Welcome to your CDP Climate Change Questionnaire 2020

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 17,400 employees operate and maintain the nation's largest electricity transmission system of 40,000 miles and more than 221,000 miles of distribution lines to efficiently deliver safe, reliable power to approximately 5.5 million regulated customers in 11 states. AEP also is one of the nation's largest electricity producers with approximately 26,000 megawatts (MW) of generating capacity, including more than 5,200 MW of renewable energy. Between 2020 - 2030, AEP is projected to add more than 9,600 MW of solar, wind and natural gas to its system. In 2019, AEP's carbon emissions were 65% below 2000 levels (baseline), while SO2 and NOx emissions were reduced 97% and 94%, 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, AEP Energy Partners, AEP OnSite Partners, and AEP Renewables, which provide innovative competitive energy solutions nationwide. For more information, visit 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, 2019	December 31, 2019	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 (led by the Board's Lead Director) 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 (http://aepsustainability.com/about/report/board.aspx) and in our annual Corporate Accountability Report (http://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 board holds management accountable for sustainability and financial performance, as described in a board statement that we publish every year online (http://aepsustainability.com/about/report/board.aspx) 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 a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives	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.

	Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	

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 is a group of AEP's top executives that meet regularly to discuss all major business decisions affecting AEP's operations, employees and customers. 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.

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	Comment

	of climate-related issues	
Row 1	Yes	In 2020, AEP added a new performance goal to its long-term incentive plan for employees. The goal is "Non-emitting generation capacity", with a 10% weight. It is a three-year goal to measure the percentage of total AEP-owned, and Power Purchase Agreement (PPAs) generation capacity at the end of the performance period. Non-carbon emitting capacity includes nuclear, hydro, wind, solar, demand-side management and energy storage.

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 inventivized	Comment
All employees	Monetary reward	Emissions reduction target	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 includes a component for strategic initiatives. 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, including 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 includes strategic goals which are based on core commitments to AEP's business model that may have less of an immediate financial return as part of its incentive compensation plan. AEP's mission and vision include commitments to culture and business transformation as well as its voluntary emission reduction commitment (https://www.aep.com/about/mission/).

			See above question (C1.3) for information on the long-term incentive goal.
Corporate executive team	Monetary reward	Emissions reduction project	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. 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 includes strategic goals which are based on core commitments to AEP's business model that may have less of an immediate financial return as part of its incentive compensation plan. AEP's mission and vision include commitments to culture and business transformation as well as its voluntary emission reduction commitment (https://www.aep.com/about/mission/). In 2020, AEP added a metric to it's Long Term Incentive Program which incentivizes AEP's transition to increased non-emitting energy resources and associated carbon reductions. Increasing the deployment of non-emitting resources share of AEP's generation portfolio from 26.5% to 31.67% over the 2020-2022 period will result in 100% targeted payout of performance shares. Not achieving the 31.67% level could result in less or no shares being awarded while higher levels of non-emitting generation could result in an increased payout.

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	3	
Medium-term	3	10	
Long-term	10	50	

C2.1b

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

AEP does not have a bright line test for substantive impact but considers a variety of factors in assessing potential risks and opportunities that warrant routine or ongoing considerations. However, as a matter of principle, financial matters of over $1 million comes 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.

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

AEP's Enterprise Risk Management group oversees all risks to AEP, including those posed by climate change. This group regularly reports (at least quarterly) to the Board of Directors on material risks, including probability, scale of impact, likelihood of occurrence and mitigation measures in place. Climate change is one of the material risks that is included in AEP's Material Risk Watch list for regular review. Discussions

around climate risk include those relating to transition risk as legislative or reputational concerns relating to climate can affect the ability of AEP to operate certain fossil based assets, such as coal-fired electric generating units. As a result of this risk, AEP has substantially reduced the use of coal in its generating portfolio and increased utilization of renewable energy to serve customers. The Board also provides oversight as to how AEP manages risk and insurance related to physical hazards, including those that can be affected by a changing climate, such as wildfires, severe weather and flooding. As an example of translating physical risk into mitigation action, AEP has recently deployed a Storm Outage Prediction Model, to help mitigate the risk posed by severe weather to help better predict where employees and equipment need to be stationed to restore electrical service as quickly and as safely as possible should storm-related outages occur. Both physical and transition risk are an on-going concern for AEP's Board of Directors.

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 reevaluated 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)

870,000,000

Explanation of financial impact figure

A hypothetical carbon tax of ~$15/ton would result in $870 million per year in additional expenditures with AEP's current annual CO2 emission profile of ~58 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 65% as compared with year 2000 levels (AEPs 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 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 look to deploy low- or no-carbon generation resources as a means of supplanting, replacing, 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 between 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 $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 customers 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. 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 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)

114,000,000

Explanation of financial impact figure

In 2019, AEP's Vertically Integrated Utilities provided 114 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 $114 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, aggressively investing in renewable energy and energy efficiency while retiring older and less efficient coal-fired generators. Current emissions levels have decreased by 65% as compared with year 2000 levels (AEPs 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 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.

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. Additionally, AEP Ohio is deploying vehicle charging technology through the Smart Columbus initiative which aims to support a 21st century smart transportation system. This initiative includes $10 million for charging infrastructure. In 2018, AEP also 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. Our strategy includes five pillars:
1. Education and outreach -- proactive engagement
2. Leading by example -- we are integrating EVs into AEP's fleet and now operate one of the largest workplace charging programs in the U.S.
3. Increase off-peak load -- deploy residential solutions to move charging to off-peak hours and design/deploy a customer fleet charging solution
4. Improve public infrastructure -- design and deploy customer workplace charging stations and advise/support municipalities
5. Get the rules right -- advocate for public policies that support increased EV sales and access to charging infrastructure

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

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 to ensure its system is reliable and resilient. However, as the generation fleet transitions to lower carbon and intermittent resources and 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 and investment in 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)

1,285,000,000

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 $1,285,000,000 from its $25.7 billion investment in its transmission and distribution systems in 2020-2024.

Cost to realize opportunity

25,700,000,000

Strategy to realize opportunity and explanation of cost calculation

AEP works with various regulatory bodies and transmission organizations to ensure customers can be provided with reliable, resilient and affordable electricity through robust planning efforts. One recent venture, the $347-million Greentown-to-Reynolds Transmission Project in Indiana, went into service on June 25, 2018. The Greentown-to-Reynolds Project links Duke Energy's Greentown Station (near Kokomo) with the Northern Indiana Public Service Company (NIPCSO) Reynolds Station (north of Lafayette). This project includes approximately 70 miles of 765-kilovolt (kV) transmission lines and facilities, and provides a new major route for power in Indiana. It was one of 17 priority projects mandated by MISO to improve grid reliability, ensure access to regional sources of competitively-priced power and provide additional energy to the area. This project is an example of the investments AEP is making to modernize the grid.

We also leverage data analytics and digital technology to reduce failures, increase safety, improve grid reliability and reduce risks. For example, AEP’s Asset Health Center (AHC) provides proactive operational and predictive awareness that allows us to make informed decisions about transmission assets that need maintenance or replacement. This helps us reduce risk by identifying safety issues in real time and informs our capital investment strategy. Since 2012, we have also installed and managed real-time performance monitors, saving the company up to $45 million by preventing transformer failures. The deployment of monitoring and analytics to the grid have been a priority for AEP. These enhanced tools will allow for us to better monitor the system, improve resilience and improve response times to outage conditions.

Learn more about Grid modernization at AEP --
http://aepsustainability.com/energy/reliability/

Comment

AEP's total planned investment in its transmission and distribution systems during 2020-2024 is $25.7 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

AEP has the opportunity to invest over the next decade in renewable energy projects to reduce the utilization of fossil fuel generation and lower AEP's carbon footprint. AEP earns a return on shareholder equity in exchange for capital investment. For example, AEP has been recently granted regulatory approval to purchase three wind projects, totaling 1,485 MW, that are currently under development in Oklahoma. The proposed nearly $2 billion investment, inclusive of all costs, would save customers of SWEPCO and PSO approximately $3 billion, net of cost, over 30 years. (project press release -- https://www.aep.com/news/releases/read/1600/AEP-Seeks-to-Add-1485-MW-of-New-Wind-Generation-from-Three-Wind-Facilities-in-Oklahoma)

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)

210,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

AEP's total planned investment in contracted renewable energy during 2020-2024 is approximately $4.2 billion. Assuming a 50/50 debt/equity ratio and an ROE of 10% AEP will earn an annual return of $210,000,000 off this investment

Cost to realize opportunity

4,200,000,000

Strategy to realize opportunity and explanation of cost calculation

AEP is actively pursuing development of renewable resources both within its regulated footprint and through its competitive AEP Energy Partners subsidiary, AEP Renewables. This is as a foundational piece of AEP's message to potential investors.

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) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative and quantitative

C3.1b

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

Climate-related scenarios and models applied	Details
Other, please specify AEP internal	AEP's risk management and scenario planning processes account for varying assumptions around climate change policy and regulation to plan for a variety of futures, including one with significant restrictions on the use of fossil fuels. AEP has evaluated a number of scenarios related to potential climate regulation through its integrated resource planning process, which evaluates the generation resources (energy and capacity) required to meet customer demand. The scenarios include a variety of assumptions related to underlying carbon policy and the associated pricing impacts that would influence the composition of our generating fleet and subsequently emissions. The scenarios were based on plausible scenarios related to carbon regulation and associated commodity pricing. Generally the resource planning process has a 15-20 year time horizon, though AEP took a longer approach in setting a 2050 carbon target. As the overwhelming majority of AEP's emissions are associated with fossil generation, the resource planning scenarios capture almost the entirety of AEP's carbon footprint. As a result of running these scenarios over the years, AEP has seen

	increased value in potential investment in renewable energy while decreased value in continuing to operate fossil generation. Consequently, AEP has been able to reduce its emissions by 65% since 2000 showing a pronounced influence on our business strategy. Looking forward, these scenarios have led AEP to announce plans for adding several thousand megawatts of renewable energy to its system over the next decade and to set a 2050 carbon reduction goal that is consistent with global low carbon scenarios, including many of the models listed for selection in this question. Additionally, AEP will be releasing a comprehensive report on climate scenario impacts aligned with TCFD recommendations later this year (2020).

C3.1d

(C3.1d) 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	AEP continues to reduce it's greenhouse gas footprint and add renewable energy to its system as a means of reducing climate transition risk and provide an opportunity for capital investment and shareholder return. AEP is currently constructing a $2 billion, 1,485 MW wind farm in Oklahoma to help meet both objectives. Additionally, AEP aspires to zero emissions by mid-century to align with stakeholder interests. Further progress will be made over the coming decade in adding renewable energy and retiring fossil generation.
Supply chain and/or value chain	Yes	AEP's customers are also in many cases suppliers and often have an interest in reducing their emissions profile with AEP's help. This customer demand for cleaner electricity helps inform AEP's decisions around generation planning and as a result ~80% of new generation sources expected to be added to the AEP system this decade will be non-emitting. AEP also has a number of jurisdictions where it offers a green tariff that allows customers to sign up for 100% renewable energy. Our suppliers are often our customers so we share a mutual interest in looking at climate risks and opportunities holistically.
Investment in R&D	Yes	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. To further advance these technologies, AEP has committed $5 million to the Low Carbon Resource Initiative, 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.
Operations	Yes	AEP is continuously looking for ways to optimize operations to deliver safe, affordable and reliable energy. Recognizing that some of our fossil units are reaching the end of their useful life given exposure to climate regulations and other factors (e.g. economics, age, etc.) AEP has been proactively reducing capital spend in those units and diverting capital towards non-emitting technologies such as renewable energy and transmission improvements. 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 fewer emissions.

C3.1e

(C3.1e) 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	AEP has used a carbon price proxy with its resource planning processes and financial forecasting process for a number of years. Use of this price has suggested that capital investments be pulled away from fossil-fueled generation and push towards renewable energy and other non-emitting uses. AEP has recently committed to build a $2 billion, 1,485 MW wind farm in part due to considering climate change in financial planning. AEP also recently acquired numerous renewable energy assets from Sempra Energy in a large acquisition recognizing the value provided through being able to provide low carbon generation to a variety of customers. AEP continues to route the majority of its capital expenditures towards transmission and distribution infrastructure, which are emission free. Our capital allocation system recognizes the liabilities associated with continued investment in fossil generation and, as such, tries to keep such investment to a minimum to prevent stranded costs when the assets eventually retire.

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

AEP is conducting a comprehensive climate risk and opportunity scenario analysis and a final report will be completed by the end of 2020.

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

2010

Target coverage

Scope(s) (or Scope 3 category)

Scope 1

Base year

2010

Covered emissions in base year (metric tons CO2e)

134,000,000

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

99

Target year

2020

Targeted reduction from base year (%)

10

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

120,600,000

Covered emissions in reporting year (metric tons CO2e)

58,000,000

% of target achieved [auto-calculated]

567.1641791045

Target status in reporting year

Achieved

Is this a science-based target?

No, but we are reporting another target that is science-based

Please explain (including target coverage)

As our 2020 target has been already achieved, in early 2018 we developed new climate targets and further revised these targets in 2019. In 2019, AEP achieved a 65% reduction in carbon emissions from its 2000 baseline. The company plans to revise its 2030 goal in 2019 since we achieved it nearly a decade ahead of schedule.

Target reference number

Abs 2

Year target was set

2018

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

2050

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)

58,000,000

% of target achieved [auto-calculated]

81.5868263473

Target status in reporting year

Underway

Is this a science-based target?

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

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. AEP's new intermediate goal is to reduce carbon dioxide emissions from AEP generating facilities by 70 percent from 2000 levels by 2030. In the longer term, AEP anticipates reducing carbon dioxide emissions from AEP generating facilities by 80 percent from 2000 levels by 2050, with an aspiration to zero. These goals reflect our current business strategy and are based on the output of our integrated resource plans, which are designed to plan for an appropriate mix of generation resources to meet energy and capacity needs at reasonable costs for our customers.

In addition to being consistent with AEP's current resource plans, these goals are consistent with the intent to limit the global average temperature rise to less than 2 degrees Celsius above pre-industrial times. Although the United States is not a party to the Paris Climate Accord, stakeholders continue to use the 2 degree target as a framework for evaluating carbon reduction plans.

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

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
2020

Figure or percentage in base year
26.5

Target year
2022

Figure or percentage in target year
31.67

Figure or percentage in reporting year
26.5

% of target achieved [auto-calculated]
0

Target status in reporting year
Underway

Is this target part of an emissions target?
yes

Is this target part of an overarching initiative?
Other, please specify
aligning compensation with emission goals

Please explain (including target coverage)

10% of AEP's long-term incentive plan payout structure was amended beginning in 2020 to incorporate increasing the share of non-emitting generation within AEP's portfolio. A targeted 100% payout level is based on increasing non-emitting generation's share of capacity from 26.5% at the end of 2019 to 31.67% at the end of 2022. This will be achieved through the addition of renewable energy sources and retirement of fossil generation.

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	4	
To be implemented*	3	12,300,000
Implementation commenced*	2	10,000
Implemented*	2	1,781,084
Not to be implemented	0	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

Various Lighting, Heat and Appliance Technologies

Estimated annual CO2e savings (metric tonnes CO2e)

527,212

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

32,200,000

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

161,000,000

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 based on 5 year simple payback

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Initiative category & Initiative type

Other, please specify

Other, please specify

Retirement of Coal-Fired Generating Units

Estimated annual CO2e savings (metric tonnes CO2e)

1,253,872

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

45,000,000

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

0

Payback period

<1 year

Estimated lifetime of the initiative

>30 years

Comment

AEP retired 750 MW of coal-fired generating capacity in 2019. In their last full year of operation, the two retired generating units emitted approximately 1.2 million metric tons

of CO2. Annual savings is gross savings based on estimation of avoided Fixed Operating Cost.

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, contests 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	AEP utilizes an internal price of carbon in all generation planning decisions, which influences and encourages investment in low-carbon generation and divestment of high-carbon generation.
Partnering with governments on technology development	AEP has partnered with the government on various technology development initiatives including carbon capture and storage development and smart grid deployment.
Dedicated budget for energy efficiency	Each of AEP's subsidiaries (where energy efficiency programs are in place) has an Energy Efficiency Manager that has a budget dedicated to energy efficiency programs in the company's jurisdiction. Results vary by jurisdiction. In 2019, AEP invested approximately $165 million in energy efficiency and demand response initiatives and has more than 120 energy efficiency and demand response programs in place across its service territory. As a result the AEP system reduced consumption by greater than 1 million MWh and peak demand by more than 300 MW. From 2008 through 2019, these programs have cumulatively reduced annual consumption by over 9 million MWh and peak demand by approximately 2,900 mW.
Financial optimization calculations	All AEP investments are optimized using a carbon price and other assumptions related to regulatory risk, including those presented by carbon.

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 emissions. Additionally, AEP is encouraging customers to look at electrification of other processes to reduce cost and avoid emissions. See more here: http://www.aepsustainability.com/energy/beneficial-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.

C-EU4.6

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

AEP actively manages it's facilities to ensure than any air emissions are limited, particulary in the case of methane which is a source of fuel for our gas fired facilities. As this fuel carrys a cost, we make every effort to ensure that is 100% combusted in the electric generation process to provide value to our customers. AEP's estimates that direct methane emissions from natural gas infrastructure are neglible.

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, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO2e)

140,917,311

Comment

Over 99% of the GHG emissions reported for Scope 1 in the base year of 2010 are adapted from US EPA's Mandatory Greenhouse Gas Reporting Rule (40CFT part 98). Scope 2 was re-evaluated for 2010 but AEP was a net seller of electricity and hence had no Scope 2 emissions. Both Scope 1 & Scope 2 emissions were developed using The Greenhouse Gas Protocol standards.

Scope 2 (location-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO2e)

0

Comment

Scope 2 (market-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

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)

64,776,308

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:
Operating company purchases and sales (for resale) are from FERC Form 1 reports and are considered high quality. Net purchases are converted to emissions using EPA's eGRID 2016 regional emission rates.
Market Based Uncertainty:
Operating company purchases and sales (for resale) are from FERC Form 1 reports and are considered high quality. Purchase Power Agreements from specific natural gas sources have specific emission rates assigned to them. Purchase Power Agreements for renewable sources (wind, solar and hydroelectric, net of REC sales) are removed from the remaining purchases before applying EPA's eGRID 2016 regional emission rates. Operating company specific emission rates are used to calculate sale-for-resale emissions which are subtracted from emissions from purchased electricity for internal use.

C6.3

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

Reporting year

Scope 2, location-based

14,514,119

Scope 2, market-based (if applicable)

12,724,618

Comment

Location-based Scope 2 emissions use operating company net purchases (net of sale-for-resale) and regional eGRID2016 CO2, CH4 and N2O emission rates (the most current available). Market-based Scope 2 emissions account for dedicated renewable purchases, specific PPAs, and operating company emission rates for sale-for-resale.

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

975,414

Emissions calculation methodology

Quality 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

0

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.

Capital goods

Evaluation status

Relevant, not yet calculated

Please explain

In 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

4,520,554

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

0

Please explain

Publicly available life cycle analysis of delivered coal and natural gas was used to estimate upstream energy use.

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 (-1,651,046 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 -1,651,046 metric tons CO2e could not be entered.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

15,207

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

42,078

Emissions calculation methodology

Commuting data based on details from a 2013 study adjusted for the current year employee headcount.

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

0

Please explain

Detailed study of average distance traveled by employees from their home address to their work address from human resource records.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

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

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

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

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Electricity is not "processed" by the customer.

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

0.00509579

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

79,290,427

Metric denominator

unit total revenue

Metric denominator: Unit total

15,560,000,000

Scope 2 figure used

Location-based

% change from previous year

9.4

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 CO2e)	GWP Reference
CO2	64,157,262	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	190,755	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	262,141	IPCC Fifth Assessment Report (AR5 – 100 year)

SF6	166,149	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	0	0	7.07	166,149	
Combustion (Electric utilities)	63,985,181	6,770	0	64,435,985	
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)	172,081	43	0	174,174	
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	64,776,308

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	64,435,985
Mobile Sources	174,174

Fugitive Emissions	166,149

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

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

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	64,477,070	Added approximately 41,000 (~24%) of mobile sources (associated with generation) 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 CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	
Other emissions reduction activities	1,225,304	Decreased	8	Decrease in purchased power.
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	10,548,159	Decreased	14	Decreased internal generation
Change in methodology	0	No change	0	

Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

C7.9b

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

Location-based

C8. Energy

C8.1

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

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

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	212,645,153	212,645,153
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		0	212,645,153	212,645,153

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

106,285,443

MWh fuel consumed for self-generation of electricity

106,285,443

MWh fuel consumed for self-generation of heat

0

Emission factor

0.32546

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

60,685,103

MWh fuel consumed for self-generation of electricity

60,685,103

MWh fuel consumed for self-generation of heat

0

Emission factor

0.34917

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

10,064,899

MWh fuel consumed for self-generation of electricity

10,064,899

MWh fuel consumed for self-generation of heat

0

Emission factor

0.34119

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

35,609,709

MWh fuel consumed for self-generation of electricity

35,609,709

MWh fuel consumed for self-generation of heat

0

Emission factor

0.15616

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)

59,343

Net electricity generation (GWh)

54,144

Absolute scope 1 emissions (metric tons CO2e)

55,781,438

Scope 1 emissions intensity (metric tons CO2e per GWh)

1,030.2

Comment

Emissions Intensity based on net GWh

Lignite

Nameplate capacity (MW)

837

Gross electricity generation (GWh)

3,352

Net electricity generation (GWh)

3,094

Absolute scope 1 emissions (metric tons CO2e)

3,434,022

Scope 1 emissions intensity (metric tons CO2e per GWh)

1,109.9

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)

7,678

Gross electricity generation (GWh)

16,004

Net electricity generation (GWh)

13,954

Absolute scope 1 emissions (metric tons CO2e)

5,560,848

Scope 1 emissions intensity (metric tons CO2e per GWh)

398.5

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)

16,158

Net electricity generation (GWh)

16,158

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)

1,865

Gross electricity generation (GWh)

10,796

Net electricity generation (GWh)

9,027

Absolute scope 1 emissions (metric tons CO2e)

3,351,113

Scope 1 emissions intensity (metric tons CO2e per GWh)

371.2

Comment

Emissions Intensity based on net GWh

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)

1,018

Net electricity generation (GWh)

1,018

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)

12,185

Net electricity generation (GWh)

12,185

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)

262

Net electricity generation (GWh)

262

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)
29,304

Gross electricity generation (GWh)
108,322

Net electricity generation (GWh)
100,815

Absolute scope 1 emissions (metric tons CO2e)
64,776,308

Scope 1 emissions intensity (metric tons CO2e per GWh)
642.5

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

9,545,547

Metric numerator

TRI waste volume in tons

Metric denominator (intensity metric only)

% change from previous year

25

Direction of change

Decreased

Please explain

TRI reportable waste volumes decreases as less coal was used to generate electricity 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	1,382,847,000	20	2024	
Lignite	165,233,000	2	2024	
Nuclear	419,580,000	6	2024	
Gas		6	2024	
Hydropower	70,709,000	1	2024	

Other, please specify Solar and Wind	4,207,694,000	62	2024	
Other, please specify Not Fuel Specific	125,434,000	2	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	Fort Sill Energy Center	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%	11,141,000	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

e-GGRT Submittals.pdf

ghgrp_verification_factsheet.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 in, Virginia, has approved joining the Regional Greenhouse Gas Initiative beginning in 2021. Final details of the program are still being established but AEP anticipates complying through the use of purchased emissions allowances and the eventual retirement of its two remaining fossil-fired electric generating units in Virginia in 2026.

C11.2

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

No

C11.3

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

Yes

C11.3a

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

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

AEP uses a carbon price within its Integrated Resource Planning (IRP) process to appropriately capture the potential future policy and regulatory risk associated with Scope 1 and 2 carbon emissions. The IRP process is the fundamental pathway in which we assess and plan for providing reliable electric supply to our customers over a longer-term time horizon. The IRP is a formal process within many of our states, which involves publically disclosing a plan for future operations and resources that is subject to review by regulators and stakeholders. In most cases, it includes a robust stakeholder process to inform the plan's development. AEP's IRP process considers all available resource and market options to achieve the least-cost plan that provides the energy and capacity resources customers need and value.

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

15

Variance of price(s) used

Price gradually increases by 5 % per year

Type of internal carbon price

Shadow price

Impact & implication

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 65% 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

AEP is publishing 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

% 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's supply chain focus has largely been iternal through a multi-year Lean Management Program. We are now beginning to take a closer look at sustainability in the supply chain. We will soon be publishing a Supplier Code of Conduct.

Impact of engagement, including measures of success

Engagement will allow for supplier to align with AEP's goals. Success will be measured through increased environmentally friendly products and services being available to AEP.

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

Collaboration & innovation

Details of engagement

Other, please specify

AEP collaborates on renewable projects, some of which are combined with energy storage. Through Smart Columbus we installed EV infrastructure to support clean mobility options. AEP offers 100+ energy efficiency programs, too.

% of customers by number

1

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

1

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

By working with our large commercial and industrial customers on clean energy and technology solutions we can have the greatest impact in reducing GHG emissions. AEP's electrification strategy focuses not only on fleet EVs and charging infrastructure (public, private and fleet), it also encompasses indoor air quality by advocating electrification of sources such as forklifts. The planned Fort Sill project in Oklahoma is another example of collaborating and innovating with customers. AEP and the U.S. Army entered into a 30-year agreement to site an energy resilience project that will include PV solar and gas-fired reciprocating internal engines. Once built, the project will deliver clean energy to the base and support its resilience to sustain its critical missions in the event of a commercial grid outage.

AEP has also launched a Home Energy Management initiative that offers a collection of integrated solutions to make it easier for customers to manage energy use, bills and services. HEM data portal enables two-way data flow with customers, giving them direct access to their energy information.

Impact of engagement, including measures of success

Smart Columbus -- regulators approved $10 million for charging infrastructure that required customers to subscribe; the program was fully subscribed in less than a year. Energy efficiency -- we measure annual energy savings (1,092,591 MWh in 2019); annual demand savings (302 MW) and avoided CO2 emissions (524,707 US Tons in 2019).

C12.1d

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

Our employees are our most important partner. AEP provides EV charging stations for employees to use while on the job. AEP is a bike-friendly company and encourages use of public transportation (where available). AEP also periodically offers special offers on EV purchases, in collaboration with automakers. And we bring ride-and-drive EV events to our offices for employees to learn about and test drive different EV models. This has been especially successful in Columbus, Ohio, where AEP is a partner with the Smart Columbus Smart City initiative.

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 will continue to advocate for this approach to climate policy as the most economical way to address the climate issue and balance cost and benefits. However, political deadlock in Washington, D.C. has rendered this approach dormant for the time being.
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 level, though many state regulators are also interested in our position.	AEP will continue to maintain 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.
Energy efficiency	Support with minor exceptions	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. Engagement occurs	AEP will continue to support energy efficiency policies where cost effective measures can be achieved.

		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.	
Clean energy generation	Support with minor exceptions	AEP has been gradually adding various forms of lower-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 impacts. 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.	AEP will continue to support incentives for lower-emitting generation and appropriate fuel diversity for the U.S. electric grid.

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

As Congress works to address this issue, it is essential to include effective consumer protection measures that help to reduce price increases for consumers and avoid harm to U.S. industry and the economy. (www.eei.org/ourissues/the Environment/climate/Pages/default.aspx)

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

AEP serves on several committees and in leadership positions in EEI.

Trade association

U.S. Chamber of Commerce

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

A deeper understanding of the issues and developing science associated with the environment and climate change will influence national and global energy, economic, and environmental policy choices. Balancing these priorities requires greater consideration of the complex processes driving climate change and increased attention to adaptation measures. We must increase our investment in climate science, which will enable us to adjust policies as scientific understanding advances. At the federal level, we need better coordination and collaboration across agencies for policy coherence and balance. (http://www.energyxxi.org/invest-climate-science-guide-energy-economic-and-environmental-policy)

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

AEP is a member of the U.S. Chamber of Commerce, as are many of our customers. We believe it is important to be at the table for our views to be heard. We may not always be in a position of influence on any single issue, but we actively engage on a range of issues.

Trade association

Business Roundtable

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Business Roundtable 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. Access to reliable, affordable energy undergirds

U.S. national and economic security, and a clean, healthy environment is essential for economic prosperity now and for future generations. Business Roundtable supports policies that capitalize on America's strengths in technology and energy diversity to maximize U.S. energy options and preserve environmental quality. The business community has a special obligation to step forward and help build an environmentally and economically sustainable future. AEP was among the companies that signed on to the BRT's corporate purpose pledge.

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 is to play an active role in addressing global electricity issues and to promote sustainable development worldwide. Missions include:
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 serves on the Board of Directors.

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. In 2017, AEP formed an internal Policy Advisory Team (PAT) to better manage public policy issues. This team is composed of senior executives across AEP, including some of those who represent the

company in Washington, D.C., and the state capitals in our service territory. The PAT considers policy options on issues of relevance to the company. The multi-departmental, cross-functional structure of the PAT supports internal policy analysis and debate. The approach helps ensure that AEP is speaking with one voice on important public policy considerations and that all employees, and ultimately external stakeholders, are clear on our policy positions and objectives. The goal of the PAT is to ensure a smoother, more consistent policy strategy across the company. In strategic discussions about how we can best align ourselves to maximize the customer benefits of new technologies, we talk about "future-proofing" our company. The pace and scope of change underway in the utility sector is indisputable. In order to adapt and bring the most value to customers, utilities require a regulatory and legislative framework that allows them the flexibility to incorporate new technologies, including those we've not even envisioned yet. We need a regulatory paradigm that fosters rapid deployment of creative energy solutions.

Furthermore, during the last decade, AEP has cultivated a commitment to engagement and transparency by being accessible, responsive, honest and open with those with whom we engage. We seek to foster healthy, trusting relationships that turn conflict into cooperation and, ultimately, into partnership. We have ongoing dialogue with many stakeholders and general agreement that technology, policy, timing and collaboration are all critical to a clean energy transition plan. As a result, AEP holds periodic calls and meetings with stakeholders to keep the channels of communication open and continue information sharing as well as looking for areas of collaboration, particularly as it relates to carbon emission reductions.

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 voluntary sustainability report

Status

Complete

Attach the document

2020 AEP TCFD Report.pdf
2019AnnualReportAppendixAtoProxy.pdf
EEI-ESGSustainability Report for Investors-2020_Carbon.pdf
2020 AEP SASB Report.pdf

Page/Section reference

All; AEP produces an annual Corporate Accountability Report that includes a section on carbon and climate (https://www.aepsustainability.com/environment/carbon/). AEP also produces several other reports that contain this information -- the EEI ESG/Sustainability Report for Investors; TCFD Report and SASB.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

EEI-ESGSustainability Report for Investors-2020_Carbon.pdf

Page/Section reference

All

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

2019AnnualReportAppendixAtoProxy.pdf

Page/Section reference

23

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

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.

n/a

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	15,560,000,000

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

294,497

Uncertainty (±%)

1

Major sources of emissions

Fossil fired electric generating units

Verified

No

Allocation method

Allocation based on the volume of products purchased

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

GHGs based on electric generation to serve retail sales.

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

35,430

Uncertainty (±%)

1

Major sources of emissions

Fossil fired electric generating units

Verified

No

Allocation method

Allocation based on the volume of products purchased

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

GHGs based on electric generation to serve retail sales.

SC1.2

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

https://www.eei.org/about/members/international/Pages/CO2-Emissions.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

SC3.1

(SC3.1) Do you want to enroll in the 2020-2021 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2019-2020 Action Exchange initiative?

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, submit Supply Chain Questions now

Please confirm below