

Welcome to your CDP Climate Change Questionnaire 2021

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 16,800 employees operate and maintain the nation's largest electricity transmission system of 40,000 miles and more than 223,000 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 25,500 megawatts (MW) of generating capacity, including more than 5,500 MW of renewable energy. More than 16,000 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 5,910 MW of solar, up to 10,685 MW of wind and 2,266 MW of natural gas. We expect renewables will represent approximately 51% of our generating resource mix by 2030. In 2020, AEP's carbon emissions were 74% below 2000 levels (baseline), while SO₂ and NO_x emissions were reduced 98% and 96%, 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](https://www.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, 2020	December 31, 2020	No

C0.3

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

United States of America

C0.4

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

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your 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

Coal mining

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	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 & 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 (https://aepsustainability.com/performance/report/board-statement/) and in our annual Corporate Accountability Report (http://www.aepsustainability.com/). The board receives semi-annual updates on our progress, although discussion occurs throughout the year.
Director on board	Due to the carbon intensive nature of our business, AEP's Board of Directors is directly responsible for managing AEP's response to climate change risk. The Chair of the Board of Directors has direct oversight over corporate strategy, structure and management. The Committee on Directors & Corporate Governance of AEP's Board of Directors has oversight over sustainability performance reporting and environmental performance, which includes the company's strategy for addressing climate change, and provides input and guidance to management on selected issues. The Lead Director is also engaged in these issues. The board holds management accountable for sustainability and financial performance, as described in a board statement that we publish every year online (http://www.aepsustainability.com/performance/report/board-statement/) and in our annual Corporate Accountability Report (http://aepsustainability.com). The board receives formal semi-annual updates on our progress, although discussion occurs throughout the year.

C1.1b

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

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

agenda item		
Scheduled – some meetings	<p>Reviewing and guiding strategy</p> <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>AEP's board and board committees consider climate-related issues when reviewing and guiding their 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. Environmental policies have a significant impact on the Company's strategy. As a result, the Board regularly engages with senior management in the oversight of environmental issues, including climate change, the efficient use of energy, renewable energy and technology advantages 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 environmental, social and governance (ESG) issues, including climate change impacts, into our 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. In early 2021, the Board discussed and reviewed the Company's first climate scenario impact analysis. This report has since been published at: https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</p> <p>The Board has delegated responsibility for overseeing the Company's annual Corporate Accountability Report (CAR) to its Committee on Directors and Corporate Governance. The Committee reviews and approves the annual CAR, which in 2020</p>

		included sustainability goals, a description of the Company's response to the COVID-19 pandemic, its clean energy strategy and the Company's diversity, equity and inclusion commitments. The Committee also receives updates at least twice a year from management on its sustainability initiatives. During those meetings, management reports on its engagement with stakeholders on a range of issues, including climate change.
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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	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 Accountability Report before it is presented to the Board of Directors.

More Detail about Sustainability/Climate Governance at AEP:

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.

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 these 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.

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>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. By transitioning to carbon-free capacity, the company advances its carbon reduction goals simultaneously. This approach recognizes that the rate of change would need to accelerate in future periods to achieve AEP's objectives, while enabling the company to manage financial risk related to cost recovery of AEP's existing and potential new generating assets.</p> <p>The goal measures the percentage of total AEP-owned, and Power Purchase Agreement (PPAs) generation capacity at the end of the performance period. Non-</p>

		carbon emitting capacity includes nuclear, hydro, wind, solar, demand-side management and energy storage.
		View AEP's 2021 Proxy Statement: https://www.aep.com/assets/docs/investors/AnnualReportsProxies/docs/20annrep/2021ProxyStatement.pdf

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 of the overall award opportunity, and the remaining 40 percent weight is tied to safety, compliance and strategic goals. 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. (https://www.aep.com/about/mission/).</p> <p>See above question (C1.3) for information on the long-term incentive goal.</p>
Corporate executives	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</p>

ve team		<p>of business goals. 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 and demand-side management, 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. AEP's mission and vision include commitments to culture and business transformation as well as its voluntary emission reduction commitment because the company believes that all of these aspects of business strategy and operations are essential to achieving its goals, including its climate goals. https://www.aep.com/about/mission/</p> <p>In 2021, AEP's Board established the Carbon-Free Capacity Mix goal within the company's long-term incentive compensation plan because it believes this to be an actionable goal tied to the company's Future Forward clean energy strategy. This carries forward the company's first long-term incentive goal set in 2020 to increase deployment of non-emitting resources. By transitioning to carbon-free capacity, the company advances its carbon reduction goals simultaneously. In addition, this approach recognizes that the rate of change would need to accelerate in future periods to achieve AEP's objectives, while enabling the company to manage financial risk related to cost recovery of AEP's existing and potential new generating assets in the future.</p> <p>Read more in AEP's 2021 Proxy Statement: https://www.aep.com/assets/docs/investors/AnnualReportsProxies/docs/20annrep/2021ProxyStatement.pdf</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
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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. 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, financial matters of over \$1 million 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](http://www.aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis.pdf) (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.

C2.2

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

Value chain stage(s) covered

Direct operations
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 in coordination with our business units and operating companies. The risk management process helps us identify strategic, financial, operational and regulatory risks, assess the threats and controls, evaluate the risk, plan mitigation strategies and monitor risks for changing conditions.

Risks are reported by business units or operating companies to the Enterprise Risk Oversight group. 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, at least quarterly, by the Audit Committee of the Board of Directors.

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 the Audit Committee of 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>

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.

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, an estimated range

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

0

Potential financial impact figure – maximum (currency)

660,000,000

Explanation of financial impact figure

A hypothetical carbon tax of ~\$15/ton would result in \$660 million per year in additional expenditures with AEP's 2020 annual CO₂ emission profile of ~44 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. Current emissions levels have decreased by 74% compared with year 2000 levels (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.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

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?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

175,000

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

AEP is actively pursuing developing utility-scale and community-scale distributed resources which provide our customers with a more cost effective solution in utilizing low- and no-carbon energy. From 2021 through 2025, we plan to invest \$37 billion in capital, with the bulk allocated to regulated businesses and renewables. We plan to invest 14% of our capital through 2025 in renewable energy within and outside our traditional service territory. This includes \$2.8 billion planned for investment in regulated renewable generation and \$2.1 billion in competitive, contracted renewables.

By 2030, our current resource plans call for our regulated utilities to add up to 5,910 MW of solar, up to 10,685 MW of wind and 2,266 MW of natural gas. We expect renewables will represent approximately 51% of our generating resource mix by 2030.

In 2020, AEP received regulatory approval in three states to build 1,485 MW wind in Oklahoma; customers in Arkansas, Louisiana and Oklahoma will save approximately \$3 billion over 30 years from this project. AEP is also actively engaged in regulatory efforts and pilot programs to allow for AEP investment in innovative technologies at or near the grid edge.

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, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

105,800,000

Explanation of financial impact figure

In 2020, 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 2020, we reduced our carbon emissions by 74% (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

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, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

100,000,000

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 and scalable way.

In 2018, AEP signed on as a partner to the Transportation Electrification Accord, which is supported by the auto industry, environmental groups, companies, utilities 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.

In March 2021, AEP along with several peer utilities announced a plan to ensure that electric vehicle (EV) drivers have access to a seamless network of charging stations connecting major highway systems from the Atlantic Coast, through the Midwest and the South, and into the Gulf and Central Plains regions. The Electric Highway Coalition will provide drivers with effective, efficient, and convenient charging options that enable long-distance EV travel. Sites along major highway routes with easy highway access and amenities for travelers 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.

Comment

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

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 also 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.

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)

1,350,000,000

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 \$1,350,000,000 from its \$27 billion investment in its transmission and distribution systems in 2021-2025.

Cost to realize opportunity

27,000,000,000

Strategy to realize opportunity and explanation of cost calculation

Having a modern, reliable, resilient and secure grid is critical to our clean energy transformation. From 2021 through 2025, we plan to invest approximately \$27 billion on transmission and distribution infrastructure to expand, strengthen and modernize our network. Our investments to strengthen the reliability and resiliency of the grid supports our generation transformation and Future Forward strategy to a clean energy future.

Together with investments to integrate renewable and distributed resources, we're leveraging data analytics to proactively address reliability and security risks. We're preparing for the convergence of the electric, communications and transportation industries by modernizing the grid to meet our communities' social and economic needs. We are providing customers with access to reliable, affordable and cleaner energy options and opening access to broadband opportunities in underserved and unserved areas.

We are also leveraging the benefits of Geographic Information System (GIS) technology to capture real-time intelligence about assets and locations. This analysis and insight allows us to view data in an intuitive new way. Location is the common thread connecting all of our data into a single view, enabling us to uncover hidden constraints and opportunities, improve predictive modelling and promote safety while giving us a competitive edge. GIS allows us to rapidly deliver data from the office to the field and vice versa, making information available to those who need it when they need it. This capability is critical to maintaining system reliability.

A resilient electric grid withstands high winds, powerful storms, cybersecurity threats and other disruptions that could cause customer outages. We are a founder of Grid Assurance, an industry-led initiative to enable quicker recovery of the transmission grid resulting from a catastrophic event, natural or man-made. Grid Assurance's framework models for high-impact, low-frequency events. It includes maintaining an inventory of critical spare assets for the grid, such as transformers and breakers, which can be promptly deployed. During the global pandemic, Grid Assurance provided a level of resilience with access to key transmission assets when portions of the economy slowed significantly, temporarily halting production and limiting availability of some critical equipment.

Learn more about Grid modernization at AEP --
<https://www.aepsustainability.com/energy/reliability/>

Comment

AEP's total planned investment in its transmission and distribution systems during 2020-2024 is ~\$27 billion.

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

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).

Our transition to a clean energy future is tied to our investment strategy. From 2021 through 2025, we plan to invest \$37 billion in capital, with the bulk allocated to regulated businesses and renewables. We plan to invest 14% of our capital through 2025 in renewable energy within and outside our traditional service territory. This includes \$2.8 billion planned for investment in regulated renewable generation and \$2.1 billion in competitive, contracted renewables.

By 2030, our current resource plans call for our regulated utilities to add up to 5,910 MW of solar, up to 10,685 MW of wind and 2,266 MW of natural gas. We expect renewables will represent approximately 51% of our generating resource mix by 2030.

An example of a renewable energy project currently in progress is the North Central Wind Energy Facilities Project. In 2020, Southwestern Electric Power Company (SWEPCO) and Public Service Company of Oklahoma (PSO) received approvals needed to acquire North Central Wind Energy Facilities in Oklahoma. The approximate \$2 billion investment will deliver 1,485 MW of clean, renewable energy to customers in Arkansas, Louisiana and Oklahoma. The project is expected to save our customers an estimated \$3 billion over the next 30 years. It will also support local and regional economic and business development while helping our customers achieve their renewable energy goals.

To learn more about AEP's Renewable energy plans, please visit:

<http://www.aepsustainability.com/energy/renewables/>

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)

245,000,000

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 2020-2025 is approximately \$4.9 billion. Assuming a 50/50 debt/equity ratio and an ROE of 10% AEP will earn an annual return of \$245,000,000 off this investment

Cost to realize opportunity

4,900,000,000

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) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, and we do not intend it to become a scheduled resolution item within the next two years	Our active management in this space is viewed favorably by our investors.

C3.2

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

Yes, qualitative and quantitative

C3.2a

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

Climate-related scenarios and models applied	Details
Other, please specify AEP internal	<p>AEP routinely reviews its business strategy, evaluating potential scenarios that could affect the company's future. These scenarios help us to identify and understand threats to our business, as well as new opportunities for growth. We typically convene a diverse team from across the company to help us determine trends, risks and uncertainties that could impact AEP's business. We prioritize these drivers to help us develop our scenarios. We ask the team how they envision the electric energy business evolving, through the lens of the scenario framework. We evaluate the value and impact each scenario would have on the company, as well as their complexity to execute.</p> <p>We have historically included a carbon price as a proxy for potential future climate regulations. Upon completion of AEP's Climate Impact Analysis, we recognize there are other climate change influences that could significantly affect our business beyond climate regulations. For example, our analysis of climate change-related physical risks created a new awareness of potential threats to our facilities and infrastructure. It showed us the vulnerability of some assets located in areas potentially susceptible to damage or loss from rising sea levels and increasing weather extremes. We will use our learnings from this exercise to inform our strategic planning as well as our risk monitoring.</p> <p>The Climate Impact Analysis also allowed us to re-evaluate our carbon emission reduction goals. We evaluated three climate transition scenarios to determine the technology and resources that would be needed, the cost to customers and how the market would respond. This analysis provided important insights into what will be required to achieve net-zero carbon by 2050. After review of our carbon emission reduction goals, we have accelerated them to achieve an 80% reduction by 2030 and net-zero emissions by 2050 (from a 2000 baseline).</p> <p>For more information about how AEP utilized our Climate Impact Scenario, Please Visit: https://www.aepsustainability.com/performance/report/docs/AEPs-Climate-</p>

	Impact-Analysis-2021.pdf
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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.</p> <p>By 2030, our current resource plans call for our regulated utilities to add up to 5,910 MW of solar, up to 10,685 MW of wind and 2,266 MW of natural gas. We expect renewables will represent approximately 51% of our generating resource mix by 2030.</p> <p>AEP Energy Supply, AEP's competitive businesses, provides commodity or asset solutions where allowed nationwide. Synergies among our subsidiary companies offer customers custom energy solutions ranging from energy supply to technology, sustainability and advisory services. We own, operate and support behind-the-meter projects and utility-scale renewable projects, as well as third party renewable assets/projects.</p> <p>AEP is currently constructing a \$2 billion 1,485 MW wind farm in Oklahoma to help meet our objectives. Additionally, AEP's net-zero emissions goal by 2050 aligns with stakeholder interests. Further progress will be made over the coming decade as we add renewable energy and retire fossil generation.</p>
Supply chain and/or value chain	Yes	<p>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 portfolio will represent approximately 51% our total capacity by 2030. AEP also has a number of jurisdictions where it offers a green tariff that allows customers to sign up for 100% renewable energy. Our</p>

		suppliers are often our customers so we share a mutual interest in looking at climate risks and opportunities holistically.
Investment in R&D	Yes	<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&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: https://www.epri.com/lcri</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: https://carbon-collaborative.org/</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 & 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: https://www.globalelectricity.org/news/unlocking-beneficial-electrification-download-report-and-watch-event/</p> <p>For more information, please view the technology section of AEP's Climate Impact analysis: https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</p>
Operations	Yes	AEP is continuously looking for ways to optimize operations to deliver safe, affordable and reliable energy. As some of our fossil units reach

		<p>the end of their useful life given exposure to climate regulations and other factors (e.g. economics, age, etc.), AEP's Future Forward 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 2010, we have retired, sold or converted to natural gas nearly 13,500 MW of coal-fueled generation. We recently announced plans to retire an additional 5,574 MW of coal generation from 2021 through 2030.</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>
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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 Assets Liabilities	<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 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>From 2021 through 2025, we plan to invest \$37 billion in capital, with the</p>

	<p>bulk allocated to regulated businesses and renewables. We plan to invest 14% of our capital through 2025 in renewable energy within and outside our traditional service territory. This includes \$2.8 billion planned for investment in regulated renewable generation and \$2.1 billion in competitive, contracted renewables.</p> <p>By 2030, our current resource plans call for our regulated utilities to add up to 5,910 MW of solar, up to 10,685 MW of wind and 2,266 MW of natural gas. We expect renewables will represent approximately 51% of our generating resource mix by 2030.</p> <p>AEP Energy Supply, AEP's competitive business, provides commodity or asset solutions where allowed nationwide. Synergies among our subsidiary companies offer customers custom energy solutions ranging from energy supply to technology, sustainability and advisory services. We own, operate and support behind-the-meter projects and utility-scale renewable projects, as well as third party renewable assets/projects.</p> <p>North Central Wind Energy Facilities Project: In 2020, Southwestern Electric Power Company (SWEPCO) and Public Service Company of Oklahoma (PSO) received approvals needed to acquire North Central Wind Energy Facilities in Oklahoma. The approximate \$2 billion investment will deliver 1,485 MW of clean, renewable energy to customers in Arkansas, Louisiana and Oklahoma. The project is expected to save our customers an estimated \$3 billion over the next 30 years. It will also support local and regional economic and business development while helping our customers achieve their renewable energy goals.</p> <p>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 to provide cost-effective solutions, at times of peak demand. Learn more about technology investments that are enabling the usage of DERs in the Energy Technology section.</p>
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C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

As we transition to a clean energy future, our decision-making is informed by:

- Customer preferences for clean energy, particularly those with carbon-free energy and fleet electrification goals;
- Availability and cost of advanced technologies, such as energy storage and modular nuclear;
- New resources, such as green hydrogen;
- Market demand and prices;
- Low natural gas prices; and
- Regulatory innovation, including alternative ratemaking mechanisms and deregulation.

AEP's Climate Scenario Analysis is a first step toward gaining clarity on actions, timing, physical and financial impacts, and possible outcomes. It is not a prescriptive, definitive path to net-zero, but it gives us valuable insights into the work that still lies ahead. Read the full [Climate Impact Analysis Report](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>

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) (or Scope 3 category)

Scope 1

Base year

2000

Covered emissions in base year (metric tons CO₂e)

167,000,000

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

99

Target year

2030

Targeted reduction from base year (%)

80

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

33,400,000

Covered emissions in reporting year (metric tons CO₂e)

44,000,000

% of target achieved [auto-calculated]

92.0658682635

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

2°C aligned

Please explain (including target coverage)

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 analyse 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).

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.

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

Business activity

Target type: absolute or intensity

Intensity

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Percentage

Target denominator (intensity targets only)

unit of production

Base year

2021

Figure or percentage in base year

26.5

Target year

2023

Figure or percentage in target year

31.83

Figure or percentage in reporting year

28.1

% of target achieved [auto-calculated]

30.0187617261

Target status in reporting year

Underway

Is this target part of an emissions target?

yes- aligning compensation with emission goals

Is this target part of an overarching initiative?

Other, please specify
aligning compensation with emission goals

Please explain (including target coverage)

AEP's Board of Directors established the threshold, target and maximum levels for the 2021-2023 Carbon Free Capacity Mix goal in early 2021. The goal is based on the extent of carbon emission reductions that it believed to be achievable during this timeframe without taking on substantial additional financial risk related to cost recovery of AEP's existing and potential new generating assets. The recently announced net zero by 2050 target had not yet been adopted but the board when this goal was established but it did recognize that the rate of change in this measure would need to accelerate in future periods to achieve AEP's objectives. The Board periodically reviews these goals.

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

In September 2020, AEP announced plans to replace 100% of our 2,300 cars and light-duty trucks with EV alternatives by 2030.

Target denominator (intensity targets only)

Base year

2020

Figure or percentage in base year

0

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

0

% of target achieved [auto-calculated]

0

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 (including target coverage)

In September 2020, AEP announced plans to replace 100% of our 2,300 cars and light-duty trucks with EV alternatives by 2030. Our total fleet comprises nearly 8,000 vehicles, including medium- and heavy-duty vehicles. By converting a portion of medium- and heavy-duty vehicles with electric or hybrid models, we will achieve our goal of electrifying 40% of our entire on-road vehicle fleet in less than 10 years.

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.

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?

Yes, but we have not committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)

In 2020, we initiated a climate scenario analysis because it gave us an opportunity 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.

Upon understanding of our analysis, we reviewed our carbon emission reduction goals and have accelerated them to achieve an 80% reduction by 2030 and net-zero emissions by 2050 (from a 2000 baseline).

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 CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	4	
To be implemented*	3	27,100,000
Implementation commenced*	2	10,000
Implemented*	2	4,020,257
Not to be implemented	0	

C4.3b

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

Initiative category & Initiative type

Energy efficiency in buildings

Other, please specify

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

Estimated annual CO₂e savings (metric tonnes CO₂e)

477,475

Scope(s)

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 Accountability Report.

Initiative category & Initiative type

Other, please specify

Other, please specify

Retirement of Coal-Fired Generating Units

Estimated annual CO2e savings (metric tonnes CO2e)

3,542,782

Scope(s)

Scope 1

Voluntary/Mandatory

Mandatory

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

AEP retired two coal- fired generation units adding up to 1,111 MW of generating capacity in 2020. In their last full year of operation, two retired generating units emitted approximately 3.5 million metric tons of CO2. Annual savings is gross savings based on estimation of avoided fixed operating cost.

Since 2010, we have retired, sold or converted to natural gas nearly 13,500 MW of coal-fueled generation. We recently announced plans to retire an additional 5,574 MW of coal generation from 2021 through 2030. By the close of this decade, we will reduce our coal generating capacity by approximately 74% — a major achievement by any measure.

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	Employees are actively engaged in forums, regular communications, competitions and opportunities to identify and promote energy efficiency activities and technology development. These actions included many related to process efficiency and renewable technologies, directly reducing CO2 production.
Internal price on carbon	<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 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: https://www.aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf</p>
Partnering with governments on technology development	<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 Accountability Report.</p> <p>Partnership Examples: In 2020, we formed a Grid Solutions team to accelerate the energy transformation and advance a clean energy economy. The team is focused on identifying and implementing the best infrastructure solutions for our customers across the regulated generation, transmission and distribution businesses with an emphasis on seamless integration of the</p>

	<p>functions. Grid Solutions is responsible for the commercial structuring, acquisition and development of new grid resources, including regulated renewables, dispatchable generation such as natural gas, competitive transmission ventures, distributed generation, energy storage and other emerging on-grid technologies. In addition, they ensure compliance with regulatory and policy requirements while remaining engaged with the Federal Energy Regulatory Commission (FERC) and Regional Transmission Organizations (RTO).</p> <p>In October 2020, AEP OnSite Partners announced an energy storage plant project that will serve the City of Martinsville in Virginia. The project is the first to leverage technology firm Wärtsilä's new GridSolv Quantum energy storage system. The installation will enable the city to offset peak load periods and more effectively manage their overall energy usage and costs. It also will reduce their reliance on traditional peak energy resources. The energy storage system is scheduled to be operational in the second half of 2021.</p>
Dedicated budget for energy efficiency	<p>Each of AEP's subsidiaries (with energy efficiency programs 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 Accountability 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 usage by more than 1.1 million MWh and reduced demand by approximately 320 MW. From 2008 through 2020, these programs combined reduced annual consumption by over 9 million MWh and peak demand by approximately 2,900 MW. To achieve these savings, \$1.5 billion was invested during this period.</p> <p>Energy Efficiency/Demand Response: AEP's demand response programs lower costs, reduce emissions, and support the grid by reducing load in periods of peak demand, such as during extreme hot/cold weather. They often include incentive rates to encourage our customers to reduce their energy consumption during these peak demand. For some customers, contract terms allow us to "interrupt" their power consumption during peak times in exchange for reduced rates.</p> <p>Home Energy Management: Customers want a more personalized energy experience, and we are delivering custom, high-tech solutions that empower them to make a difference. The Home Energy Management (HEM) tool available on our</p>

	<p>websites, gives customers greater control of their energy use and bills.</p> <p>HEM provides tools such as proactive alerts, and personalized energy efficiency tips and programs – improving the customer experience and increasing satisfaction. Our deployment of Advanced Metering Infrastructure (AMI), or smart meters, is critical to providing the benefits of HEM, which includes greater access to more data to facilitate high-impact, personalized solutions.</p> <p>In 2020, Southwestern Electric Power Company and Appalachian Power Company introduced the new HEM tool for its residential customers, giving them the hands-on experience with their energy usage. The tool offers bill comparisons, home energy analysis, a data browser, energy-saving tips, and account information/preferences. The tool also provides high-bill alerts, empowering customers keep bills affordable by making changes in their energy use.</p>
Financial optimization calculations	<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>

C4.5

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

Yes

C4.5a

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

Level of aggregation

Product

Description of product/Group of products

In some jurisdictions AEP operating companies or affiliates market 100% renewable electricity, which represents a zero carbon product.

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

Low-carbon product

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

Other, please specify

Renewable energy certificates are register and retired

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

0.1

Comment

Not currently a major source of revenue

Level of aggregation

Product

Description of product/Group of products

AEP has begun to invest in electric vehicle charging infrastructure which will allow for additional vehicle electrification and avoided transport-related emissions. Additionally, AEP is encouraging customers to look at electrification of other processes to reduce cost and avoid emissions. See more here:
<https://aepsustainability.com/energy/electrification/>

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

Avoided emissions

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

Other, please specify

As EV's do not produce direct emissions they are inherently zero emissions.

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

0.1

Comment

Not currently a major source of revenue, but anticipated to grow.

Case Study Example: The Electric Highway Coalition

In March 2021, AEP along with several peer utilities announced a plan to ensure that electric vehicle (EV) drivers have access to a seamless network of charging stations connecting major highway systems from the Atlantic Coast, through the Midwest and the

South, and into the Gulf and Central Plains regions. The Electric Highway Coalition will provide drivers with effective, efficient, and convenient charging options that enable long-distance EV travel. Sites along major highway routes with easy highway access and amenities for travelers 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.

Smart Columbus

We were a founding partner with the City of Columbus in being awarded the U.S. Department of Transportation's (DOT) Smart City Challenge grant in 2016. The Smart Columbus project helped community leaders and organizations understand how electrification can enhance Columbus and positively impact the quality of life. The goals of the program aligned with our vision to transform the transportation sector and make the grid smarter and more efficient.

Smart Columbus surpassed its grant goals in 2020 with over 3,400 EVs sold and an EV adoption rate reaching as high as 2.34% during the grant term. To support these vehicles, over 900 new EV charging ports were installed in the seven-county region over three years, thanks in great part to the AEP Ohio charging program. We also exceeded our goal to install 10% of charging stations in low-income areas. Although the grant period expired at the end of 2020, Smart Columbus is continuing to promote electrification and renewable energy adoption in partnership with our team.

For more information, please visit: <https://aepsustainability.com/energy/electrification/>

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.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1, 2000

Base year end

December 31, 2000

Base year emissions (metric tons CO₂e)

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 CO₂e)

0

Comment

Scope 2 (market-based)

Base year start

January 1, 2000

Base year end

December 31, 2000

Base year emissions (metric tons CO₂e)

0

Comment

C5.2

(C5.2) 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 CO₂e?

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

49,271,372

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 it's 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 eGRID averages. If BU is a self generator and it's 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 CO₂e?

Reporting year

Scope 2, location-based

409,225

Scope 2, market-based (if applicable)

441,928

Comment

AEP has a new understanding of what constitutes Scope 2 emissions. This year's Scope 2 emissions are a significant change from last year. Much of what was included in last year's Scope 2 emission has been moved to this year's Scope 3 emissions. The values in this report are believed to be improvements over previous reporting years and better aligns with reporting guidelines.

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)

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 CO₂e emissions be reported for mobile torpedo heaters. AEP emissions for these sources have been estimated at less than 2,000 metric tons.

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

Metric tonnes CO₂e

438,812

Emissions calculation methodology

Quantity of major consumables used in the generation of electricity entered into CDP calculation spreadsheets and raw material production emission rates from value chain partners.

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

10

Please explain

Key power generation consumables data is 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. The percentage stated above is an estimate based on about half the 20% adder for transportation was on data not obtained from outside the company.

Capital goods

Evaluation status

Relevant, not yet calculated

Please explain

Past discussions with the purchasing department, it was determined that AEP does not currently have a way to collect meaningful corporate data on capital good purchases.

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

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

3,707,311

Emissions calculation methodology

Quantity of fuel consumed multiplied by life cycle production emission factors from Worldwatch Institute

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

10

Please explain

Publicly available life cycle analysis of delivered coal and natural gas was used to estimate upstream energy use. The percentage stated above is an approximation that half the 23% adder for fuel was on data not obtained from outside the company.

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

Metric tonnes CO₂e

0

Emissions calculation methodology

Quantity of non-organic waste sent to landfill used in EPA's WARM model. The value is actually negative (-1,040,133 metric tons CO₂e) due to recycling of metal and the beneficial reuse of Coal Combustion Products (ash).

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

0

Please explain

Hazardous waste disposed and electronic equipment recycled (producing a negative emission according to EPA WARM model). The actual number of -1,040,133 metric tons CO₂e could not be entered.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

6,678

Emissions calculation methodology

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.

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

100

Please explain

All business travel emissions are based at least in part on value partner supplied data.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

16,990

Emissions calculation methodology

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.

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

0

Please explain

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

Relevant, calculated

Metric tonnes CO₂e

36,270,704

Emissions calculation methodology

This is a shift from prior reporting. Emissions associated with the Company's purchased power and gas for resale were tabulated and reported here.

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

0

Please explain

Emissions are based on BU power purchases and appropriate emission rates being applied.

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

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 CO₂e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0033298

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

49,680,597

Metric denominator

unit total revenue

Metric denominator: Unit total

14,920,000,000

Scope 2 figure used

Location-based

% change from previous year

34.66

Direction of change

Decreased

Reason for change

Reduced generation, reduced purchased generation, greater utilization of lower emitting fossil units and more generation from the renewable fleet.

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 CO ₂ e)	GWP Reference
CO ₂	48,807,820	IPCC Fifth Assessment Report (AR5 – 100 year)
CH ₄	141,581	IPCC Fifth Assessment Report (AR5 – 100 year)
N ₂ O	194,305	IPCC Fifth Assessment Report (AR5 – 100 year)
SF ₆	127,667	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			5.43	127,667	
Combustion (Electric utilities)	48,657,597	5,028	0	48,991,995	
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)	150,222	29	0	151,700	
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	49,271,372

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	48,991,995
Mobile Sources	151,710
Fugitive Emissions	127,667

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 CO ₂ e	Comment
Electric utility activities	49,019,324	Added approximately 27,329 tons CO ₂ e (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?

Decreased

C7.9a

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

	Change in emissions (metric tons CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption				
Other emissions reduction activities				
Divestment				
Acquisitions				
Mergers				
Change in output	15,443,990	Decreased	24	Decrease in CO ₂ e from stationary sources.

Change in methodology	14,104,894	Decreased	97	The majority of what was classified in the past as Scope 2 emissions (stemming from the resale of purchased power) was now recognized as Scope 3 emissions.
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

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 35% but less than or equal to 40%

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	No
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	165,534,905	165,534,905
Consumption of self-generated non-fuel renewable energy		0		
Total energy consumption		0	165,534,905	165,534,905

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.

Fuels (excluding feedstocks)

Bituminous Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

87,054,984

MWh fuel consumed for self-generation of electricity

87,054,984

MWh fuel consumed for self-generation of heat

0

Emission factor

0.32394

Unit

metric tons CO₂e per MWh

Emissions factor source

Calculated by comparison of fuel specific MWh to fuel specific Scope 1 CO₂e. MWh determined using CDP HHV method (Gross MMBtu times 0.29307).

Comment

Fuels (excluding feedstocks)

Subbituminous Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

37,811,663

MWh fuel consumed for self-generation of electricity

37,811,663

MWh fuel consumed for self-generation of heat

0

Emission factor

0.35979

Unit

metric tons CO₂e per MWh

Emissions factor source

Calculated by comparison of fuel specific MWh to fuel specific Scope 1 CO₂e. MWh determined using CDP HHV method (Gross MMBtu times 0.29307).

Comment

Fuels (excluding feedstocks)

Lignite Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

6,632,935

MWh fuel consumed for self-generation of electricity

6,632,935

MWh fuel consumed for self-generation of heat

0

Emission factor

0.34131

Unit

metric tons CO₂e per MWh

Emissions factor source

Calculated by comparison of fuel specific MWh to fuel specific Scope 1 CO₂e. MWh determined using CDP HHV method (Gross MMBtu times 0.29307).

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

34,035,322

MWh fuel consumed for self-generation of electricity

34,035,322

MWh fuel consumed for self-generation of heat

0

Emission factor

0.15285

Unit

metric tons CO₂e per MWh

Emissions factor source

Calculated by comparison of fuel specific MWh to fuel specific Scope 1 CO₂e. MWh determined using CDP HHV method (Gross mmbtu times 0.29307).

Comment

C-EU8.2d

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

Coal – hard

Nameplate capacity (MW)

13,346

Gross electricity generation (GWh)

43,646

Net electricity generation (GWh)

40,455

Absolute scope 1 emissions (metric tons CO₂e)

41,805,199

Scope 1 emissions intensity (metric tons CO₂e per GWh)

1,033.4

Comment

Emissions Intensity based on net GWh

Lignite

Nameplate capacity (MW)

837

Gross electricity generation (GWh)

2,363

Net electricity generation (GWh)

2,141

Absolute scope 1 emissions (metric tons CO₂e)

2,263,910

Scope 1 emissions intensity (metric tons CO₂e per GWh)

1,057.6

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 CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Gas

Nameplate capacity (MW)

8,787

Gross electricity generation (GWh)

16,252

Net electricity generation (GWh)

14,175

Absolute scope 1 emissions (metric tons CO₂e)

5,202,264

Scope 1 emissions intensity (metric tons CO₂e per GWh)

367

Comment

Emissions Intensity based on net GWh

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)

2,288

Gross electricity generation (GWh)

18,269

Net electricity generation (GWh)

18,269

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Misunderstood question last.

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Hydropower

Nameplate capacity (MW)

933

Gross electricity generation (GWh)

1,356

Net electricity generation (GWh)

1,356

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Wind

Nameplate capacity (MW)

4,063

Gross electricity generation (GWh)

12,549

Net electricity generation (GWh)

12,549

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Solar

Nameplate capacity (MW)

239

Gross electricity generation (GWh)

257

Net electricity generation (GWh)

257

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Total

Nameplate capacity (MW)

30,493

Gross electricity generation (GWh)

94,693

Net electricity generation (GWh)

89,201

Absolute scope 1 emissions (metric tons CO2e)

49,271,372

Scope 1 emissions intensity (metric tons CO2e per GWh)

552.4

Comment

Emissions Intensity based on net GWh

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 CO₂e)

Length of network (km)

356,063

Number of connections

Area covered (km²)

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 (km2)

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

6,307,589

Metric numerator

TRI waste volume in tons

Metric denominator (intensity metric only)

% change from previous year

34

Direction of change

Decreased

Please explain

Link to AEP's TRI Reports: <https://www.aep.com/requiredpostings/tri>

C-EU9.5a

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

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Coal – hard	1,494,170	19	2024	
Lignite	62,006	1	2024	
Nuclear	389,320	5	2024	

Gas	1,072,004	13	2024	
Hydropower	92,717	1	2024	
Other, please specify Solar/Wind	4,748,682	60	2024	
Other, please specify Various	110,448	1	2024	

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	<p>Fort Sill Energy Center</p> <p>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 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>	115,000,000	0.3	2024

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	AEP sponsors research through EPRI on a variety of low carbon technologies and applications.

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	AEP sponsors research through EPRI on a variety of low carbon technologies and applications.

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

C10.1a

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

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

High assurance

Attach the statement

-  GHG Files .pdf
-  ghgrp_verification_factsheet.pdf
-  GHG Summary Report - Big Sandy Revision 1.pdf
-  GHG Summary Report - Arsenal Hill.pdf

Page/ section reference

The vast majority of AEP's scope 1 emissions are subject to US EPA's Mandatory GHG Reporting Rule and verification. The rule is a matter of law and EPA serves as the third-party administrator and verifier.

Relevant standard

Other, please specify

AEP's scope 1 emissions from electric generating facilities are verified by USEPA.
Emissions

Proportion of reported emissions verified (%)

99

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)?

No, but we anticipate being regulated in the next three years

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, has approved joining 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.

Because this is a regulation for 2021, we will provide further updates in future CDP reports.

C11.2

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

No

C11.3

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

Yes

C11.3a

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

Objective for implementing an internal carbon price

- Navigate GHG regulations
- Stakeholder expectations
- Drive energy efficiency
- Drive low-carbon investment
- 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.

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 74% 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

Yes, other partners in the value chain

C12.1a

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

Type of engagement

Other, please specify

In 2020, AEP published a new Supplier Code of Conduct that addresses climate and environment-related performance and expectations. In addition, some business units incorporate expectations for sustainability performance into RFPs.

Details of engagement

Other, please specify

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

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

100

Rationale for the coverage of your engagement

AEP is fully committed to being a good steward of the environment. AEP's commitment to sustainability includes efficient use of resources and respect for the environment.

Suppliers are encouraged to collaborate with AEP to eliminate waste and cost from our supply chain. Suppliers will also strive to reduce emissions and waste, and use energy and natural resources efficiently. Suppliers must comply with all applicable environmental laws, regulations and standards and demonstrate they are doing such.

Impact of engagement, including measures of success

We recently published a Supplier Code of Conduct.

For more information, Please visit AEP's Supplier Code of Conduct:
<https://aep.com/assets/docs/b2b/SupplierCodeOfConduct2021.pdf>

Comment

AEP does not audit suppliers at this time for climate-related performance.

C12.1b

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

Type of engagement

Other, please specify

Details of engagement

Other, please specify

AEP engages with our customers on climate-related issues. This takes the form of delivering an annual report on Scope 2 emissions to support their

sustainability/carbon reduction goals, and initiatives to enable customers to use energy efficiently.

% of customers by number

100

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

0

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

Many of our large customers have carbon reduction and renewable energy goals and seek support for achieving these goals from their electric utilities. We engage with customers on a variety of issues including:

- Carbon emissions
- Renewable energy
- Electrification
- Energy solutions, including resiliency
- Energy management
- Site selection/property searches
- COVID-19 customer support
- Fleet electric transportation
- Supply chain resilience
- Public safety awareness

We have a wide variety of how we engage them including:

- Advisory services for energy solutions & incentives
- Property searches, screening, certification
- Relocation and expansion support
- EEI Customer Carbon & Energy Report
- Host webinars
- Newsletters
- One-on-one outreach
- Special team to support COVID-19 needs of customers
- Social media
- Expanding digital channel engagement
- Integrated Resource Plan (IRP) stakeholder process

We continue to expand and enhance the methods customers can engage with AEP.

Impact of engagement, including measures of success

- AEP is leading a strategic initiative to support U.S. manufacturing and address supply chain issues. The pandemic highlighted supply chain challenges and many companies are considering expanding U.S. manufacturing capabilities to fill the need for domestic sources for their supply chains. AEP brings energy solutions that include renewable resources, resiliency in microgrids and energy storage to support these efforts.
- Indoor agriculture pilots – indoor facilities that grow produce using a combination of

electric lighting, HVAC equipment, technology and building controls – at three AEP operating companies were launched to increase higher food yields, addressing food insecurity in underserved areas, and advancing efficient electrification that reduces carbon emissions.

- Energy solutions to support federal and military customers meet sustainability and resiliency goals, including the addition of renewable resources. For example, in 2020, Southwestern Electric Power Company and its Energy Service Company were awarded a Utility Energy Service Contract for Red River Army Depot to provide comprehensive energy and water efficiency improvements and demand reduction services.
- AEP is a 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. GSEP provides a forum to share experience and knowledge with stakeholders, including policymakers, serving as a global hub for all dimensions of electrification — clean energy, advanced technologies, partnerships, enabling public policies, strong economic growth, and customer relationships.
- AEP works with customers on their carbon reduction and renewable energy goals by providing them with options such as special tariffs or programs, as well as access to technologies that enable expanded electrification that reduces their carbon footprint.

Type of engagement

Education/information sharing

Details of engagement

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

% of customers by number

100

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

0

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

Our clean energy strategy gives customers the tools and the knowledge to optimize their energy experience. We view energy efficiency as a readily deployable, competitively priced and clean resource that benefits our customers and our environment. Energy efficiency benefits all customers; AEP has more than 150 energy efficiency programs across its service territory.

Impact of engagement, including measures of success

In 2020, AEP's energy efficiency programs reduced energy usage by more than 1.1 million MWh and reduced demand by approximately 320 MW. From 2008 through 2020, these programs cumulatively reduced annual consumption by over 9 million MWh and

peak demand by approximately 2,900 MW. To achieve these savings, we invested \$1.5 billion during that same period.

The U.S. Environmental Protection Agency (EPA) announced its 2021 ENERGY STAR® awards for businesses and organizations with outstanding contributions to protecting the environment through energy. AEP Texas, Appalachian Power and Southwestern Electric Power Company (SWEPCO – Arkansas) were named ENERGY STAR Partner of the Year – Sustained Excellence winners. SWEPCO (Louisiana and Texas) and Public Service Company of Oklahoma (PSO) were recognized for an ENERGY STAR Partner of the Year – Energy Efficiency Program Delivery award as well.

AEP also has initiatives in place reduce consumption within its own facilities. We reduced our kilowatt-hour (kWh) usage, normalized for weather, by approximately 35% in 2020, compared with the 2007 baseline, in nearly 280 buildings. This resulted in approximately \$7.1 million in cost savings. Today, we have nine LEED-certified company facilities across our service territory.

Type of engagement

Collaboration & innovation

Details of engagement

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

0

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

The electrification of end-use technologies in industry, buildings and the transportation sector has the potential to enable customers to be more energy efficient through the use of more — and increasingly cleaner — electricity while replacing direct fossil fuel use. This trend continues to grow as society seeks to replace fossil fuels with clean electricity to heat homes and buildings, power vehicles and operate industrial equipment. The benefits are significant for the environment, society and business. However, the shift to an electrified economy requires planning to ensure infrastructure is in place to meet our customers' needs and the right policies and regulations are established to support them.

The U.S. transportation system provides mobility for people, goods and services. Because transportation relies heavily on fossil fuels today, electrification of the transportation sector is vital to achieving long-term carbon reductions and ensuring our nation's energy and economic security.

Thanks to aggressive goal setting and technology advancement, the electric power sector now emits less carbon dioxide than the transportation sector. EVs are cost-effective, saving drivers both fuel and maintenance costs.

As of December 2020, there were more than 18,800 EVs in AEP's 11-state service territory. All-electric EVs surpassed plug-in hybrid EVs for the first time in March 2020 and growth rates suggest this trend will continue. 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 offers, and low-cost off-peak charging rates.

Impact of engagement, including measures of success

Customer program offerings span our service territory and include infrastructure deployment rebates, off-peak charging programs, energy efficiency rebates and consultative services. This includes collaboration with vendors and automakers to raise awareness on fleet electrification and charging infrastructure deployment. Our customer program offerings aim to optimize the electric grid, thereby benefiting all customers with applications such as corridor fast charging, fleets and transit agencies, multi-family dwellings, workplaces and residential homes.

In March 2021, AEP along with several peer utilities announced a plan to ensure that electric vehicle (EV) drivers have access to a seamless network of charging stations connecting major highway systems from the Atlantic Coast, through the Midwest and the South, and into the Gulf and Central Plains regions. The Electric Highway Coalition will provide drivers with effective, efficient, and convenient charging options that enable long-distance EV travel. 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. Since its launch, several more utilities have joined the coalition.

C12.1d

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

Climate change risk, governance and strategy and a Just Transition continue to be a main focus of stakeholder engagement as we transition to a low-carbon future. We recognize that climate change remains a significant risk and opportunity for which we are preparing to ensure we can deliver the clean, safe and resilient electricity expected by our customers. We engage with different stakeholders, including Climate Action 100+. Our executive management team and Lead Director are also involved in our engagement with Climate Action 100+ and other stakeholders. Listening to and engaging with stakeholders allows us to hear perspectives we might not have considered, mitigate risks, identify opportunities for collaboration, build stronger relationships, and arrive at consensus or shared motivation for meaningful outcomes.

We engage with on issues ranging from climate change, clean energy transition, energy efficiency, reliability and affordability, supply chain management and human capital management.

For a full list of stakeholders, Issues we engage on, and how we engage with them, please visit: <https://www.aepsustainability.com/governance/sustainability/stakeholders/>

C12.3

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

Direct engagement with policy makers

Trade associations

Funding research organizations

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Cap and trade	Support with minor exceptions	AEP supported the Waxman-Markey climate bill in 2009 which would have implemented a cap-and-trade program. AEP continues to support this type of approach in lieu of regulation through the Clean Air Act. Engagement occurs through various forms of communication with regulators, policymakers and stakeholders. These discussions generally occur at the federal level given the global scope of the underlying issue.	AEP prefers this approach to climate policy as the most economical way to address the climate issue and balance cost and benefits.
Carbon tax	Oppose	While a carbon tax represents a potential source of revenue, its disadvantages for the economy and the electric power and energy industry in particular, and the uncertainty of the environmental benefits that would be achieved, keep it from becoming a reasonable policy solution. Engagement occurs through various forms of communication with regulators, policymakers and stakeholders, generally at the federal	AEP maintains that this type of approach does not represent a workable solution to reduce carbon emissions and places added burden on customers with no clear benefit. A carbon tax is the least desirable because it would require customers to pay for the cost of cutting emissions and pay a tax on remaining emissions.

		level, though many state regulators are also interested in our position.	
Energy efficiency	Support with minor exceptions	<p>AEP generally supports federal and state policy initiatives to improve the energy efficiency of the U.S. economy. AEP supports reasonable and justified policies that do not adversely impact any individual customers or businesses, including AEP.</p> <p>Engagement occurs through various forms of communication with regulators, policymakers and stakeholders. This engagement occurs both at the federal level as well as the state level on energy efficiency legislation and potential regulations. Engagement is focused especially on those state officials and regulators involved in setting the required amounts of energy efficiency to be achieved by our customers.</p>	AEP will continue to support energy efficiency policies where cost effective results can be achieved.
Clean energy generation	Support with minor exceptions	<p>AEP has been gradually adding various forms of lower- to zero-emitting energy to its electric system and believes that such sources can play an increasing role in the diversification of the U.S. generating mix. However, policies to support clean energy need to carefully balance long-term objectives with cost and reliability impacts. As we transform the resource mix, reliability and resilience of the power grid are a top priority.</p> <p>Engagement occurs through various forms of communication with regulators, policymakers and stakeholders. Seven of the states in which AEP operates have renewable or alternative energy portfolio standards and AEP continues to have dialogues with regulators and policymakers in all of its states regarding potential new or modified standards.</p>	<p>AEP will continue to support incentives for lower-emitting generation and appropriate fuel diversity for the U.S. electric grid. In 2021, AEP announced a new Future Forward strategy to add 16 GW of clean renewable energy to our system by 2030 (with regulatory approval).</p> <p>AEP also supports a Clean Energy Standard (CES) because it offers clear advantages and lower costs for customers by requiring them to pay only for the cost of compliance. However, it is important that a CES provide partial credit for natural gas in the near term as well as full credit for nuclear.</p>

C12.3b

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

Yes

C12.3c

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

Trade association

Edison Electric Institute

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

EEL member companies are united in "our commitment to get the energy we provide as clean as we can as fast as we can, without compromising the reliability or affordability that are essential to the customers and communities we serve." EEL's policy priorities to meet long-term clean energy and climate goals include:

- Significantly increase research, development, demonstration and deployment funding for the range of clean energy technologies.
- Provide federal support to get these technologies from R&D to commercialization, affordably.
- Revamp existing tax credits to advance newer technologies.
- Create a new technology-neutral tax credit.
- Enable the siting, permitting and construction of new technologies.
- Enhance energy grid modernization and resilience
- Leverage the electric power sector emission reductions to reduce emissions in other sectors of the economy.

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

AEP actively engages with EEI on many fronts, from policy and operational matters to issues around ESG/sustainability and diversity, equity and inclusion. AEP was a founding member of the ESG/Sustainability Steering Committee that developed an ESG/sustainability report for investors (published annually). We also participate in a similar reporting process for customers who need the Scope 2 data from their utilities.

Trade association

Business Roundtable

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Business Roundtable (BRT) is an association of chief executive officers of leading U.S. companies working to promote a thriving economy and expanded opportunity for all Americans through sound public policy. The BRT believes "market-based solutions are the best approach to combatting climate change." The BRT also supports limiting global temperature rise to well below 2 degrees Celsius above preindustrial levels, consistent with the Paris Agreement. The organization also supports the creation of incentives for developing new technologies to achieve this goal. In addition, the BRT supports advancing "climate resilience and adaptation while minimizing social and economic costs for those least able to bear them." This positioning aligns with AEP's position and its recent climate impact assessment and analysis and are consistent with the Paris Agreement. AEP was also among the companies that signed on to the BRT's corporate purpose pledge.

BRT climate position: <https://www.businessroundtable.org/climate>

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

AEP's CEO is an active member of the Roundtable and previously chaired the Energy and Environment committee.

Trade association

Global Sustainable Electricity Partnership

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The mission of the Global Sustainable Electricity Partnership (GSEP) is to play an active role in addressing global electricity issues and to promote sustainable development worldwide. GSEP's mission includes:

- 1) Develop joint policy frameworks and implement related initiatives in both domestic and international markets.
- 2) Engage in the global debates on electricity-related issues, taking joint positions.
- 3) Provide information and expertise on the efficient generation and use of electricity to assist developing countries in strengthening their human capabilities.

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

AEP Chairman, President & CEO Nick Akins served as the 2020–2021 Chair of GSEP. Under his leadership members collaborated with customers and end users of electricity to learn how they want to accelerate the electrification of their businesses. Link to the report: <https://www.globalelectricity.org/publication/voice-of-electricity-end-users-report/>

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3f

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

Similar to other companies, AEP has a public policy strategy that seeks to influence decisions being made at Congress, FERC, state legislatures and regulatory commissions. We do this to mitigate our risk exposure and to help us achieve our business objectives.

The energy industry is one of the most highly regulated sectors of the U.S. economy and is in the midst of a technology and innovation revolution. Advances in technology are creating opportunities for AEP to integrate and modernize the grid – making it smarter, cleaner, more reliable and more resilient. The policy realm in which we exist today was designed largely to accommodate outmoded technologies of the past. To meet our customers' evolving expectations, we sometimes must work to reshape the regulatory and legislative frameworks in which we exist. As a result, we are active in the policy making and political process on a wide range of issues, including climate change, through routine, constructive engagement with government officials, policymakers and stakeholder groups.

AEP has committed to disclosing all contributions to 501(c)(4) social welfare entities, beginning in 2021. This is in addition to existing disclosures on political contributions and memberships where a portion of dues is used for lobbying purposes.

C12.4

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

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

 AEPs-Climate-Impact-Analysis-2021.pdf

Page/Section reference

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

In 2020, AEP initiated a climate scenario analysis to expand our understanding of how various climate-related scenarios can affect the company now and in the future. This informs our strategic planning, risk management and how fast we can achieve our net-zero carbon goal. 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.

As we transition to a clean energy future, our decision-making is informed by:

Customer preferences for clean energy, particularly those with carbon-free energy and fleet electrification goals;
Availability and cost of advanced technologies, such as energy storage and modular nuclear;
New resources, such as green hydrogen;
Market demand and prices;
Low natural gas prices; and
Regulatory innovation, including alternative ratemaking mechanisms and deregulation.

AEP's Climate Scenario Analysis is a first step toward gaining clarity on actions, timing, physical and financial impacts, and possible outcomes. It is not a prescriptive, definitive path to net-zero, but it gives us valuable insights into the work that still lies ahead.

Publication

In voluntary sustainability report

Status

Attach the document

 AEP-Accountability-Report (10).pdf

- 📎 2021-EEI-ESGSustainabilityReportforInvestors_Carbon_Updates.pdf
- 📎 2021 Proxy.pdf
- 📎 2021_AEP_SASB_Report_FULL.pdf
- 📎 2021_AEP_GRI_Report_FULL.pdf

Page/Section reference

Corporate Accountability Report: <http://www.aepsustainability.com/performance/report/GRI>:
http://www.aepsustainability.com/performance/docs/2021_AEP_GRI_Report_FULL.pdf
 SASB:
http://www.aepsustainability.com/performance/docs/2021_AEP_SASB_Report_FULL.pdf
 EEI ESG : http://www.aepsustainability.com/performance/docs/2021-EEI-ESGSustainabilityReportforInvestors_Carbon_Updates.pdf
 2021 Proxy:
<https://aep.com/assets/docs/investors/AnnualReportsProxies/docs/20annrep/2021ProxyStatement.pdf>

Content elements

Governance
 Strategy
 Risks & opportunities
 Emissions figures
 Emission targets
 Other metrics

Comment

C15. 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.

C15.1

(C15.1) 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	14,920,000,000

SC0.2

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

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	0255371017

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

AT&T Inc.

Scope of emissions

Scope 1

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

313,029

Uncertainty (±%)

1

Major sources of emissions

Fossil fuel fired Electric Generating Units.

Verified

No

Allocation method

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

Values were derived using AEP's EEI Customer report portal. Link:
<https://www.eei.org/Pages/CO2Emissions.aspx>. AEP Tx required using BU specific data to build the emission rate used for this reporting.

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 CO₂e

49,817

Uncertainty (±%)

Major sources of emissions

Values were derived using AEP's EEI Customer report portal. Link:
<https://www.eei.org/Pages/CO2Emissions.aspx>. AEP Tx required using BU specific data to build the emission rate used for this reporting.

Verified

No

Allocation method

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

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

SC1.2

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

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

SC1.3

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

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

SC1.4

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

Yes

SC1.4a

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

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/about/members/international/Pages/CO2-Emissions.aspx>

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 CO2e 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 CO2e 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 am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now

Please confirm below

I have read and accept the applicable Terms