a 2013 study. Number of employees was updated and that number was adjusted for the estimate of workforce that was working remote for the majority of the reporting year. Internal data was used to determine average distance travelled per employee. Internal data used to estimate number of employees working remotely.

**Upstream leased assets**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Any meaningful leased equipment fuel consumption is captured by corporate fuel purchase records in scope 1.

**Downstream transportation and distribution**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

The transportation and distribution of electricity (Transmission & Distribution losses) is already captured by scope 1.

## Processing of sold products

---

### Evaluation status

Not relevant, explanation provided

### Please explain

Emissions from sold energy are captured in Scope 1 and Scope 3 category 3.

## Use of sold products

---

### Evaluation status

Not relevant, explanation provided

### Please explain

The use of electric energy does not cause any further GHG emissions.

## End of life treatment of sold products

---

### Evaluation status

Not relevant, explanation provided

### Please explain

Electricity requires no end of life treatment.

## Downstream leased assets

---

### Evaluation status

Not relevant, explanation provided

### Please explain

Any meaningful leased equipment fuel consumption is captured by corporate fuel purchase records in scope 1.

## Franchises

---

### Evaluation status

Not relevant, explanation provided

### Please explain

No franchises

## Investments

---

### Evaluation status

Not evaluated

### Please explain

## Other (upstream)

---

### Evaluation status

Not evaluated

**Please explain**

The above scopes and categories are believed to capture all relevant emission sources.

**Other (downstream)**

---

**Evaluation status**

Not evaluated

**Please explain**

## 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 CO<sub>2</sub>e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

---

**Intensity figure**

0.00337819

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO<sub>2</sub>e)**

56,719,856

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

16,790,000,000

**Scope 2 figure used**

Location-based

**% change from previous year**

14.53

**Direction of change**

Increased

**Reason for change**

Emissions and emission intensity factors are driven by unit availability and energy market selections. In 2021, AEP's system generation increased ~5% and CO2 emissions were up ~13%. Generation from coal assets was up ~17%. and the CO2 emissions from those same units increased ~13%. Much of this a result of fuel prices: coal versus gas \$/mmbtu.

**Intensity figure**

0.5575

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

56,719,856

**Metric denominator**

megawatt hour generated (MWh)

**Metric denominator: Unit total**

101,731,000

**Scope 2 figure used**

Location-based

**% change from previous year**

**Direction of change**

**Reason for change**

No increase or decrease reported above since this is the first year this metric was used.

## 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	55,612,321	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	163,629	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	225,739	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	399,391	IPCC Fifth Assessment Report (AR5 – 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			17	399,391	
Combustion (Electric utilities)	55,483,438	5,824		55,871,693	
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)	128,883	20		129,996	
Emissions not elsewhere classified	0	0	0	0	

## 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	56,401,080

## C7.3

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

By activity

### C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Stationary Combustion	55,871,693
Mobile Sources	129,996
Fugitive Emissions	399,391

### 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	Comment
Electric utility activities	55,890,519	Added approximately 18,826 tons CO2e (Diesel usage of mobile sources associated with generation operations) to the Stationary Combustion. No fugitive emissions are associated with generation activities

### 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				



Other emissions reduction activities				
Divestment				
Acquisitions				
Mergers				
Change in output	6,879,700	Increased	12	Increase from stationary sources from prior year
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other	92,000	Decreased	0	Change due to reduction in total purchased power combined with reduction in all EPA eGRID regional factors

## C7.9b

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

Location-based

## C8. Energy

### C8.1

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

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

### C8.2

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

Indicate whether your organization 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	186,165,418	186,165,418
Consumption of purchased or acquired electricity		0	0	0
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		0	186,165,418	186,165,418

## 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

**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

**Comment**

n/a

### Other biomass

---

#### 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

**Comment**

n/a

### Other renewable fuels (e.g. renewable hydrogen)

---

#### 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

**Comment**

n/a

**Coal**

---

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

153,479,594

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

153,479,594

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

0

**Comment**

Value calculated using specified fuel total mmbtu's and applying CDP HHV to MWh methodology factor of 0.29307

**Oil**

---

**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

**Comment**

n/a

**Gas**

---

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

32,685,824

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

32,685,824

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

0

**Comment**

Value calculated using specified fuel total mmbtu's and applying CDP HHV to MWh methodology factor of 0.29307

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

---

**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

**Comment**

n/a

**Total fuel**

---

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

186,165,418

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

186,165,418

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

0

**Comment**

Total of individual fuels specified above. MWH are calculated using mmbtu's and CDP HHV to MWh Methodology factor of 0.29307.

## 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)**

12,231

**Gross electricity generation (GWh)**

50,789

**Net electricity generation (GWh)**

46,858

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

48,270,033

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

1,030.1

**Comment**

Emissions Intensity based on net GWh

### Lignite

---

**Nameplate capacity (MW)**

837

**Gross electricity generation (GWh)**

2,980

**Net electricity generation (GWh)**

2,744

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

3,181,842

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

1,159.7

**Comment**

Emissions Intensity based on net GWh

### Oil

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

**Gas**

---

**Nameplate capacity (MW)**

7,615

**Gross electricity generation (GWh)**

14,963

**Net electricity generation (GWh)**

13,041

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

4,949,206

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

379.5

**Comment**

Emissions Intensity based on net GWh

**Sustainable biomass**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e 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)**

2,296

**Gross electricity generation (GWh)**

17,961

**Net electricity generation (GWh)**

17,961



**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e 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 CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e 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 CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

**Hydropower**

---

**Nameplate capacity (MW)**

933

**Gross electricity generation (GWh)**

1,000

**Net electricity generation (GWh)**

1,000

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

0

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

0

**Comment**

**Wind**

---

**Nameplate capacity (MW)**

4,819

**Gross electricity generation (GWh)**

13,614

**Net electricity generation (GWh)**

13,614

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

0

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

0

**Comment**

**Solar**

---

**Nameplate capacity (MW)**

392

**Gross electricity generation (GWh)**

425

**Net electricity generation (GWh)**

425

**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 CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e 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 CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e 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 CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

**Total**

---

**Nameplate capacity (MW)**

29,123

**Gross electricity generation (GWh)**

101,731

**Net electricity generation (GWh)**

95,643

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

56,401,081

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

589.7

**Comment**

Emissions Intensity based on net GWh

## 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)**

6,144,143

**Consumption of heat, steam, and cooling (MWh)**

0

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

6,144,143

## 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**

Distribution (low voltage)

**Annual load (GWh)**

148,614

**Annual energy losses (% of annual load)**

**Scope where emissions from energy losses are accounted for**

**Emissions from energy losses (metric tons CO<sub>2</sub>e)**

**Length of network (km)**

356,063

**Number of connections**

**Area covered (km<sup>2</sup>)**

518,431

**Comment**

---

**Country/Region**

United States of America

**Voltage level**

Transmission (high voltage)

**Annual load (GWh)**

193,010

**Annual energy losses (% of annual load)**

**Scope where emissions from energy losses are accounted for**

**Emissions from energy losses (metric tons CO2e)**

**Length of network (km)**

64,374

**Number of connections**

**Area covered (km<sup>2</sup>)**

518,431

**Comment**

Some distribution losses maybe embedded

## C9. Additional metrics

### C9.1

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

---

**Description**

Waste

**Metric value**

9,794,061

**Metric numerator**

Pounds of waste reported in 2022 TRI Reporting

**Metric denominator (intensity metric only)**

**% change from previous year**

35.6

**Direction of change**

Increased

### **Please explain**

We report through the Toxic Release Inventory (TRI) program, part of the Emergency Planning and Community Right-to-Know Act (EPCRA). EPCRA requires companies with 10 or more employees, in certain industries, to collect and publicly disclose information about how they manufacture, process, or use any of nearly 650 chemicals on a special list developed by the U.S. EPA. Read more on our TRI website:  
<https://www.aep.com/requiredpostings/tri>

The Toxics Release Inventory (TRI) program is part of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). EPCRA requires companies with 10 or more employees, in certain industries, to collect and publicly disclose information about how they manufacture, process or use any of nearly 650 chemicals on a special list developed by the U.S. EPA. Out of the 650 chemicals on the TRI list, AEP reported 25 in 2017.

Companies are required to report the amount of these chemicals they manufacture or process when that amount exceeds 25,000 pounds a year. For most chemicals that are simply used, such as chemicals purchased to clean a facility, the amount required to trigger a report is 10,000 pounds or more in a year. A few chemicals have much lower reporting thresholds. The U.S. EPA establishes these numbers. The report is not related in any way to health or environmental standards.

In general, coal-fired power plants need to report on very few of the 650 chemicals on the U.S. EPA's list. However, because of the nature of our industry and the amount of coal we consume, large coal-fired electric power plants will be listed at or near the top of rankings, when compared with other reporting industries, in terms of number of pounds reported by a single facility. Although the chemicals reported by AEP are released in large amounts, they generally rank low in toxicity.

Link to Required Internet Postings Webpage: <https://www.aep.com/requiredpostings/tri>

Note: Many factors go into AEP's amount of waste generated. The effects of Covid-19 played a major role in generation needs and therefore, waste created.

---

### **Description**

Energy usage

### **Metric value**

104,334,588

### **Metric numerator**

AEP's Facility Energy Consumption measured in KWh

### **Metric denominator (intensity metric only)**

**% change from previous year**

17

**Direction of change**

Decreased

**Please explain**

AEP is also committed to doing our part to operate more efficiently while reducing our carbon footprint through ongoing reduction of energy consumption within our operations. In 2021, we reduced our kilowatt-hour (kWh) usage, normalized for weather, by approximately 38%, compared with the 2007 baseline, in nearly 215 buildings. This resulted in approximately \$7.9 million in cost savings. Energy consumption reductions are mostly achieved through equipment investments, such as new lighting, heating and cooling systems, control systems installations, and employee education. More recently, however, the shift to remote work and a decrease in the number of AEP facilities also contributed to the reduction in energy usage at some of our facilities.

Today, we have 18 LEED-certified company facilities across our service territory, demonstrating our commitment to reducing carbon emissions, improving efficiency, saving money and creating healthy workspaces for our employees. In addition, since 2016, we have installed a total of 275 electric vehicle (EV) charging stations at several of our facilities across our service territory, making charging easy and efficient for our employees.

## 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)**

446,151

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

16.7

**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**

19

**Explain your CAPEX calculations, including any assumptions**

We continue to work toward achieving our goal to reduce CO2 emissions 80% by 2030. Beyond that, the path to net-zero emissions by 2050 is less certain. While we believe technology and alternative resources will be a major factor in achieving a net-zero economy, we currently cannot provide a precise path for getting to net-zero between



2030 and 2050. AEP's goals and our strategy for transitioning are driven by our integrated resource plans, which are overseen by state regulators. Increasingly, we have seen renewables become more cost competitive, enabling AEP to invest in economical clean energy resources that also reduce our carbon footprint.

Part of the conversation we have with some stakeholders is the question of when AEP will be fully out of coal-fueled generation. In total, from 2011 to 2021, AEP has retired or sold more than 13,700 MW of coal-fueled generation, and we have plans to retire another 5,300 MW between 2022 and 2028. That will leave five remaining coal plants on our system totaling 6,500 MW. The timing for full retirement of coal-fueled generation assets will be based on a combination of factors, including expected investments for operations, overall economics, useful asset life and depreciation rates, and reliability factors highlighted in our integrated resource plans. In addition, we rely on our partnerships with our state regulators and local communities to assess the economics, timing and impacts.

Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation. Additionally, we eliminated growth capital in the Generation & Marketing segment as we have begun the process to sell some or all of our unregulated renewable assets. This will provide additional capital to invest in our core regulated businesses to support rebuilding and reinforcing the grid and enhancing service for customers. By 2030, our resource plans indicate an opportunity to add approximately 16 GW of regulated renewable energy, which will represent approximately half of our generating capacity.

Link: <https://aepsustainability.com/decarbonization/strategy/>

## Lignite

---

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

9,481

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

0.35

**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**

1

**Explain your CAPEX calculations, including any assumptions**

Link to AEP's Decarbonization Strategy:

<https://aepsustainability.com/decarbonization/strategy/>

## 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**

AEP Does not own generation from Oil

## Gas

---

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

240,498

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

8.98

**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**

13

**Explain your CAPEX calculations, including any assumptions**

Link to AEP's Decarbonization Strategy:

<https://aepsustainability.com/decarbonization/strategy/>

## 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**

AEP Does not own generation from biomass

**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**

AEP Does not own generation from biomass

**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**

AEP does not own Generation from Waste

**Nuclear**

---

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

80,793

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

3.02

**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**

5

### **Explain your CAPEX calculations, including any assumptions**

We continue to work toward our goal to reduce CO<sub>2</sub> emissions 80% by 2030. Beyond that, the path to net-zero emissions by 2050 is less certain. While we believe technology and alternative resources will be a major factor in achieving a net-zero economy, we currently cannot provide a precise path for getting to net-zero between 2030 and 2050. AEP's goals and our strategy for transitioning are driven by our integrated resource plans, which are overseen by state regulators. Increasingly, we have seen renewables become more cost competitive, enabling AEP to invest in economical clean energy resources that also reduce our carbon footprint.

Part of the conversation we have with some stakeholders is the question of when AEP will be fully out of coal-fueled generation. In total, from 2011 to 2021, AEP has retired or sold more than 13,700 MW of coal-fueled generation, and we have plans to retire another 5,300 MW between 2022 and 2028. That will leave five remaining coal plants on our system totaling 6,500 MW. The timing for full retirement of coal-fueled generation assets will be based on a combination of factors, including expected investments for operations, overall economics, useful asset life and depreciation rates, and reliability factors highlighted in our integrated resource plans. In addition, we rely on our partnerships with our state regulators and local communities to assess the economics, timing and impacts.

Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation. Additionally, we eliminated growth capital in the Generation & Marketing segment as we have begun the process to sell some or all of our unregulated renewable assets. This will provide additional capital to invest in our core regulated businesses to support rebuilding and reinforcing the grid and enhancing service for customers. By 2030, our resource plans indicate an opportunity to add approximately 16 GW of regulated renewable energy, which will represent approximately half of our generating capacity.

Link: <https://aepsustainability.com/decarbonization/strategy/>

### **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**

AEP does not own Geothermal Generation

**Hydropower**

---

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

35,868

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

1.34

**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**

1

**Explain your CAPEX calculations, including any assumptions**

We continue to work toward our goal to reduce CO<sub>2</sub> emissions 80% by 2030. Beyond that, the path to net-zero emissions by 2050 is less certain. While we believe technology and alternative resources will be a major factor in achieving a net-zero economy, we currently cannot provide a precise path for getting to net-zero between 2030 and 2050. AEP's goals and our strategy for transitioning are driven by our integrated resource plans, which are overseen by state regulators. Increasingly, we have seen renewables become more cost competitive, enabling AEP to invest in economical clean energy resources that also reduce our carbon footprint.

Part of the conversation we have with some stakeholders is the question of when AEP will be fully out of coal-fueled generation. In total, from 2011 to 2021, AEP has retired or sold more than 13,700 MW of coal-fueled generation, and we have plans to retire another 5,300 MW between 2022 and 2028. That will leave five remaining coal plants on our system totaling 6,500 MW. The timing for full retirement of coal-fueled generation assets will be based on a combination of factors, including expected investments for operations, overall economics, useful asset life and depreciation rates, and reliability factors highlighted in our integrated resource plans. In addition, we rely on our partnerships with our state regulators and local communities to assess the economics, timing and impacts.

Our capital investment strategy is critical in supporting our decarbonization and renewable energy strategy. From 2022 through 2026, AEP plans to invest \$38 billion in capital with an emphasis on transmission, distribution and regulated renewable energy with the ability to shift capital as needed. This includes investing \$8.2 billion in regulated renewable generation. Additionally, we eliminated growth capital in the Generation &

Marketing segment as we have begun the process to sell some or all of our unregulated renewable assets. This will provide additional capital to invest in our core regulated businesses to support rebuilding and reinforcing the grid and enhancing service for customers. By 2030, our resource plans indicate an opportunity to add approximately 16 GW of regulated renewable energy, which will represent approximately half of our generating capacity.

Link: <https://aepsustainability.com/decarbonization/strategy/>

## Wind

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**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**

Included in the "Other renewables" Total

Link to AEP's Decarbonization Strategy :  
<https://aepsustainability.com/decarbonization/strategy/>

## Solar

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**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**

Included in the "Other renewables" Total

Link to AEP's Decarbonization Strategy :  
<https://aepsustainability.com/decarbonization/strategy/>

## Marine

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**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**

AEP does not own Marine Sources

## Fossil-fuel plants fitted with CCS

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**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**

AEP does not own Generation from fossil plants fitted for CCS

## Other renewable (e.g. renewable hydrogen)

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

1,848,134

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

69.02

**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**

60

**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)**

16,862

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

0.63

**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**

1

**Explain your CAPEX calculations, including any assumptions**

Link to AEP's Decarbonization Strategy :

<https://aepsustainability.com/decarbonization/strategy/>

**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
Micro-grid	Fort Sill Energy Center In 2020, Public Service Company of Oklahoma (PSO) signed a 30-year lease with the Army to install an energy resilience project on approximately 81 acres at Fort Sill, located near Lawton, Oklahoma. If approved by the Oklahoma Corporation Commission, the \$117.9 million project will include the construction of 36 megawatts (MW) of gas-fired electric generation and 10.9 MW of solar panels. This project adds more clean energy to the power grid, improves the safety and security of grid modernization efforts, and	115,000,000	0.3	2024



	<p>increases energy supply diversity. The new natural gas units will provide greater resiliency and reduce service disruptions for customers. The project will also help balance the system as PSO integrates more intermittent renewables into its generation fleet.</p>			
<p>Distributed generation</p>	<p>Nuclear energy is one of the most reliable carbon-free sources of electricity. It is a secure energy source that isn't subject to weather conditions. AEP's Donald C. Cook Nuclear Plant in Bridgman, Michigan, can provide 2,296 MW of carbon-free electricity when operating at full power – enough to power 1.5 million homes.</p> <p>We are committed to investing in the long-term viability of this clean energy resource. Cook's two units originally were designed for a 40-year life, but, in 2005, the licenses were extended by 20 years to 2034 for Unit 1 and 2037 for Unit 2. Our climate analysis assumes we will extend the units' licenses again. The Cook Plant is also part of an industrywide, multiyear strategy to transform the industry and ensure the plant's long-term capability.</p> <p>As the grid continues to evolve, we are evaluating ways to optimize how we make, move and deliver electric services. This includes exploring new generation technology such as advanced small modular nuclear reactors (SMRs). SMR technologies are considered a clean, reliable energy</p>			

	<p>opportunity to improve grid resilience and promote energy independence. They offer many advantages, such as a smaller physical footprint and reduced siting restrictions, and they are more affordable compared with larger nuclear plants.</p>			
<p>Other, please specify                  CLEAN ENERGY TECHNOLOGY</p>	<p>We support the continuing development of cleaner energy options through technology advancement. Such advancements will continue to drive favorable economics of existing clean technologies and potentially provide new options in the future. Technologies of interest include:</p> <ul style="list-style-type: none"> <li>Renewable Energy</li> <li>Energy Storage</li> <li>Small Modular Nuclear Reactors (SMRs)</li> <li>Carbon Capture with Utilization or Storage</li> <li>Hydrogen and Other Chemical Energy Carriers</li> <li>Other Technologies (as they are identified)</li> </ul> <p>As we introduce more renewable generation into our energy mix, the need to invest in energy storage grows. Energy storage can help smooth the flow of power as generation from intermittent resources such as wind and solar varies over time. Storage technology supports local reliability and demand response for our customers, and it is integrated into our distribution and resource planning processes.</p> <p>We continue to invest in energy storage projects throughout our</p>			

	<p>service territory. In 2021, AEP Ohio installed a second energy storage system at the City of Athens water treatment plant. The microgrid system uses solar power and a battery energy storage system for maintaining water service in the event of a power outage. AEP Ohio's first energy storage project went into service at the Columbus Zoo in 2020, and another, at the Columbus water booster station, will begin operating in 2022.</p> <p>In addition, AEP continues to operate the 636 MW Smith Mountain hydroelectric facility located near Roanoke, Virginia. The facility leverages a unique pumped-storage system to provide clean electricity for customers, and the two dams and reservoirs provide an abundance of recreational opportunities for the region.</p> <p>We are also investigating and actively pursuing the application of bulk energy storage systems as transmission assets in situations where they can help to cost-effectively maintain or improve the reliability of the transmission system, compared to traditional options of building new transmission lines or stations.</p>			
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**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	<p>AEP is a founding member of the Electric Power Research Institute's Low Carbon Resource Initiative (EPRI), a partnership between utilities, EPRI and the Gas Technology Institute. This five-year research and development project will design pathways for the energy sector to advance low-carbon technologies for large-scale deployment. It's primary focus is on the 2030 – 2050 timeframe. The goal is to enable an understanding of the technologies we can use to facilitate economy-wide decarbonization.</p> <p>This five-year initiative will:</p> <ul style="list-style-type: none"> <li>• Identify development of promising technologies from around the world</li> <li>• Demonstrate and assess the performance of key technologies and processes/identify improvements</li> <li>• Inform key stakeholders and the public about technology options and potential pathways to a low carbon future</li> </ul> <p>In 2019, AEP received an EPRI Technology Transfer Award in recognition of our work on the Integrating Technical Analyses of Climate-Related Science into Company Climate Risk Assessment, Planning, Greenhouse Gas Goal Setting and Outreach project.</p> <p><b>INNOVATIVE R&amp;D PARTNERSHIPS</b></p> <p>Edison Electric Institute– an association that represents all U.S. investor-owned electric companies, providing public policy leadership, strategic business intelligence, and forums.</p> <p>American Clean Power– support companies across the clean power sector in their efforts to provide cost-effective solutions to the climate crisis while creating jobs, spurring investments, and driving high-tech innovation.</p> <p>WIRES Group – a trade association that promotes investment in the North American electric transmission system through development of information, strategic advocacy/innovation in many forums.</p> <p>Free Electrons – Global energy accelerator with the mission to create the future of energy.</p> <p>Global Sustainable Electricity Partnership– a CEO-led alliance of the world's largest electricity companies committed to leading the transformation of the global electricity industry and the energy transition through accelerated clean energy electrification.</p>

	<p>Various Original Equipment Manufacturers – AEP directly works with the OEMs to learn about low-carbon technologies available today and in the near future</p> <p>Partnerships: <a href="http://www.aepsustainability.com/governance/stakeholder-engagement/">http://www.aepsustainability.com/governance/stakeholder-engagement/</a></p> <p>Sustainable finance framework Pg 5: <a href="https://www.aep.com/assets/docs/investors/esg/AEPSustainableFinanceFramework.pdf">https://www.aep.com/assets/docs/investors/esg/AEPSustainableFinanceFramework.pdf</a></p>
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## C-CO9.6a/C-EU9.6a/C-OG9.6a

**(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		≤20%	11,300,000	<p>AEP is a founding member of the Electric Power Research Institute’s Low Carbon Resource Initiative (EPRI), a partnership between utilities, EPRI and the Gas Technology Institute. This five-year research and development project will design pathways for the energy sector to advance low-carbon technologies for large-scale deployment. The goal is to enable an understanding of the technologies we can use to facilitate economy-wide decarbonization.</p> <p>This five-year initiative will:</p> <ul style="list-style-type: none"> <li>• Identify development of promising technologies from around the world</li> <li>• Demonstrate and assess the performance of key technologies and processes/identify improvements</li> <li>• Inform key stakeholders and the public about technology options and potential pathways to a low carbon future</li> </ul>

Infrastructure	Large scale commercial deployment	≤20%		<p>NATIONAL ELECTRIC HIGHWAY COALITION</p> <p>AEP was instrumental in establishing the National Electric Highway Coalition (NEHC). The NEHC is a collaborative of more than 60 U.S. power companies serving more than 120 million customers across 48 states plus Washington, D.C. The members of NEHC are committed to providing EV fast-charging stations that will allow the public to drive EVs with confidence along major U.S. travel corridors by the end of 2023.</p>
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## 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 are waiting for more mature verification standards and/or processes

## 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)?**

Yes

## C11.1a

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

RGGI - ETS

## C11.1b

**(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.**

### RGGI - ETS

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**% of Scope 1 emissions covered by the ETS**

0.01

**% of Scope 2 emissions covered by the ETS**

0

**Period start date**

January 1, 2021

**Period end date**

December 31, 2021

**Allowances allocated**

0

**Allowances purchased**

91,007

**Verified Scope 1 emissions in metric tons CO<sub>2</sub>e**

91,100

**Verified Scope 2 emissions in metric tons CO<sub>2</sub>e**

0

**Details of ownership**

Facilities we own and operate

**Comment**

Zero entered for questions about Scope 2 emissions since there is no compliance obligation for scope 2

## C11.1d

**(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

One state in which AEP operates, Virginia, joined the Regional Greenhouse Gas Initiative beginning in 2021. AEP anticipates complying through the use of purchased emissions allowances and the eventual retirement of its two remaining fossil-fired electric generating units in Virginia in 2026.

## 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.**

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### **Objective for implementing an internal carbon price**

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

### **GHG Scope**

- Scope 1
- Scope 2

### **Application**

In 2020, AEP conducted a climate scenario analysis also using carbon tax. AEP's analysis included a Business as Usual (BAU) and the Fast Transition Scenario. Both included a carbon tax to influence the outcome. The BAU scenario employed a carbon price of \$15 per MT that escalates 3.5% per year starting in 2028. The carbon price was increased to \$30 per MT in the Fast Transition scenario, this resulted in uptick in power prices. This analysis helps to inform our future strategy and Integrated Resource Planning (IRP) process.

The IRP process is a formal process within many of our states, which involves publicly disclosing a plan for future operations and resources. AEP uses an internal price on carbon to appropriately capture the potential future policy and regulatory risk associated from scope 1&2 emissions.



More information in AEP's Climate Analysis:

<https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf>

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

15

**Variance of price(s) used**

Price gradually increases by 3.5 % per year

**Type of internal carbon price**

Shadow price

**Impact & implication**

As we transition to a clean energy economy, climate change impacts are central to our planning an electric power system that is reliable, resilient and affordable. How fast we make the transition and at what cost remain priorities for regulators, public policymakers and the energy industry. AEP's Climate Scenario Analysis has helped us gain a deeper understanding of the transition, physical risks associated with certain climate variables, and the economic and social toll it presents, as well as identify potential pathways forward to achieving our goal of net-zero carbon emissions by 2050. The use of a carbon price within AEP's planning and IRP process has encouraged additional energy efficiency and renewable energy measures while simultaneously reducing the perceived value of fossil fueled resources. As a result of the carbon price and other factors, AEP's direct CO2 emissions from generation sources have decreased by 70% since 2000. Additionally, use of the carbon price has supported a new generation strategy that is solely focused on low- or no-carbon resources.

## C12. Engagement

### C12.1

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

Yes, our suppliers

Yes, our customers/clients

Yes, other partners in the value chain

### C12.1a

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

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**Type of engagement**

Information collection (understanding supplier behavior)

**Details of engagement**

Collect climate change and carbon information at least annually from suppliers

Other, please specify  
Environmental Management Practices

**% of suppliers by number**

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

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

**Rationale for the coverage of your engagement**

AEP participates with Electric Utility Industry Sustainable Supply Chain Alliance in this endeavor to collaborate with other utilities and the community of 200 suppliers who participate in the Information Collection effort.

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

Impact of engagement

- Development of a support structure for future information gathering and measurable success: Learn, Measure, Improve.
- Based on member input and benchmarking data value includes: risk mitigation, supplier engagement, investor requests/scorecards/surveys, and member confidence in the validity of the data in the Assessment.
- Speaking with industry experts some level of verification (in line with what is being proposed here) is expected to be table-stakes in the near term, if not already, for any credible program

**Comment**

2022 is AEP's first year back participating in this program. More information will be provided in 2023 after we have suppliers participate in and annual ESG survey.

## C12.1b

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

---

**Type of engagement & Details of engagement**

Education/information sharing

Run an engagement campaign to education customers about your climate change performance and strategy

**% of customers by number**

100

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

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

Climate change, including decarbonization and our transition to a clean energy future, continues to be the primary issue of interest among the majority of our stakeholders. This complex and multi-dimensional issue touches almost every aspect of our business, which requires us to engage with diverse stakeholders whether virtually, through one-on-one engagement, through town hall meetings, or through formal regulatory processes.

Our ability to execute our strategy and the pace of change are contingent upon securing support from regulators. We have a responsibility to provide reliable, affordable electricity to our customers, but how we do it is changing. As we invest in the clean energy transition, we are also investing in grid modernization to empower customers with more choices and greater control over their energy use. In addition, many of our large customers have clean energy goals and some will not expand or relocate without access to 100% clean energy. Our clean energy transition plan is as critical to enabling economic growth in our service territory as it is to reducing our carbon footprint.

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

Case Study:

In Oklahoma, the North Central Energy Facilities (NCEF) began commercial operation in 2021. The Maverick and Sundance wind farms began generating clean, reliable electricity and reducing bill impacts for customers. A third facility, named Traverse, came online in March 2022. The Traverse project is the largest single wind farm built at one time in North America. Together, the wind farms provide 1,484 MW of clean energy to customers of Public Service Company of Oklahoma and the Southwestern Electric Power Company. These customers are estimated to save ~\$3 billion in electricity costs over 30 years.

State and federal energy policies, as well as industrial and manufacturing customer demand for renewables, are key drivers of our clean energy strategy. Appalachian Power has petitioned regulators to add nearly 500 MW of solar and wind power to the company's renewables portfolio by 2025. This is part of its long-range plan to meet the renewable energy targets established by Virginia's Clean Economy Act. Passed in 2020 by the General Assembly, the law requires Appalachian Power to file an annual plan with the Virginia State Corporation Commission outlining how it will meet key mandates as it reaches 100 percent carbon-free status by 2050.

Indiana Michigan Power (I&M) intends to significantly expand its clean energy generation as part of its Powering the Next Tomorrow plan, calling for the addition of 2,100 MW of wind and solar energy generation by 2028. The Powering the Next Tomorrow plan was submitted to state regulatory commissions in both Indiana and Michigan in 2022. I&M expects up to 1,300 MWs of new renewable resources to be online as early as the end of 2024.

Public Service Company of Oklahoma is seeking regulatory approval for additional

renewable resources, including up to 2,800 MW of wind and 1,350 MW of solar generation resources with optional battery-energy storage systems.

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### **Type of engagement & Details of engagement**

Education/information sharing

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

### **% of customers by number**

100

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

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

AEP has multiple platforms for customer involvement via education/information sharing. They have ability to access information vis our sustainability report, corporate website or Operating company websites.

<https://aepsustainability.com/>

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

<https://www.aep.com/about/aepwebsites>

Many customers are pursuing installations of various Distributed Energy Resources (DERs) such as solar panels and battery storage systems. We support our customers who are evaluating installing their own DERs. We launched a new, easy-to-use solar calculator providing residential customers with accurate and objective information on the benefits and costs of rooftop solar energy. With information from the solar calculator, customers can make fully informed decisions about their options. In only a few minutes, they will better understand their home's solar potential through a personal assessment.

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

Building a Portfolio of Energy Options

AEP's competitive businesses offer the opportunity to integrate end-to-end customer solutions in a rapidly evolving energy marketplace. This includes projects and technologies to decarbonize, improve resilience, advance energy efficiency and provide clean solutions to customers at a competitive price.

Case Study:

As an experienced developer, owner, off-taker and operator of sustainable energy solutions across the U.S., AEP has competitive businesses that serve customers and communities from Hawaii to Vermont. AEP Energy is committed to meeting customers' clean energy needs and in early 2021, announced an agreement with the City of Columbus to pursue and source new renewable power generation to meet their 100% Ohio-based clean energy goal. The "Clean Energy Columbus" program will serve residential and small-business customers as well as provide energy efficiency and

workforce development initiatives to underserved communities in Columbus. The new renewable energy projects will support more than 4,500 jobs in Ohio and support building a diverse and local pipeline into clean energy jobs of the future.

As we introduce more renewable generation into our energy mix, the need to invest in energy storage grows. Energy storage can help smooth the flow of power as generation from intermittent resources such as wind and solar varies over time. Storage technology supports local reliability and demand response for our customers, and it is integrated into our distribution and resource planning processes. AEP's competitive businesses executed and finalized two energy storage projects with the City of Martinsville, Virginia, and South River, New Jersey. Each project consists of Li-Ion batteries that will directly serve customers to reduce their electric costs during peak load events. The projects will be placed into service in the first half of 2022.

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### **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**

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

AEP has multiple platforms for customer involvement via education/information sharing. They have ability to access information vis our sustainability report, corporate website or Operating company websites.

<https://aepsustainability.com/>

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

<https://www.aep.com/about/aepwebsites>

We believe customers should be empowered to make decisions on how to optimize their energy experience. This is why we help customers better understand and manage their energy usage through energy efficiency programs and offerings. Today, AEP provides our customers with access to a variety of energy management tools to help them accomplish these goals. These tools keep our customers informed through proactive energy usage alerts and provide personalized energy efficiency tips and programs. This includes bill comparisons, home and business energy analysis, account information and preferences, and high-bill alerts, empowering customers to make changes in their energy use during the current billing period to keep their monthly electric bill affordable.

Our continued investments in grid modernization, such as smart meter technology,

further enhance our ability to provide customers with energy management tools and programs. Smart meters use secure, two-way wireless communication to measure and record electricity usage and send the information from a customer's meter to AEP. This information gives us the ability to develop and deliver highly personalized solutions, such as high bill alerts.

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

As of January 2022, AEP has deployed smart meter technology to 63% of our customers. Several of our operating companies, including Indiana Michigan Power, plan to have their smart meters fully deployed by year-end.

In addition, AEP offers our customers a robust set of energy efficiency programs to help them manage their energy usage. These programs include a wide variety of home weatherization, lighting, HVAC, and commercial and industrial equipment upgrades and process improvements to get the most value out of their energy usage.

#### Case Study:

AEP's energy efficiency programs and efforts have been recognized among some of the best in the industry for several years. In 2022, the U.S. Environmental Protection Agency (EPA) announced its ENERGY STAR® Partner of the Year awards for businesses and organizations that have made outstanding contributions to protecting the environment through superior energy efficiency achievements. AEP Texas, Public Service Company of Oklahoma and Southwestern Electric Power Company (SWEPCO – Arkansas) were named ENERGY STAR Partner of the Year – Sustained Excellence winners. SWEPCO (Louisiana and Texas) was recognized for the ENERGY STAR Partner of the Year – Energy Efficiency Program Delivery award, and Appalachian Power received the Award for Excellence in ENERGY STAR Marketing.

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### **Type of engagement & Details of engagement**

Collaboration & innovation

Run a campaign to encourage innovation to reduce climate change impacts

#### **% of customers by number**

100

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

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

AEP has multiple platforms for customer involvement via education/information sharing. They have ability to access information vis our sustainability report, corporate website or Operating company websites.

<https://aepsustainability.com/>

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

<https://www.aep.com/about/aepwebsites>

## ELECTRIFYING OUR ECONOMY

Both globally and within the U.S., our economy is moving away from fossil fuel resources to cleaner, less carbon-intensive options. This includes the transportation sector. At the 2021 United Nations Climate Change Conference (COP26), over 100 national governments, cities, states and major businesses signed the Glasgow Declaration on Zero-Emission Cars and Vans to globally end the sale of internal combustion engines by 2040. In the U.S., transportation accounts for the largest share of CO2 emissions. Getting more Americans to switch to electric transportation options by improving access to charging infrastructure is a key component of EV adoption.

Electric utilities play a vital role in decarbonizing and electrifying our economy. According to Edison Electric Institute, over the past decade electric companies have received regulatory approval to invest more than \$3.4 billion to accelerate electric transportation. This includes investing in smart grid technologies to support charging infrastructure, deploying cost-saving customer programs, and influencing public policies to support the continued growth of electric transportation options.

AEP has assembled a cross-functional team to analyze the opportunities in the Bipartisan Infrastructure Law and advocate that our customers receive their share of the federal funds to support the electrification of transportation in our communities. We plan to assist our customers, communities, and stakeholders in navigating these historic opportunities. This strategy will accelerate the goals and objectives AEP has been pursuing for the past five years to facilitate the transition to EVs and give our customers access to the benefits of electric transportation.

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

#### ELECTRIFICATION TRANSPORTATION STRATEGY & INITIATIVES

As the cost of EVs continue to drop, we are seeing adoption rates increase among residential and commercial customers. Several of our commercial customers have set emission reduction goals for their fleet which is critical in supporting EV growth. Our efforts to provide customers with accessible and affordable charging options focuses on working with regulators to create programs that benefit all customers. AEP offers customers low off-peak EV-charging rates, incentives for associated infrastructure upgrades, and consultative services to encourage electrification.

#### Case Studies:

##### I&M Plugged In Program:

Indiana Michigan Power's IM Plugged In program offers incentive payments and discounted overnight rates for EV charging for residents and small commercial customers in both Indiana and Michigan. IM Plugged also has EV charging incentives in both states for commercial and industrial workplace, fleet, and multi-unit dwelling customers planning to install EV chargers. These include rebates for newly installed EV charging ports and or extended revenue credit options for customers that require new dedicated electrical service from I&M for EV chargers.

**ChargePoint:**

Public Service Company of Oklahoma (PSO) is partnering with ChargePoint, an EV charging network. Through this partnership, PSO will identify business customers with EV charging needs and connect them with ChargePoint, which will offer its services to support our customers' needs.

**Local Community Partnerships:**

Appalachian Power awarded \$2.1 million in grants to five school systems across southwest and central Virginia toward the purchase of nine energy-efficient buses powered by electricity. AEP Ohio and I&M plan to make similar awards in 2022.

**NATIONAL ELECTRIC HIGHWAY COALITION**

AEP was instrumental in establishing the National Electric Highway Coalition (NEHC). The NEHC is a collaborative of more than 60 U.S. power companies serving more than 120 million customers across 48 states plus Washington, D.C. The members of NEHC are committed to providing EV fast-charging stations that will allow the public to drive EVs with confidence along major U.S. travel corridors by the end of 2023.

More info: <https://aepsustainability.com/decarbonization/electrification/>

## C12.1d

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

#### **ENGAGEMENT THROUGH DECARBONIZATION**

Climate change continues to be the primary issue of interest among the majority of our stakeholders. This complex issue touches almost every aspect of our business, which requires us to engage with diverse stakeholders whether virtually, through one-on-one engagement, through town hall meetings, or through formal regulatory processes. In 2021, we met with more than two dozen ESG-focused investors where we had the opportunity to discuss our path to a low-carbon energy future. We also continued our engagement with Climate Action 100+.

As our transition to a clean energy future continues, we must consider the social and economic impacts our decarbonization strategy may have within the communities we serve. The decision to retire a coal plant has profound life-changing implications including loss of jobs at the plants and in the broader economy; loss of taxes that support public services, including education; and decreased economic activity that is supported by the plant's ecosystem.

In 2021, AEP and our subsidiary Southwestern Electric Power Company partnered with the Just Transition Fund to plan for and mitigate the impacts of the planned retirement of the Pirkey Power Plant in East Texas. As a result, we formed the Pirkey Transition Task Force, composed of more than two dozen local leaders and community stakeholders, to develop an actionable plan to diversify the local economy. For six months, the Task Force met biweekly to share data, identify resources, raise concerns and questions, vet ideas, envision the future and work collaboratively toward an action plan. Learn more at <https://aepcommunitytransition.com/> Developing and siting infrastructure, such as transmission or renewable facilities, is a complex, technical process that involves balancing disturbance to human, cultural and natural resources



with a community's need for reliable electricity. At AEP, we're dedicated to meaningful engagement with all customers and communities to ensure fair treatment and equitable decision-making. In 2021, we developed an [Environmental and Social Justice Policy](#) that reinforces our commitment to consider environmental and social impacts when developing new infrastructure, transitioning our existing generation fleet, or deploying new programs, services and technologies. This includes listening, learning and seeking opportunities to partner with our stakeholders, to incorporate environmental and social justice into our business strategy. Our team of specialists is focused on transmission right-of-way acquisition, siting and community outreach and is dedicated to avoiding or minimizing impacts to people and the environment to the greatest extent possible. In 2021, the Transmission Right-of-Way team logged 98,850 interactions with landowners and acquired nearly 4,100 easements, securing landowner agreements more than 99% of the time. The Project Outreach team also hosted a total of 46 virtual or in-person open houses. Open houses, whether traditional or virtual, serve as an excellent opportunity for landowners and members of the community to learn about the project need and benefits, timeline, right-of-way practices and construction process and to view interactive maps.

#### **INNOVATIVE PARTNERSHIPS**

We collaborate with industry trade organizations, technology experts, developers, start-ups, universities and consortiums to influence policy, conduct research and co-develop technologies that are not currently available today. Partnerships:

- **Electric Power Research Institute**— an independent, non-profit energy research and development organization.
- **Edison Electric Institute** – an association that represents all U.S. investor-owned electric companies, providing public policy leadership, strategic business intelligence, and forums.
- **American Clean Power**— support companies across the clean power sector in their efforts to provide cost-effective solutions to the climate crisis while creating jobs, spurring massive investment in the U.S. economy, and driving high-tech innovation.
- **WIRES Group** – a trade association that promotes investment in the North American electric transmission system through development of information, advocacy, and innovation in regulatory, policy making, industry, and education forums.
- **Free Electrons** – a global energy accelerator with the mission to create the future of energy.
- **Global Sustainable Electricity Partnership**— a CEO-led alliance of the world's largest electricity companies committed to leading the transformation of the global electricity industry and the energy transition through accelerated clean energy electrification.
- **Various Original Equipment Manufacturers** – AEP works with the OEMs to learn about technologies that are commercially available today and what will be available in the near future, especially relating to low-carbon technologies.

<https://aepsustainability.com/governance/stakeholder-engagement/>

## **C12.2**

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

No, but we 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 directly with policy makers

Yes, we engage indirectly through trade associations

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

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

AEP routinely engages regulators and policymakers both directly and indirectly through trade associations and other collaborative groups. Engagement on these issues is internally coordinated through our Federal Affairs department as well as Operating Company leader to assure policy alignment with respect to AEP's climate goals as well as overall business strategy.

## C12.3a

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?**

**Focus of policy, law, or regulation that may impact the climate**

Emissions trading schemes

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

AEP routinely engages policy makers related to emissions trading program development. At this time, there is not a specific policy, law or regulation to specifically point to as being particularly relevant.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Undecided

**Description of engagement with policy makers**

High level discussion have occurred related to potential program design elements and what AEP may support or oppose.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

---

**Focus of policy, law, or regulation that may impact the climate**

Carbon tax

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

AEP routinely engages policy makers related to carbon development. At this time, there is not a specific policy, law or regulation to specifically point to as being particularly relevant.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Undecided

**Description of engagement with policy makers**

High level discussion have occurred related to potential program design elements and what AEP may support or oppose.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

**Focus of policy, law, or regulation that may impact the climate**

Subsidies for renewable energy projects

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

AEP has been publicly supportive of extending tax credits for renewable energy through the Build Back Better proposal or similar legislation.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

AEP has contacted policy makers to express support for extending renewable subsidies.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

---

**Focus of policy, law, or regulation that may impact the climate**

Mandatory climate-related reporting

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Proposed SEC Rule on Climate Disclosure

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with major exceptions

**Description of engagement with policy makers**

AEP engaged with different trade organization to offer comments on the proposed rule on SEC climate disclosure.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

AEP has some concern with the broad scope of the rule, the level of detail required and the timelines associated with new disclosures as well as the annual filing date.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

## C12.3b

**(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.**

---

**Trade association**

Edison Electric Institute (EII)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

EEI does not have specific position on climate change per se that is relevant in a specific policy context but will weigh in on specific climate related issues as relevant.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

US Chamber of Commerce

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We have already influenced them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The Chamber does not have specific position on climate change per se that is relevant in a specific policy context but will weigh in on specific climate related issues as relevant.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

---

**Trade association**

Business Roundtable

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We have already influenced them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The Business Roundtable does not have specific position on climate change per se that is relevant in a specific policy context but will weigh in on specific climate related issues as relevant.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

## 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**

Research organization

**State the organization to which you provided funding**

Electric Power Research Institute Low Carbon Resource Initiative (EPRI LCRI)

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

1,000,000

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

To further advance these technologies, AEP committed \$5 million to the Low Carbon Resource Initiative (LCRI), which is a collaborative low carbon R&D effort lead by EPRI and the Gas Technology Institute. This 5-year effort will look at opportunities around carbon capture and storage, hydrogen production and electrification among other low carbon technologies. This initiative is focused on advancing technologies and new resources during the 2030-2050 timeframe.

Link to LCRI: <https://www.epri.com/lcric>

**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 sustainability report

**Status**

Complete

**Attach the document**

 2022 AEP Sustainability Report.pdf

**Page/Section reference**

Decarbonization and Environmental sections: pages 30- 59

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

AEP's Annual Corporate Sustainability Report.

2022 Link: <https://aepsustainability.com/>

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**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

 AEP 10K 2021.pdf

**Page/Section reference**

2021 10K pages 10-17 includes Climate related information such as goals, current emissions, and transformation Strategy. This section also includes other topics like S&H, DEI, Human Capital Management, training, and culture

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**



2021 10K pages 10-17 includes Climate related information such as goals, current emissions, and transformation Strategy. This section also includes other topics like S&H, DEI, Human Capital Management, training, and culture

Link: [https://www.aep.com/assets/docs/investors/filings/docs/AEP\\_10K\\_2021.pdf](https://www.aep.com/assets/docs/investors/filings/docs/AEP_10K_2021.pdf)

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### **Publication**

In mainstream reports, incorporating the TCFD recommendations

### **Status**

Complete

### **Attach the document**

 AEPs Climate Impact Analysis 2021.pdf

### **Page/Section reference**

Entire Document- This document is AEP's Climate Impact Analysis that outlines various transition scenarios. It also includes a Mapping to the TCFD framework on Pages 10-21.

### **Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

### **Comment**

This report is aligned with the Task Force for Climate related Financial Disclosure (TCFD) framework, which is emerging as the preferred approach for reporting on climate risk management. We also referenced the Fourth National Climate Assessment, among other climate-related documents. (See appendix for reference resource list.)

Link: <https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf>

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### **Publication**

In mainstream reports, incorporating the TCFD recommendations

### **Status**

Complete

### **Attach the document**

 FINAL 2022 TCFD Report.pdf

**Page/Section reference**

Entire Document- This is AEP's 2022 Update of our TCFD mapping

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

This is AEP's 2022 Update of our TCFD mapping:

Link:

<https://aepsustainability.com/performance/docs/FINAL%202022%20TCFD%20Report.pdf>

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**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

 2022ProxyStatement.pdf

**Page/Section reference**

AEP's 2022 Proxy Statement pages 25-26 and 39-54 (incentive compensation goals related to environmental compliance and renewables. link:

<https://www.aep.com/assets/docs/investors/AnnualReportsProxies/docs/21annrep/2022ProxyStatement.pdf>

**Content elements**

Governance  
Strategy  
Emission targets  
Other metrics

**Comment**

Incentive compensation goals relating to climate

## 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
Row 1	Yes, executive management-level responsibility	AEP maintains an Environment, Safety and Health Policy, which is “owned” or enforced by our Vice President of Environmental Services. This policy describes how, “AEP is committed to social responsibility and sustainability. We are proactive in our efforts to protect people and the environment by committing to: maintain compliance with all applicable environmental, safety and health (ES&H) requirements while pursuing the spirit of ES&H stewardship; ensure that people working for or on behalf of AEP understand and integrate ES&H responsibilities into their business functions; support continual improvement of environmental performance and pollution prevention; and hazard elimination through employee involvement and continual health and safety improvement.” Compliance with environmental rules and regulations, which includes the protection of biodiversity, is non-negotiable. It is our only option. As we build and maintain new and existing infrastructure across our service territory, such as transmission or renewable generation facilities, we are mindful of the potential impacts we may have on wildlife and ecosystems. This includes species protected under the Endangered Species Act, the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act. We remain committed to following all federal, state and local environmental regulations and practicing environmental stewardship where possible when siting, constructing and operating our assets. For example, this includes adherence to the U.S. Fish & Wildlife Service’s (USFWS) voluntary Land-Based Wind Energy Guidelines.

### 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	Biodiversity-related public commitments	Initiatives endorsed
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	public commitment or endorsed any initiatives related to biodiversity		
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	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  We adhere to the U.S. Fish & Wildlife Service's voluntary Land-Based Wind Energy Guidelines and are certified under the Wildlife Habitat Council's voluntary sustainability and biodiversity standards at our Flint Creek facility in Arkansas.

### 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?
Row 1	Yes, we assess impacts on biodiversity in both our upstream and downstream value chain

### 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 Land/water management Species management Education & awareness

### 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	Yes, we use indicators	Other, please specify  We complete the GRI survey, which lists company sites on or near biodiverse areas, the potential impacts of these


		facilities, how we restore biodiversity, and lists threatened and endangered species that may be affected by our operations.
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## 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 Impacts on biodiversity Details on biodiversity indicators Biodiversity strategy	2022 GRI pages 17-27 Climate Impact Analysis page 72  <sup>1</sup>
In voluntary sustainability report or other voluntary communications		Biodiversity section of AEP's 2022 Corporate Sustainability Report. Pages 50-59  <sup>2</sup>
In voluntary sustainability report or other voluntary communications	Other, please specify	Other Please Specify: Corporate Company Website: <a href="https://www.aep.com/environment/">https://www.aep.com/environment/</a>
In other regulatory filings	Content of biodiversity-related policies or commitments Governance	AEP has a commitment to Environmental stewardship linked to incentive compensation.  This measure was based on the number of significant environmental enforcement actions during the year (those resolved with a fine exceeding \$1,000). Proxy pg: 45-47

 <sup>1</sup>2022-GRI-Report.pdf

 <sup>2</sup>2022 AEP Sustainability Report.pdf

## 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	Vice President-Environmental Services	Other C-Suite Officer

## 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	16,790,000,000

### 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**

International Paper Company

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

**Emissions in metric tonnes of CO<sub>2</sub>e**

344,994

**Uncertainty (±%)**

10

**Major sources of emissions**

Utility scale electric generating units

**Verified**

No

**Allocation method**

Allocation based on the number of units purchased

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

751,487

**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**

Emissions intensity rates based on AEP's EEI Customer report portal.  
<https://www.eei.org/Pages/CO2Emissions.aspx>. AEP Tx intensity rate is estimated using the EPA power-profiler eGRID region rate for ERCT.

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**Requesting member**

AT&T Inc.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

**Emissions in metric tonnes of CO<sub>2</sub>e**

229,422

**Uncertainty (±%)**

10

**Major sources of emissions**

Utility scale electric generating units

**Verified**

No

**Allocation method**

Allocation based on the number of units purchased

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

476,996

**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**

Emissions intensity rates based on AEP's EEI Customer report portal.  
<https://www.eei.org/Pages/CO2Emissions.aspx>. AEP Tx intensity rate is estimated using the EPA power-profiler eGRID region rate for ERCT.

---

**Requesting member**

U.S. General Services Administration - OMB ICR #3090-0319

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

**Emissions in metric tonnes of CO<sub>2</sub>e**

27,577

**Uncertainty (±%)**

10

**Major sources of emissions**

Utility scale electric generating units

**Verified**

No

**Allocation method**



Allocation based on the number of units purchased

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

57,522

**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**

Emissions intensity rates based on AEP's EEI Customer report portal.  
<https://www.eei.org/Pages/CO2Emissions.aspx>. AEP Tx intensity rate is estimated using the EPA power-profiler eGRID region rate for ERCT.

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**Requesting member**

NRG Energy Inc

**Scope of emissions**

Scope 3

**Allocation level**

Company wide

**Allocation level detail**

**Emissions in metric tonnes of CO<sub>2</sub>e**

10

**Uncertainty (±%)**

10

**Major sources of emissions**

Utility scale electric generating units

**Verified**

No

**Allocation method**

Allocation based on the number of units purchased

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

28

**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**

Emissions intensity rates based on AEP's EEI Customer report portal.  
<https://www.eei.org/Pages/CO2Emissions.aspx>. AEP Tx intensity rate is estimated using the EPA power-profiler eGRID region rate for ERCT.

## SC1.2

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

Values were derived using AEP's EEI Customer report portal. Link: <https://www.eei.org/issues-and-policy/national-corporate-customers/co2-emission>

## 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.**

AEP is part of an industry initiative to provide GHG emissions and electricity mix data to customers through the Edison Electric Institute. <https://www.eei.org/issues-and-policy/national-corporate-customers/co2-emission>

We also complete an annual EcoVadis survey and receive an annual updated score and scorecard. this can be requested for download here:

<https://aepsustainability.com/performance/EcoVadis-request>

## SC2.1

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

**Requesting member**

AT&T Inc.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

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

**Estimated timeframe for carbon reductions to be realized**

1-3 years

**Estimated lifetime CO<sub>2</sub>e savings**

**Estimated payback**

Cost/saving neutral

**Details of proposal**

AEP is interested in partnering with customers on renewable energy projects as feasible

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**Requesting member**

International Paper Company

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

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

**Estimated timeframe for carbon reductions to be realized**

1-3 years

**Estimated lifetime CO<sub>2</sub>e savings**

**Estimated payback**

Cost/saving neutral

**Details of proposal**

AEP is interested in partnering with customers on renewable energy projects as feasible

---

**Requesting member**

NRG Energy Inc

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

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

**Estimated timeframe for carbon reductions to be realized**

1-3 years

**Estimated lifetime CO<sub>2</sub>e savings**

**Estimated payback**

Cost/saving neutral

**Details of proposal**

AEP is interested in partnering with customers on renewable energy projects as feasible

---

**Requesting member**

U.S. General Services Administration - OMB ICR #3090-0319

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

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

**Estimated timeframe for carbon reductions to be realized**

1-3 years

**Estimated lifetime CO<sub>2</sub>e savings**

**Estimated payback**

Cost/saving neutral

## Details of proposal

AEP is 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