Welcome to your CDP Water Security Questionnaire 2023

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

American Electric Power, based in Columbus, Ohio, is powering a cleaner, brighter energy future for its customers and communities. AEP's approximately 17,000 employees operate and maintain the nation's largest electricity transmission system and more than 225,000 miles of distribution lines to safely deliver reliable and affordable power to 5.6 million regulated customers in 11 states. AEP also is one of the nation's largest electricity producers with approximately 30,000 megawatts of diverse generating capacity, including more than 7,000 megawatts of renewable energy. More than 22,600 MW of renewable energy is interconnected across the U.S. via AEP's transmission network. The company's plans include growing its renewable generation portfolio to approximately 50% of total capacity by 2032. AEP is on track to reach an 80% reduction in carbon dioxide emissions from 2005 levels by 2030 and has committed to achieving net zero by 2045. AEP is recognized consistently for its focus on sustainability, community engagement, and diversity, equity and inclusion. 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, which provides innovative competitive energy solutions nationwide. For more information, visit https://www.aepsustainability.com/

W-EU0.1a

(W-EU0.1a) Which activities in the electric utilities sector does your organization engage in?

Electricity generation
Transmission
Distribution
Other, please specify
Smart grids/Demand Response; battery storage; micro grids; coal mining.

W-EU0.1b

(W-EU0.1b) For your electricity generation activities, provide details of your nameplate capacity and the generation for each technology.

	Nameplate capacity (MW)	% of total nameplate capacity	Gross electricity generation (GWh)
Coal – hard	11,114	43.8	32,360
Lignite	675	2.7	2,527
Oil	0	0	0
Gas	8,123	32	14,667
Biomass	0	0	0
Waste (non-biomass)	0	0	0
Nuclear	2,296	9.1	16,621
Fossil-fuel plants fitted with carbon capture and storage	0	0	0
Geothermal	0	0	0
Hydropower	805	3.2	623
Wind	2,137	8.4	6,003
Solar	220	0.9	567
Marine	0	0	0
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	25,275	100	73,368

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	January 1, 2022	December 31, 2022

W0.3

(W0.3) Select the countries/areas in which you operate.

United States of America

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

USD

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Corporate facilities that house administrative or support functions including, but not limited to, office buildings, transmission and distribution operations, warehouses, and maintenance buildings.	Only regulated generation facilities over which AEP exercises operational control are included in this disclosure, since these are the facilities with significant exposure to water issues that can be directly controlled by AEP ("regulated" facilities are those whose rates are approved by a state or federal governing body). This includes our steam electric generating plants (coal, lignite, gas, nuclear) which are our largest users of water. Water use, beyond drinking water, is not generally tracked at our office buildings, transmission and distribution facilities, warehouses, and maintenance buildings. Water use at these facilities is significantly less than at our steam electric plants. Typically, water is purchased from municipal water supplies or withdrawn from wells for use at these facilities and any associated water risks are generally very low. Under rare circumstances, potential water pollution incidents may occur at our electric transmission and distribution facilities.

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	0255371017
Yes, a Ticker symbol	AEP

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	Adequate water quantity is needed for electric generation facilities (direct use) and for the development of fuel sources, such as gas fracking, coal mining and barge transportation (indirect use). At our steam electric facilities, water is used for cooling, internal processes, air pollution control and sanitation. It is vital that adequate freshwater be available in order to operate our power plants and generate electricity. Adequate water quality is needed to protect generation equipment and to ensure compliance with water quality standards and for general operations. It is important that sufficient water is available to develop fuel sources (coal mining and gas fracking) as well as to support our own barge fleet and the fleets of other suppliers. It is also essential to supply clean potable (drinking and sanitation) water to our employees. Our water dependency has decreased and will continue to decrease as the company transitions to less water-dependent sources of electricity, such as wind and solar. For example, coal operations ceased at the Pirkey Plant in 2023, reducing our overall water withdrawal by 557,721 megaliters per year.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	Recycled water is used at generation facilities (direct use), particularly at our Comanche Plant in Oklahoma, which uses water from the City of Lawton's POTW (publicly-owned treatment works). It is important that recycled water be available in this part of the country due to the incidence of periodic droughts. Recycled or brackish water is also used for gas fracking (indirect use as part of our supply chain), which is an important part of AEP's fuel supply portfolio. In

			some areas, access to freshwater for gas fracking operations is limited, thus encouraging the use of recycled water. This water dependency has decreased and will continue to decrease as the company transitions to less water-dependent sources of electricity, such as wind and solar.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – total volumes	100%	Continuously	Facility staff acquire the water use information using a variety of methods including pump rating curves (hours the various pumps are running to obtain the flow information), operation time, net MWhs, metered information and pumping rates.	Surface water and groundwater withdrawals from all steam electric facilities (coal, lignite, gas, nuclear) are reported here. A steam-electric power plant is a facility where the electric generator is steam driven. Water is heated using coal, gas or nuclear fuel, to create steam, which spins a turbine and drives an electrical generator.
Water withdrawals – volumes by source	100%	Continuously	Facility staff acquire the water use information using a variety of methods including pump rating curves (hours the various pumps are running to obtain the flow information),	Water withdrawals by source (surface water, groundwater and third party) for all steam electric facilities are reported here. A steam-electric power plant is a facility where the electric generator is steam driven. Water is heated using coal,

			operation time, net MWhs, metered information and pumping rates.	gas or nuclear fuel, to create steam, which spins a turbine and drives an electrical generator.
Water withdrawals quality	100%	Other, please specify As needed	Based on the quality of the discharge, it is sometimes necessary to measure certain parameters. For example, pH levels may not meet specifications and must be measured at the facility water intake to determine the source of the problem. Samples are collected under the supervision of a person experienced with the sampling of industrial wastewater per EPA requirements (40 CFR 136). Once collected, samples are preserved and sent to an EPA approved laboratory for analysis.	The quality of water withdrawals is consistently measured to ensure the proper operation of power plant equipment. Good quality freshwater, with total dissolved solid levels of less than 1000 mg/L, is needed for all of our steam electric facilities. Our facilities are designed to use water of a certain quality. If the water quality becomes degraded, the units with cooling towers could become susceptible to scaling on the surface condenser, which could create difficulties in meeting wastewater discharge permit limits. Density intrusion events at our Turk Plant will continue to be an issue as the quality of the Little River in Arkansas is poor, often precluding its use for steam electric generation.

Water discharges – total volumes	100%	Daily	Water discharge volumes are continuously measured and reported on a daily basis. Flow meters or pump curves (hours the various pumps are running to obtain the flow information) are examples of the measurement method.	Surface water discharges from steam electric facilities (coal, lignite, gas, nuclear) are reported here. The discharge volume of each facility is recorded as per state-issued NPDES permit requirements.
Water discharges – volumes by destination	100%	Daily	The volume of water discharges is continuously measured and reported on a daily basis. Flow meters or pump curves (hours the various pumps are running to obtain the flow information) are examples of the measurement method.	Surface water discharges from steam electric facilities are reported here. The discharge volume of each facility is recorded by outfall location and destination per state-issued NPDES permit requirements. The destination of water discharges varies by facility and effluent type. For example, at the AEP Rockport Plant in Indiana, the main discharge is to the Ohio River, while landfill leachate is discharged to Honey Creek, a tributary of the Ohio River.
Water discharges – volumes by	100%	Daily	The volume of water discharges is measured and	Surface water discharges from steam electric facilities (coal,

treatment method			reported on a daily basis. NPDES permits require that the discharge volumes be reported on a destination basis, which includes a description of the treatment method. Flow meters or wiers are examples of the measurement method.	lignite, gas, nuclear) are reported here. The discharge volume of each facility is recorded by treatment method as per state-issued NPDES permit requirements. NPDES permits require that the discharge volumes be reported on a destination basis, which includes a description of the treatment method. For example, the methods used to treat the scrubber blowdown at the AEP Mountaineer Plant in West Virginia are described in NPDES permit renewal application. This permit also mandates the measurement frequency.
Water discharge quality – by standard effluent parameters	100%	Other, please specify Variable - daily, weekly, monthly to annually.	The frequency with which standard effluent parameters are measured varies from facility to facility and from discharge to discharge. Samples are collected under the supervision	Surface water discharges from steam electric facilities (coal, lignite, gas, nuclear) are reported here. The discharge quality of each facility is recorded by standard effluent parameters (i.e. pH) as per NPDES permit requirements. For example, at the

			of a person experienced in the sampling of industrial wastewater per EPA requirements, which describe the required sample containers, sample preservation methods, holding times, and the collection of QA-QC samples. Once collected, samples are preserved and sent to an EPA approved laboratory for analysis.	AEP Amos Plant in West Virginia, the main discharge to the Kanawha River is monitored weekly for flow, twice per month for pH, total suspended solids, copper, mercury, aluminum, and selenium, monthly for temperature, quarterly for other metals, ammonia, oil and grease, total residual chlorine, and nitrate/nitrite, and twice per year for chronic aquatic toxicity.
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	100%	Other, please specify Once every 5 years	Samples are collected under the supervision of a person experienced in the sampling of industrial wastewater per EPA requirements, which describe the required sample containers, sample preservation, holding times, and the collection of	Discharges (emissions) to water of nitrates, phosphates, and other priority substances are measured when the NPDES permit for the facility is renewed, typically on a 5-year schedule. Form 2C (a part of the NPDES permit application) lists the specific parameters that must be measured. These include priority

			QA-QC samples. Once collected, samples are preserved and sent to an EPA approved laboratory for analysis.	metals, such as chromium, copper and lead, other metals, such as iron and aluminum, and inorganics such as phosphorus, nitrogen and sulfate. Organic toxic pollutants (40 CFR 122.21(g)(7)(v) parameters) are also monitored during permit renewal at the discharge and inlet. Pesticides are not measured as they are not present in the facility discharges.
Water discharge quality – temperature	100%	Daily	Measured daily or two times per month depending on facility permit requirements. Measurements are made using a thermocouple.	While water discharge temperature reporting is not always required, it is measured 100% of the time at those facilities where required by state or federal regulation. All once-through, non-contact cooling water discharges are monitored.
Water consumption – total volume	100%	Monthly	Forced evaporation, which is a function of wind speed, inlet temperature and gross MWHs generated, is calculated on a monthly basis.	Surface water consumption is not a required measurement; however, it is estimated based on facility design flows and the reported water withdrawal value.

			The water diverted from a source, minus the forced evaporation, equals the water returned. Forced evaporation volumes are calculated on a monthly basis.	
Water recycled/reused	76-99	Yearly	Water use design parameters and/or process information, pump curves and time, are used to estimate the volumes of water recycled or reused. In a few cases, the flow rates are metered.	At different facilities, water is reused and recycled in different ways, leading to variable methods and frequency of measurement depending on the facility. Water is also recycled at many of the western plants that are on cooling water reservoirs (Comanche, Flint Creek, Knox Lee, Lieberman, Welsh and Wilkes). These reservoirs were specifically built to be both the source and receiving water body for the cooling water used at these plants. Assuming negligible loss of water due to evaporation, these facilities “recycle” nearly 100% of the water that they withdraw. Since the cooling lakes are typically large, open

				bodies of water, they also provide public fishing and recreational boating. Recycled or reused water rates are recorded/estimated for steam electric facilities dependent on surface water as part of the company's GRI reporting effort.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Yearly	Drinking water is monitored annually at most facilities. The sampling frequency is based on the size of the drinking water system (non-community, non-transient). Samples are collected by personnel trained in the collection of drinking water samples and the handling of sample preservatives per EPA requirements, which describe the required containers, preservation methods, holding times, and QA-QC samples. Once	Employees at all of our facilities are provided with access to clean drinking water, sanitary facilities and solid waste management, however, such access is not provided at unmanned facilities, such as our solar farms. Typically, municipal water, well water or bottled water is provided and each of these delivery methods is required to meet safe drinking water requirements. For example, at AEP locations with non-transient non-community water systems, we are required to report water quality (e.g. bacteria and nitrate) as dictated by state and federal drinking

			collected, samples are sent to an EPA approved laboratory for analysis.	water regulations. We recognize that climate change can affect access to water. To that end, we have begun an Environmental Justice initiative which reaffirms our commitment to engaging with stakeholders to incorporate environmental and social justice into the management of existing and planned facilities, programs and services. This includes access to appropriate water supplies in the communities in which we operate.

W-EU1.2a

(W-EU1.2a) For your hydropower operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations measured and monitored	Please explain
Fulfilment of downstream environmental flows	100%	With the exception of Berrien Springs, all AEP hydroelectric projects are operated in accordance with Federal Energy Regulatory Commission (FERC) licenses, which include requirements for downstream flows and maintaining reservoir elevations within a range. Typically, AEP facilities are operated as run-of river projects. The exceptions are Smith Mountain, a pump-storage facility, and Claytor, which is authorized to generate in a peaking mode during certain times of the year. Regardless, water is passed through the hydroelectric facilities in accordance with

		FERC license requirements either through the generating units or through other parts of the dam to provide downstream flows. During 2022, over 34 billion cubic meters of water passed through our hydroelectric turbines.
Sediment loading	100%	All AEP hydroelectric projects are operated in accordance with Federal Energy Regulatory Commission (FERC) licenses, which require that sediments be monitored during the relicensing process. However, no AEP hydroelectric project directly manages sediments. Sediments flowing into the project reservoirs are either passed through the dam or deposited within the reservoir.
Other, please specify	100%	AEP conducts water quality and biological monitoring at its hydroelectric facilities as required by NPDES permits or FERC relicensing requirements. Permit-required monitoring varies between facilities. At our Virginia-based projects, NPDES permit monitoring is limited to parameters such as flow, temperature and pH. In West Virginia, monitoring requirements are more extensive and include the collection of samples for metal testing, in addition to flow, temperature and pH. At our Smith Mountain and Claytor projects, we perform ongoing monitoring studies for dissolved oxygen, temperature and aquatic vegetation. In addition, at the Claytor project, caged mussels were reared in 2020 in partnership with the Virginia Department of Wildlife Resources and were deployed in 2021 to determine if hydroelectric project operations influenced the growth and survival of mussels in response to a freshwater mussel adaptive management plan. This study was repeated in 2022. We are also in the final stages of relicensing the Racine and Constantine projects. Studies have been completed for the Niagara and Byllesby-Buck projects. Ongoing studies are also implemented at some of our northern hydroelectric projects. For example, downstream water quality monitoring is required at the Mottville project every five years and fish tissue / reservoir sediment monitoring is required every ten years. In addition, surveys for purple loosestrife and Eurasian water milfoil (invasive

		aquatic plants) are conducted in the Mottville, Constantine and Buchanan reservoirs.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	3,428,406	Lower	Change in accounting methodology	Lower	Facility closure	Total water withdrawals during 2022, which includes water from the City of Lawton's Publicly Owned Treatment Works (POTW) and groundwater, were about 42% less than those during 2021 primarily due to changes in water use accounting. Water from cooling lakes is no longer considered to be a withdrawal since about 99% of this water is recycled. Instead, water diverted from nearby streams to make-up for water lost from the cooling lakes

						due to evaporation is now considered to be "withdrawn," resulting in lower water withdrawal values for the Arsenal Hill, Flint Creek, Know Lee, Lieberman, Pirkey, Welsh and Wilkes facilities. For year-to-year comparisons, AEP is defining the thresholds based on peer utility CDP submissions. They are as follows: more than 50% less is 'much lower,' 25%-50% less is 'lower,' plus or minus 25% is 'about the same,' 25%-50% more is 'higher' and greater than 50% more is 'much higher.' The primary reason for the forecast of lower water use is due to the recent shutdown of the Pirkey Plant and the anticipated closure of the Northeastern, Rockport and

						Welsh facilities in 2028.
Total discharges	3,349,489	Lower	Change in accounting methodology	Lower	Facility closure	Total water discharges during 2022 were about 41% lower than those during 2021 due to changes in water use accounting. For 2022, water discharge information was compiled from Discharge Monitoring Reports (DMRs), state water use reports, or summaries prepared by AEP experts. In previous years, water discharge volumes had been estimated based on water balance diagrams, which represent nominal flows rather than actual flows. The use of data-based water discharge data resulted in a more accurate and lower estimate. For year-to-year comparisons, AEP is defining the thresholds as

						follows: more than 50% less is 'much lower,' 25%-50% less is 'lower,' plus or minus 25% is 'about the same,' 25%-50% more is 'higher' and greater than 50% more is 'much higher.'
Total consumption	79,792	Much lower	Change in accounting methodology	Lower	Facility closure	Total water consumption during 2022 was about 64% less during 2021 due to changes in water use accounting. Consumption was estimated as the difference between water withdrawals and discharges, which accounts for all consumptive uses at the facility. This is more accurate than basing the estimate on the nominal flows indicated on facility water balance diagrams. Since our new accounting methods resulted in estimates of less water being withdrawn, our

						water consumption estimates were also lower. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is 'much lower,' 25%-50% less is 'lower,' plus or minus 25% is 'about the same,' 25%-50% more is 'higher' and greater than 50% more is 'much higher.'

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	Less than 1%	About the same	Other, please specify There was no significant change in water withdrawal for this facility during 2022.	About the same	Other, please specify No change in water use is expected at this facility.	WRI Aqueduct	The percentage of water withdrawn from areas with water stress was based on steam-electric facilities (excluding

								hydroelectric facilities) in the Mississippi, Sabine and St Lawrence watersheds that fell within the WRI Aqueduct med-high water risk areas for baseline water risk which aggregates all selected indicators from the Physical Quantity, Quality and Regulatory & Reputational Risk categories. The WRI analysis was modified to use the settings for the electric power industry, which places a weighting of 90+% on water availability (i.e.

								quantity). Two facilities fell into this category, however, one does not use water and was excluded from the analysis. The remaining facility, Dresden, withdrew 4,376 MegL of water during 2022. During 2021, this facility withdrew 3,942 MegL of water, which is nearly the same as the previous year. During 2020, two facilities fell into this risk category, with a combined total water withdrawal

								of 5,693 MegL, which is about the same amount of water being withdrawn from water stressed areas during 2022. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is 'much lower,' 25%-50% less is 'lower,' plus or minus 25% is 'about the same,' 25%-50% more is 'higher' and greater than 50% more is 'much higher.'

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	3,421,312	Lower	Change in accounting methodology	42% less water was withdrawn from freshwater sources during 2022. This value is for the entire AEP steam electric fleet, minus our Comanche Plant, which uses water from the City of Lawton's Publicly Owned Treatment Works (POTW) and several groundwater dependent facilities. This difference is primarily due to changes in water use accounting. Water from cooling lakes is no longer considered to be a withdrawal since about 99% of this water is

					recycled. Instead, water diverted from nearby streams to make-up for water lost from the cooling lakes due to evaporation is now considered to be "withdrawn," resulting in a lower water withdrawal value for the Arsenal Hill, Flint Creek, Know Lee, Lieberman, Pirkey, Welsh and Wilkes facilities. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’

Brackish surface water/Seawater	Not relevant				AEP does not withdraw surface water from any brackish or seawater sources.
Groundwater – renewable	Relevant	5,067	Higher	Increase/decrease in business activity	Approximately 28% more water was withdrawn from renewable ground water sources during 2022 than during the previous year, which we consider to be higher, as it is above a 25% change. While it is higher due to changes in fleet dispatch, it is actually about the same as reported during previous years (i.e. 2020 - 5,476 MegL).
Groundwater – non-renewable	Not relevant				AEP does not use any groundwater from “non-sustainable” sources.

Produced/Entrained water	Not relevant				AEP does not use any 'produced' or 'entrained' water.
Third party sources	Relevant	1,595	Much higher	Increase/decrease in business activity	AEP sources water for the Comanche Plant from the City of Lawton Publicly Owned Treatment Works (POTW) and also uses water from municipalities at several other facilities. This combined water use was much higher (about 100% more) due to changes in weather and facility dispatch.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain

Fresh surface water	Relevant	3,349,489	Lower	Change in accounting methodology	41% less water was discharged to freshwater sources during 2022. This difference is primarily due to changes in water use accounting. Water discharged to cooling lakes is no longer considered to be a discharge since about 99% of this water is recycled. Instead, water discharged to nearby streams is now considered to be "discharged," resulting in a lower water discharge values for the Arsenal Hill, Flint Creek, Knox Lee, Lieberman, Pirkey, Welsh and Wilkes facilities. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’
Brackish surface water/seawater	Not relevant				AEP does not own or operate any water-dependent generation facilities that are located on

					brackish or seawater sources of water.
Groundwater	Not relevant				AEP does not inject wastewater into any groundwater aquifers.
Third-party destinations	Not relevant				While the disposal of some waste water is handled by AEP contractors or POTWs, the amount is minimal and not reported here.

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Not relevant					As defined by the CDP, tertiary treatment involves additional treatment to remove suspended, colloidal and dissolved constituents (nutrients, heavy metals, inorganic

						and other contaminants) remaining after secondary treatment through a number of processes, including granular media filtration or biological nitrification-denitrification. While AEP does operate a biological treatment system at its Mountaineer Plant, it follows primary treatment, not secondary treatment, therefore, we do not define it as tertiary treatment per the CDP definition.
Secondary treatment	Relevant	1,023	About the same	Other, please specify There was no significa	Less than 1%	One AEP facility (Mountaineer Plant) utilizes

				nt change in flows undergoing secondary treatment during 2022.		secondary treatment to remove metals and metalloids, such as mercury and selenium, through a physical-chemical process, followed by biological treatment. Percent of volume is based on the total volume of effluents treated by AEP. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is 'much lower,' 25%-50% less is 'lower,' plus or minus 25% is 'about the same,' 25%-50% more is 'higher' and greater

						than 50% more is 'much higher.' Since the difference between the amounts recorded for 2021 and 2022 is only 15% lower than that recorded for 2020, we consider this amount to be "about the same" as the previous year.
Primary treatment only	Relevant	2,966,940	About the same	Other, please specify There was no significant change in flows undergoing primary treatment during 2022.	81-90	The majority of AEP waste waters receive primary treatment before being discharged. This includes the physical removal of suspended solids through settling in treatment ponds or, in

						the case of facilities that utilize cooling towers, there is sedimentation in the base of the towers. Preliminary treatment does occur at all facility water intake structures through the removal of large debris by trash racks, rotating intakes screens, or wedge-wire screens. Percent of volume is based on the total volume of effluents treated by AEP. Since the difference between the amounts recorded for 2021 and 2022 is less than 25%, we consider

						these amounts to be "about the same."
Discharge to the natural environment without treatment	Not relevant					
Discharge to a third party without treatment	Not relevant					While the disposal of some waste water is handled by AEP contractors or POTWs, the amount is minimal and not reported here.
Other	Relevant	381,526	Much lower	Change in accounting methodology	11-20	For AEP "other treatment" primarily involves chlorination for biofouling control within the plant systems, but not for disinfection of the discharge. Discharges of cooling water must adhere to strict state and federal

						thermal limits necessary to assure the protection and propagation of the waterbody's balanced, indigenous population of shellfish, fish and wildlife. As a result, plant operations and treatment methods are adjusted as necessary to ensure that these standards are met prior to any discharges. This mainly applies to our once-thru cooling water discharges, primarily to lakes (Lake Michigan for Cook Plant and cooling lakes for Flint Creek, Knox Lee,

						Lieberman, Pirkey, Welsh and Wilkes Plants). Percent of volume is based on the total volume of effluents treated by AEP. While 85% less water experienced "other" treatment during 2022, this does not mean that less treatment occurred. This difference is primarily due to changes in water use accounting. Water discharged to cooling lakes is no longer considered to be a discharge since about 99% of this water is recycled. Instead, water

						effluents directed to nearby streams is now considered to be "discharged," resulting in much lower water discharge values for the Arsenal Hill, Flint Creek, Knox Lee, Lieberman, Pirkey, Welsh and Wilkes facilities. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is 'much lower,' 25%-50% less is 'lower,' plus or minus 25% is 'about the same,' 25%-50% more is 'higher' and greater than 50% more is

						'much higher.' Since the difference between the amounts recorded for 2021 and 2022 is more than 85%, we consider the 2022 amount to be "much lower."

W1.2k

(W1.2k) Provide details of your organization's emissions of nitrates, phosphates, pesticides, and other priority substances to water in the reporting year.

	Emissions to water in the reporting year (metric tonnes)	Category(ies) of substances included	List the specific substances included	Please explain
Row 1	260.2	Priority substances listed under the EU Water Framework Directive	Substances reported include arsenic, barium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, zinc and ammonia.	As a U.S. company, rather than monitoring for the priority substances listed under the EU Water Framework Directive, we report to the U.S. EPA under its Toxics Release Inventory program. Under this program, several of the priority substances from the EU Water Framework Directive are included, such as lead, mercury, nickel and dioxins. During 2022, AEP reported releases to water totaling 260.2 metric tons. Substances reported include arsenic, barium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, zinc and ammonia. For several substances, such as dioxin, the measured levels

				fall below the reporting levels set by U.S. EPA. The release of these substances is the result of coal combustion residual management, typically with water. Water treatment technologies are applied to remove these substances to levels that are below all applicable effluent guidelines and water quality standards. We do monitor for some nutrients and pesticides on a 5-year frequency during the renewal process for our NPDES permits. Typically, no pesticides are detected.

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	19,640,000,000	3,428,406	5,728.6097387532	Revenue is reported in USD. As the company transitions to a less water-dependent generation profile, we expect our total water withdrawal efficiency value to increase over time.

W-EU1.3

(W-EU1.3) Do you calculate water intensity for your electricity generation activities?

Yes

W-EU1.3a

(W-EU1.3a) Provide the following intensity information associated with your electricity generation activities.

Water intensity value (m3/denominator)	Numerator: water aspect	Denominator	Comparison with previous reporting year	Please explain
51.81	Total water withdrawals	MWh	Lower	Value is for steam electric facilities owned and

				operated by AEP and regulated by local governing bodies (i.e., Utility Commission) (m3/netMWh). It is 34% lower than our 2021 reported value of 78.5 m3/net MWh. This difference is primarily due to changes in water use accounting. Water from cooling lakes is no longer considered to be a withdrawal since about 99% of this water is recycled. Instead, water diverted from nearby streams to make-up for water lost from the cooling lakes due to evaporation is now considered to be "withdrawn," resulting in a lower water withdrawal value for the Arsenal Hill, Flint Creek, Know Lee, Lieberman, Pirkey, Welsh and Wilkes facilities. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’
1.21	Total water consumption	MWh	Much lower	Value is for steam electric facilities owned and operated by AEP and regulated by local governing bodies (m3/ MWh). It is 59% lower than our 2021 value of 2.95 m3/net MWh due to changes in water use accounting. Consumption

				was estimated as the difference between water withdrawals and discharges, which accounts for all consumptive uses at the facilities. This is more accurate than basing the estimate on the nominal flows indicated on facility water balance diagrams. Since our new accounting methods resulted in estimates of less water being withdrawn, our water consumption estimates were also lower. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is 'much lower,' 25%-50% less is 'lower,' plus or minus 25% is 'about the same,' 25%-50% more is 'higher' and greater than 50% more is 'much higher.'
46.72	Total water withdrawals	Other, please specify Total net MWh for the entire AEP generation fleet, including steam electric, wind, solar and hydroelectric	Lower	Value is for the entire AEP generation fleet which is regulated by local governing bodies and includes steam electric, wind, solar and hydroelectric (m3/net MWh). This is 38% lower than the value we reported for 2021. This difference is primarily due to changes in water use accounting. Water from cooling lakes is no longer considered to be a withdrawal since about 99% of this water is recycled. Instead, water diverted from nearby streams to make-up for water lost from the cooling lakes due to evaporation is now

				considered to be "withdrawn," resulting in a lower water withdrawal value for the Arsenal Hill, Flint Creek, Know Lee, Lieberman, Pirkey, Welsh and Wilkes facilities. For year-to-year comparisons, AEP is defining the thresholds as follows: more than 50% less is 'much lower,' 25%-50% less is 'lower,' plus or minus 25% is 'about the same,' 25%-50% more is 'higher' and greater than 50% more is 'much higher.'

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
Row 1	Unknown	AEP's primary product is electricity, which does not contain any solid material, hazardous or otherwise, however, we do sell gypsum, a by-product of our air pollutant removal systems. While the company's Safety Data Sheets for gypsum address various hazards (i.e., respiratory irritation) this does not mean that the material contains a hazardous substance rather, it lists the various hazards that must be addressed when handling these materials. The analytical information we have is limited to those substances which must be measured in order to characterize the material as hazardous or non-hazardous for disposal under the Resource Conservation and Recovery Act. Based on a determination by the U.S. EPA (Bevell Amendment), gypsum is not considered to be a hazardous waste. Under the Clean Water Act, we cannot identify the presence or absence of any specific hazardous substances based on the generic information provided on Occupational Safety and Health Act-required Safety Data Sheets.

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

	Engagement
Suppliers	Yes
Other value chain partners (e.g., customers)	Yes

W1.5a

(W1.5a) Do you assess your suppliers according to their impact on water security?

Row 1

Assessment of supplier impact

Yes, we assess the impact of our suppliers

Considered in assessment

Other, please specify

AEP places a strategic focus on supply chain preparedness and resilience.

Number of suppliers identified as having a substantive impact

0

% of total suppliers identified as having a substantive impact

None

Please explain

AEP's strategic focus on supply chain preparedness and resilience has proven critical to mitigating supply chain disruptions. We are leveraging the insight and expertise of the Edison Electric Institute (EEI) and utility peers, industry analysts and our knowledgeable employees to identify innovative solutions. AEP is a member of the Sustainable Supply Chain Alliance (SSCA) that focuses on advancing supply chain sustainability best practices within the electric utility industry.

W1.5b

(W1.5b) Do your suppliers have to meet water-related requirements as part of your organization's purchasing process?

	Suppliers have to meet specific water-related requirements
Row 1	Yes, water-related requirements are included in our supplier contracts

W1.5c

(W1.5c) Provide details of the water-related requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Water-related requirement

Setting and monitoring water pollution-related targets

% of suppliers with a substantive impact required to comply with this water-related requirement

76-99

% of suppliers with a substantive impact in compliance with this water-related requirement

76-99

Mechanisms for monitoring compliance with this water-related requirement

Supplier self-assessment

Response to supplier non-compliance with this water-related requirement

Retain and engage

Comment

AEP engages with the City of Lawton in Oklahoma, which supplies water to the AEP Comanche Plant through its municipal POTW. In the past, AEP has had to discuss the quality of this water to ensure its suitability for use in a power plant. We also engage with the City of Gentry, which discharges its treated wastewater into Flint Creek's primary ash pond. This is done in lieu of directly discharging to Little Flint Creek, however, this wastewater can cause problems due to nutrients that can produce algae blooms, creating compliance problems for AEP. The discharge of the ash pond is directed to SWEPCO Lake, which is the cooling pond for the plant. Being a once-through cooled system, the water in the lake, and consequently the water discharged from the ponds, is recycled multiple times, reused within the plant, and then discharged again into the lake. It is therefore imperative that this water be suitable for use.

W1.5d

(W1.5d) Provide details of any other water-related supplier engagement activity.

Type of engagement

Other

Details of engagement

Other, please specify

Onboarding & compliance

% of suppliers by number

76-99

% of suppliers with a substantive impact

None

Rationale for your engagement

AEP values its relationships with its suppliers, energy providers and other organizations looking to do business with us and we want to be as transparent as possible in our expectations of them. AEP's Supplier Code of Conduct serves as a guide for suppliers to uphold our values around safety and health, environmental performance, ethics and compliance, and many other social issues. It is important that AEP do business with environmentally responsible companies. Our stakeholders expect this, as do the communities in which we serve. AEP is fully committed to being a good steward of the environment and requires the following as part of its Supplier Code of Conduct:
1. The efficient use of resources and respect for the environment. Suppliers are encouraged to collaborate with AEP to eliminate waste and cost from our supply chain. Suppliers will strive to reduce emissions and waste, and use energy and natural resources efficiently.
2. Suppliers must comply with all applicable environmental laws, regulations and standards and demonstrate they are doing so.

Impact of the engagement and measures of success

AEP implemented its Supplier Code of Conduct in 2020 that includes environmental compliance (see - https://www.aep.com/assets/docs/b2b/SupplierCodeOfConduct.pdf). This was communicated directly to all suppliers and is an addendum to the terms and conditions of all contracts. We also insist on environmental compliance within our fuel supply chain. For example, while not specific to water, AEP has language in its master coal agreements to ensure environmental compliance among its coal suppliers. The language requires, "Compliance with Applicable Law – Seller and Buyer shall make good faith efforts to comply with the provisions of all federal, state, local, and other governmental laws and any applicable orders, rules and/or regulations, or any amendments or supplements thereto, which have been, or may at any time be, issued by a governmental agency." With regards to our gas suppliers, AEP does not specifically engage them on water related issues, however, they are heavily vetted and scrutinized by the company's Credit Risk organization and, for the most part, consist of large oil/gas producers, large financial institutions and other utilities. We do not directly engage with the producers of the natural gas that we use, but instead, we buy natural gas in the commodities market and negotiate with pipeline companies to deliver the gas, who are not dependent on water for their operations. Regardless, an unfavorable environmental record would impact their financial statements and AEP's decision to continue to work with them. Having these types of engagements with our fuel suppliers ensures our access to a reliable, continuous supply of coal and natural gas.

With regard to the AEP River Transportation organization and its water-related value chain, we belong to and support, two organizations, 1) the American Waterways Operators or AWO, and 2) the Waterways Council, Inc., or WCI. The AWO collaborates with the Coast Guard on our industry's rules and regulations. We are now an "inspected" industry and for our fleet of five boats, we have four Certificate of Inspections and received the last one later in 2021. The WCI collaborates with the Army Corps of Engineers and seeks funding for infrastructure, such as locks and dams. The AEP River Transportation organization always strives for environmental excellence (i.e., no spills) and follows all applicable rules and regulations.

Comment

W1.5e

(W1.5e) Provide details of any water-related engagement activity with customers or other value chain partners.

Type of stakeholder

Other, please specify

AEP is a member of the Electric Power Research Institute and participates in its P55 Ecosystem Risk and Resiliency Program.

Type of engagement

Innovation & collaboration

Details of engagement

Collaborate with stakeholders on innovations to reduce water impacts in products and services

Rationale for your engagement

AEP is a member of the Electric Power Research Institute and participants in its P55 Ecosystem Risk and Resiliency Program. This program focuses on water availability and watershed management to investigate ways of better managing water use and implementing nature-based solutions. For example, the program develops quantitative, hydrologic, and economic research applications that can help AEP manage important watershed, mitigation, resiliency and stewardship issues. Regulatory changes in the definition of Waters of the United States (WOTUS) may impact AEP and technical information from this program will aid AEP in its efforts to influence related rulemakings. Changes in weather patterns and increasing investor group interest will require that AEP address its exposure to water-related risks, especially those due to availability, quality or regulatory restrictions. Issues of environmental justice must also be considered as new infrastructure projects are planned and permitted. The program provides solutions to help AEP manage increasing climate variability impacts, resulting in potential savings of millions of dollars in avoided damages or lost revenue. The 2023 scope includes an ongoing emphasis on regional ecosystem priorities and working groups to provide peer learning, regulatory updates, and innovation.

Impact of the engagement and measures of success

EPRI research on environmental resiliency and mitigation, as well as on water stewardship, has allowed AEP to provide stakeholders with better water disclosure reports and develop meaningful environmental stewardship goals, which can lead to better investor relations and stakeholder interactions. Credit agencies and investor groups have seen that AEP is benefitting from EPRI research on climate-water risks and mitigation opportunities. EPRI will develop insights and quantify the value of healthy ecosystems for communities, helping to address issues of environmental justice. For

example, EPRI P55-related research was used to inform AEP's climate scenario analysis report, which received an EPRI Tech Transfer award in 2022.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

Yes

W2.1a

(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and the total financial impact.

Country/Area & River basin

United States of America
Mississippi River

Type of impact driver & Primary impact driver

Regulatory
Regulation of discharge quality/volumes

Primary impact

Increased compliance costs

Description of impact

EPA's Steam Electric Effluent Guidelines or ELGs for generating facilities establishes limits for FGD wastewater, fly ash and bottom ash transport water, coal combustion residual leachate and legacy wastewater, which are to be implemented through each facility's wastewater discharge permit. A revision to the ELG rule, published in October 2020, established additional options for reusing and discharging small volumes of bottom ash transport water, provided an exception for retiring units and extended the compliance deadline to a date as soon as possible beginning one year after the rule was published but no later than December 2025. In March 2023, EPA proposed additional restrictions on FGD wastewater, fly ash/bottom ash transport water and leachate. A final rule is expected in early 2024. AEP management has assessed technology additions and retrofits necessary to comply with the rule and the impacts of EPA's recent actions on wastewater discharge permitting for FGD wastewater and bottom ash transport water. AEP management cannot predict whether EPA will actually finalize its proposed revisions or what such revisions might be but will continue to monitor this issue and will participate in further rulemaking activities as they arise. The new rulemaking could result in new technology requirements and higher costs for AEP.

Primary response

Comply with local regulatory requirements

Total financial impact

250,000,000

Description of response

AEP has assessed technology additions and retrofits to comply with the impacts of EPA's recent actions affecting FGD wastewater, bottom ash transport water, leachate and legacy wastewater. Permit modifications for affected facilities were filed in January 2021 that reflect the outcome of that assessment. Based on the retirement exception, AEP filed Notices of Planned Participation for four facilities (Northeastern Unit 3, Rockport Units 1 and 2, Pirkey Unit 1, and Welsh Units 1 and 3) which will allow them to operate without modification until their retirement dates (Northeastern–2026, Rockport–2028, Pirkey- 2023, and Welsh–2028). AEP continues to refine the cost estimates of complying with these and other environmental requirements. AEP's future investment to meet these existing and other proposed requirements for fossil generation ranges from approximately $150 to $250 million through 2028. In anticipation of EPA's final ELG rule next spring, AEP has been working with the Utility Water Act Group and the Electric Power Research Institute to assess available technologies associated with potential new provisions.

Country/Area & River basin

United States of America
Mississippi River

Type of impact driver & Primary impact driver

Regulatory
Regulation of discharge quality/volumes

Primary impact

Increased compliance costs

Description of impact

EPA's Coal Combustion Residuals or CCR Rule regulates the disposal and beneficial re-use of coal combustion residuals, including fly ash and bottom ash generated at coal-fired electric generating units. The rule requires certain standards for location, groundwater monitoring and dam stability to be met at landfills and certain surface impoundments at operating facilities. If existing disposal facilities cannot meet these standards, they must close. In August 2020, EPA revised the CCR rule to include a requirement that unlined CCR storage ponds cease operations and initiate closure by April 11, 2021. The revised rule provides two options for seeking an extension of that date. AEP filed extension requests for seven facilities. In January 2022, EPA proposed to deny several extension requests filed by other utilities based on allegations that those utilities are not in compliance with the CCR Rule. EPA's allegations of noncompliance rely on new interpretations of the CCR Rule requirements. The January actions of the EPA have been legally challenged as unlawful rulemaking that revises the existing CCR

Rule requirements without proper notice and opportunity for comment. AEP is unable to predict the outcome of that litigation. Because AEP currently uses surface impoundments and landfills to manage CCR materials at generating facilities, significant costs are being incurred to upgrade or close and replace these existing facilities and conduct any required remedial actions.

Primary response

Comply with local regulatory requirements

Total financial impact

250,000,000

Description of response

Closure and post-closure costs have been included in ARO in accordance with the requirements in the Federal EPA's final CCR rule. Additional asset retirement obligation (ARO) revisions will occur on a site-by-site basis if groundwater monitoring activities conclude that corrective actions are required to mitigate groundwater impacts. AEP may incur significant additional costs complying with EPA's CCR Rule, including costs to upgrade or close and replace surface impoundments and landfills used to manage CCR and to conduct any required remedial actions including removal of coal ash. If additional costs are incurred and AEP is unable to obtain cost recovery, it would reduce future net income and cash flows and impact financial conditions. Management will continue to participate in rulemaking activities and make adjustments based on new federal and state requirements affecting its ash disposal units. For more information, see our 10K report at: https://d18rn0p25nwr6d.cloudfront.net/CIK-0000004904/849094a1-243f-4116-9c0e-335abcbe1ed5.pdf.

Country/Area & River basin

United States of America
Mississippi River

Type of impact driver & Primary impact driver

Chronic physical
Inadequate infrastructure

Primary impact

Impact on company assets

Description of impact

In 2022, AEP armored the riverbank upstream and downstream of the Turk intake structure. The project was done with Corps permit approval due to slippage in the below grade soils downstream of the intake structure caisson. A contributing factor to bank instability was the 2015 Red River flood where the Red River backed up into the Little River.

Primary response

Improve maintenance of infrastructure

Total financial impact

1,700,000

Description of response

Working with Corps-approved permits and requirements, the riverbank was stabilized at the river pumphouse by clearing and placing rip-rap along the bank during 2022.

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Fines, enforcement orders, and/or other penalties	Comment
Row 1	Yes	Enforcement orders or other penalties but none that are considered as significant	Two Notices of Violation were issued during 2022. The first was issued on April 19, 2022, by the WV DEP for a sedimentation event at the AEP Teays Valley Service Center. The site received nearly an inch of rain on April 18 and following the event sediment laden water was found to be discharging from an unfinished sediment basin, impacting a local creek. After the event, a riser pipe was installed and construction of the sediment pond completed, preventing future unauthorized discharges. The second was issued on May 31, 2022, by the LA Office of Conservation for an unauthorized discharge of water at the AEP Dolet Hills Mine. Following a 3-inch rainfall event, the discharge of a pond was found to have a pH of 6.0, equal to the minimum effluent limit. The NOV was subsequently issued. Following the incident, caustic wheels were installed upstream of the discharge to mediate pH levels. Ponds have also been cleaned out to increase the water storage capacity and minimize discharges.

W3. Procedures

W3.1

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of	How potential water pollutants are identified and classified

	potential water pollutants	
Row 1	Yes, we identify and classify our potential water pollutants	AEP complies with both water quality-based and steam electric guideline effluent limits as implemented in NPDES permits. When applying for such permits, the company completes an NPDES Form 2C application, which includes an assessment of the flows, sources of pollution, intake and effluent characteristics, potential discharges not covered by the analysis, and biological toxicity testing data. We also monitor the leachate from our landfills. AEP determines if there will be a reasonable potential to exceed water quality standards to protect both aquatic life and human health. Metals and metalloids, such as arsenic, copper, mercury and selenium, are the potential pollutants of most concern. Thermal discharges are evaluated and conform to the requirements of section 316(a) of the CWA, which ensures that there is a balanced indigenous community of aquatic organisms maintained within the receiving body of water. AEP also complies with all applicable regulatory programs to prevent spills and subsequent impacts. AEP also conducts water quality and biological monitoring at its hydroelectric facilities as required by NPDES permits or to meet FERC relicensing requirements. Our monitoring targets include parameters such as flow, temperature and pH. In West Virginia, monitoring requirements are more extensive and include the collection of samples for metal testing. At our Smith Mountain and Claytor projects, we perform on-going monitoring for dissolved oxygen and temperature.

W3.1a

(W3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Water pollutant category

Other, please specify

Thermal

Description of water pollutant and potential impacts

AEP operates and owns two steam electric units at its Cook Nuclear Plant that utilize once-through cooling of heated condenser water formed by waste heat in the steam cycle. The potential impacts of heated cooling water on biodiversity range from insignificant to temporarily significant, depending on ambient temperature conditions. During extreme drought events, the heated water can cause a temporary displacement of thermally-sensitive fish species in the immediate area where the thermal discharge mixes with the source water body.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

The potential ecological impacts of this heated water are addressed in the facility NPDES permit. The plant has an approved Clean Water Act Section 316(a) variance, which signifies that a state regulatory agency has concluded that a balanced, indigenous biological community will be maintained in the source waterbody despite the discharge of cooling water at temperatures in excess of applicable water quality temperature criteria. Routinely, the state agency requires that AEP provide a re-justification of this finding, based on recent water quality and biological studies.

Water pollutant category

Other, please specify

Coal Combustion Residuals

Description of water pollutant and potential impacts

Two types of ash are produced during the combustion of coal: bottom ash and fly ash. After collection, the fly ash and bottom ash may be managed separately or together in landfills or in wet surface impoundments. If managed in surface impoundments, water is used to sluice the ash to these ponds. Fly ash and bottom ash sluices typically contain heavy metals and inorganic constituents. If present in excessive amounts, these can be harmful to aquatic life or human health.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

Bottom ash ponds are used to treat ash sluice water and are primarily settling basins that allow ash constituents and suspended solids to settle out before the transport water reaches the discharge point or is recycled. Some iron co-precipitation also occurs in these ponds, aiding with the removal of pollutants such as arsenic. The control of pond pH also helps to precipitate out metals, such as copper. In some cases, aeration-mixing or treatment chemicals are used to maximize pond effectiveness. AEP no longer operates any fly ash ponds as all fly ash management has been converted to "dry" systems. In response to proposed and final regulations governing the disposal and beneficial re-use of fly ash and bottom ash created from coal-fired generating units, AEP is considering plans to upgrade or close and replace these existing facilities and conduct

any required remedial actions.

The operation of a wet FGD system typically results in the generation of a chloride purge stream, which must be treated to manage pH, solids and metals. The treatment process is based on three broad principles:
• removal of the bulk of the suspended solids in a primary clarification step,
• conversion of constituents into solid precipitates, and
• removal of solids remaining after primary clarification, including precipitated solids.
Once treated, this effluent is generally directed to a bottom ash pond for further settling before final discharge to a receiving/source water body.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Value chain stage

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as a standalone issue

Frequency of assessment

Annually

How far into the future are risks considered?

1 to 3 years

Type of tools and methods used

Databases

Tools and methods used

Regional government databases

Contextual issues considered

Water availability at a basin/catchment level
Water quality at a basin/catchment level

Stakeholders considered

Customers
Employees
Investors
Local communities
NGOs
Regulators
Other water users at the basin/catchment level

Comment

AEP reports extensively on its water use, consumption and associated risks and mitigation efforts in its annual Corporate Sustainability and GRI reports. Data on water use is collected on a per-plant basis in response to the annual FERC and GRI reporting questions. AEP also uses the WRI Aqueduct Tool to annually assess water stress among its steam-electric facilities in the Mississippi, Sabine and St Lawrence watersheds. The WRI analysis is modified to use the settings for the electric power industry, which places a weighting of 90+% on water availability (i.e. quantity). Discharge data is collected from NPDES discharge monitoring reports, which are also compiled on a per plant basis. State agency or industry groups periodically forecast water demands for their states that may look ahead as far as 50 years.

W3.3b

(W3.3b) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	AEP uses a variety of methods and tools to identify and assess water-related risks, issues and affected stakeholders. With regards to sustainable water use, climate change has	Water-related risk assessments are conducted for all steam-electric facilities at all levels of the supply chain management. The results of our climate scenario analysis can be found in our report, "Powering Forward to Net-Zero, AEP's Climate Impact Analysis." See: https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf Key takeaways from this analysis are as follows: · Investments to harden and build resilience and reliability into the system are essential and have a positive impact. · Weather extremes are becoming noticeably more severe. · AEP's geographic diversity provides a hedge against physical extremes in many climate-related	We are committed to engaging with our stakeholders to enable the generation of low-carbon, affordable, resilient and reliable electricity. Supply chain	Decisions are made on the basis of risk-based technology option evaluations (RBTOs), which assess anticipated compliance options and costs. We work to ensure the

	been identified as a top issue of engagement with our stakeholders. While conducting a year-long effort to analyze the risks to our company from a changing climate, we included three focus areas, 1) transition risk, 2) physical risks and opportunities, and 3) the socioeconomic aspect of coal plant retirements. To be representative, the work involved a diverse, cross-functional team, including engineers; resource planners; meteorologists; and experts in generation,	variables because the impacts tend to be local or regional and can vary greatly by location. · An analysis of heavy rain events at six AEP coal-fueled power plants showed that subtle changes are occurring over time and that weather extremes, like Hurricanes Harvey and Laura, may be more intense. The report is aligned with the Task Force for Climate-related Financial Disclosure (TCFD) framework, which is the preferred approach for reporting on climate risk management. We also referenced the Fourth National Climate Assessment, among other climate-related documents.	resilience and management is a topic of engagement with our customers, investors, and suppliers. This is accomplished through social media, one-on-one outreach, webinars, conference participation, meetings with ESG-focused investors, investor reports, supplier surveys, issuing our Supplier Code of Conduct, and through ESG-related memberships, among many other engagements.	implementation of the most efficient and cost-effective water treatment strategies and technologies. At the operational level, we implement a continuous improvement process to continually look for improvements. AEP also engages in the legislative and regulatory process associated with the U.S. Congress, the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, the Federal Energy Regulatory Commission, state legislatures and regulatory

	transmission, distribution, legal, air quality and environmental, along with enterprise risk and insurance, investor relations, economic development, customer solutions, and corporate sustainability, among others. We also consulted with external resources, reports and studies, and climate experts to further inform our analysis. We evaluated the advancement of new and emerging technologies; public policy and regulatory changes that could influence our actions; the pace of transition;			agencies, among others. We do this to mitigate our risk exposure and to help us achieve our business objectives. AEP is also a member of industry organizations and trade associations (e.g. Utility Water Act Group, Edison Electric Institute) which provide a venue for reviewing potential new water-related regulatory and legislative programs. AEP is also involved with the Ohio River Valley Sanitation Commission through our memberships with the Ohio Electric Utility Institute and

	and risk mitigation strategies to make the electric grid more resilient. We conducted desk research, benchmarking and interviews to frame our approach, capture legacy knowledge and identify best practices and potential new business opportunities.			the Electric Power Research Institute to address water quality in the Ohio River. AEP also participates in regional water planning organizations that cover western and northeastern Texas, Arkansas, and the Illinois River watershed. Additional information on how AEP identifies, assesses and responds to water-related risks can be found in the company's 10K and Corporate Sustainability Reports.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, both in direct operations and the rest of our value chain

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

AEP's common stock is publicly-traded and the company is subject to the jurisdiction of the Securities and Exchange Commission (SEC). In addition to its regularly filed financial reports, AEP is required to advise the SEC and the public within four business days of any event or development which would have a material impact on the companies. Generally, these levels range between 5 to 15 percent of certain financial measures (revenues, assets, or income) based on the most recent audited financial statements for the affected company. Developments that have an impact equal to or in excess of the applicable threshold must be reported within four days to the SEC and publicly announced.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	9	26-50	Nine steam electric generation facilities (coal, lignite, gas) have been identified for the period of Jan 1 to Dec 31, 2022 as having a medium to high overall water risk as per the WRI Aqueduct tool or due to exposure to water-related regulatory compliance programs (Steam Electric Guidelines [ELG] and Coal Combustion Residual [CCR] rules). This represents 38% of our steam electric fleet or 16% of all generation facilities operated by AEP (steam electric, hydro, wind and solar) as calculated on the basis of the number of owned and operated facilities.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

United States of America
Mississippi River

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

% company's annual electricity generation that could be affected by these facilities

1-25

% company's total global revenue that could be affected

Less than 1%

Comment

This response is based on the number of steam-electric facilities utilizing surface water and groundwater withdrawals (excludes renewable facilities) in the Mississippi River watershed that fall within the WRI Aqueduct med-high water risk areas. This is the Dresden Plant. The percentage of company-wide facilities and annual electricity generation that could be affected is based on the AEP steam electric fleet (excludes wind, solar and hydroelectric). The percent of total global revenue that could be affected is assumed to be less than 1%.

Country/Area & River basin

United States of America
Mississippi River

Number of facilities exposed to water risk

7

% company-wide facilities this represents

26-50

% company's annual electricity generation that could be affected by these facilities

26-50

% company's total global revenue that could be affected

Unknown

Comment

AEP owns and operates seven steam electric generation facilities in the Mississippi River watershed with the potential to be impacted by the Steam Electric Effluent Guidelines (ELGs) and current Coal Combustion Residual (CCR) regulations. The CCR rule established new requirements for how coal ash – the material that is left over after coal is burned to make electricity – is stored at our power plants. While we've previously monitored groundwater at many of our coal ash storage sites, the CCR rule created new requirements to install more wells and test for additional substances at coal-fired power plants. We completed the first phase of testing and did additional monitoring and

evaluations during 2020. All of our activities related to the CCR requirements are posted to a public website - https://www.aep.com/environment/ccr. The percentage of company-wide facilities and annual electricity generation that could be affected by these two regulations is based on the 24 steam electric facilities owned and operated by AEP during 2022 and net MWH generation during the same year.

Country/Area & River basin

United States of America
Sabine River

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

% company's annual electricity generation that could be affected by these facilities

1-25

% company's total global revenue that could be affected

Less than 1%

Comment

AEP owns and operates one steam electric generation facility in the Sabine River watershed (Pirkey Plant) with the potential to be impacted by the Steam Electric Effluent Guidelines (ELGs), as well as EPA's Coal Combustion Residuals (CCR) Rule. The percentage of company-wide facilities and annual electricity generation that could be affected is based on the 24 steam electric facilities operated by AEP during 2022.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

United States of America
Mississippi River

Type of risk & Primary risk driver

Acute physical
Flood (coastal, fluvial, pluvial, groundwater)

Primary potential impact

Increased operating costs

Company-specific description

AEP is subject to physical and substantive financial risks associated with climate change. For example, the inability to access appropriate amounts of water to produce electricity could create a future business risk. Physical risks to these facilities from climate change may include changes in precipitation and extreme weather events, including severe drought, storms and floods. Our WRI risk assessment, which was weighted to the electric utility industry, revealed that one AEP facility, Dresden, is subject to medium to high risk with regards to baseline water risks, extremely high risk with regards to the average between-year variability of available water (interannual variability) and med to high risk with regards to eutrophication. All of these risks are the result of the facility being located on the Muskingum River in Ohio. While this facility has not experienced any of these issues, the risk still exists.

Severe weather can also impact AEP's service territories, primarily when thunderstorms, tornadoes, hurricanes, fires, floods and snow or ice storms occur. To understand the risk of storm surge and flooding along coastal Texas, we overlaid our substations in the Corpus Christi area over a storm surge map using the Sea, Lake and Overland Surges from Hurricanes (SLOSH) model developed by the National Weather Service (NWS) to estimate storm surge heights. We modeled how a Category 4 hurricane creates storm surge in this area. The exercise indicated four substations vulnerable to storm surge and flooding in a Category 4 hurricane. An additional review of existing AEP stations conducted during 2020, identified nearly 260 substations located within a 100-year flood plain.

Timeframe

Current up to one year

Magnitude of potential impact

Medium-high

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

26,000,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Extreme weather conditions in general require the development and implementation of system redundancy, adding to costs, and can contribute to increased system stress, including service interruptions. Weather conditions outside of the AEP service territory could also have an impact on revenues. AEP buys and sells electricity depending upon regional transmission system needs and market opportunities. Extreme weather conditions creating high energy demand on AEP's own and/or other systems may raise electricity prices as AEP buys short-term energy to serve AEP's own system, which would increase the cost of energy AEP provides to customers. Changes in precipitation resulting in droughts, water shortages or floods could adversely affect operations, principally the fossil fuel generating units and transmission and distribution operations. A negative impact to water supplies due to long-term drought conditions or severe flooding could adversely impact AEP's ability to provide electricity to customers, as well as increase the price they pay for energy. The availability, quantity and quality of water is highly dependent on weather and the environment. When these are out of balance, there can be operational risks for AEP. For example, an analysis of rainfall trends in northeast Texas shows that heavy rainfall events have increased the average annual rainfall amount over the past 20 years. Another analysis of rainfall trends over the past 20 years in Huntington, West Virginia, shows an increase in annual precipitation amounts and supports research claims that heavy rainfall events are increasing in the Ohio Valley. To the extent climate change impacts a region's economic health, it may also impact revenues. AEP's financial performance is tied to the health of the regional economies AEP serves. While the costs of these impacts are not readily available, from 2023 through 2027, AEP plans to invest $40 billion in capital with an emphasis on transmission, distribution and regulated renewable energy. This includes investing $26 billion in our transmission and distribution systems to make the transmission grid more reliable and resilient. This investment will help mitigate the impacts described above.

Primary response to risk

Increase capital expenditure

Description of response

AEP will be taking many actions to mitigate the effects of weather-related flooding. For example, we will be monitoring the evolution of floodplain maps due to climate change and are prioritizing higher risk substations for remedial action, as the cost of moving all of them outside of flood prone areas in the near term is prohibitive. In the future, the location of new facilities will take into consideration elevation and road access during flood conditions, with the intent of locating outside of areas most vulnerable to severe flooding. We have also developed a process for prioritizing mitigation strategies for at-risk facilities.

AEP has also participated in research with the Electric Power Research Institute to develop, test and deploy efficient, advanced cooling technologies. It has also examined the benefits that AEP can and has realized while using alternate water supplies or management practices at the Comanche, Pirkey, and Turk Plants.

Cost of response

26,000,000,000

Explanation of cost of response

To the extent climate change impacts a region's economic health, it may also impact revenues. AEP's financial performance is tied to the health of the regional economies AEP serves. While the costs of these impacts are not readily available, from 2023 through 2027, AEP plans to invest $40 billion in capital with an emphasis on transmission, distribution and regulated renewable energy. This includes investing $26 billion in our transmission and distribution systems to make the transmission grid more reliable and resilient. This investment will help mitigate the impacts described above.

Country/Area & River basin

United States of America
Mississippi River

Type of risk & Primary risk driver

Regulatory
Regulation of discharge quality/volumes

Primary potential impact

Increased compliance costs

Company-specific description

EPA's Steam Electric Effluent Guidelines or ELGs for generating facilities establishes limits for FGD wastewater, fly ash and bottom ash transport water, coal combustion residual leachate and legacy wastewater, which are to be implemented through each facility's wastewater discharge permit. In March 2023, EPA proposed additional restrictions on FGD wastewater, and fly ash/bottom ash transport water and leachate. A final rule is expected in early 2024. AEP management has assessed technology additions and retrofits necessary to comply with the rule and the impacts of EPA's recent actions on wastewater discharge permitting for FGD wastewater and bottom ash transport water. AEP management cannot predict whether EPA will actually finalize its proposed revisions or what such revisions might be but will continue to monitor this issue and will participate in further rulemaking activities as they arise. The new rulemaking could result in new technology requirements and higher costs for AEP.

EPA's Coal Combustion Residuals or CCR Rule regulates the disposal and beneficial re-use of coal combustion residuals, including fly ash and bottom ash generated at coal-fired electric generating units. The rule requires certain standards for location, groundwater monitoring and dam stability to be met at landfills and certain surface impoundments at operating facilities. If existing disposal facilities cannot meet these standards, they must close. In August 2020, EPA revised the CCR rule to include a requirement that unlined CCR storage ponds cease operations and initiate closure by April 11, 2021. The revised rule provides two options for seeking an extension of that date. AEP filed extension requests for seven facilities. In January 2022, EPA proposed to deny several extension requests filed by other utilities based on allegations that those utilities are not in compliance with the CCR Rule. EPA's allegations of noncompliance

rely on new interpretations of the CCR Rule requirements. The January actions of the EPA have been legally challenged as unlawful rulemaking that revises the existing CCR Rule requirements without proper notice and opportunity for comment. AEP is unable to predict the outcome of that litigation. Because AEP currently uses surface impoundments and landfills to manage CCR materials at generating facilities, significant costs are being incurred to upgrade or close and replace these existing facilities and conduct any required remedial actions.

Timeframe

1-3 years

Magnitude of potential impact

High

Likelihood

Virtually certain

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)

150,000,000

Potential financial impact figure - maximum (currency)

250,000,000

Explanation of financial impact

AEP management continues to refine the cost estimates of complying with air and water quality standards and other impacts of environmental proposals. The estimated financial impacts will change depending on the timing of the new requirements and whether or not EPA provides flexibility in the final rules. These cost estimates will also change based on: (a) the states' implementation of these regulatory programs, (b) additional rulemaking activities in response to court decisions, (c) the actual performance of the pollution control technologies installed on the units, (d) changes in costs for new pollution controls, (e) new generating technology developments, (f) total MWs of capacity retired, replaced or sold, including the type and amount of such replacement capacity and (g) other factors. Based upon management estimates, AEP's future investment to meet environmental requirements ranges from approximately $150 to $250 million through 2028. Note that these costs are not exclusive to water-related requirements, but include those associated with air, water and waste requirements. More information can be found in the company's 10K report at: https://d18rn0p25nwr6d.cloudfront.net/CIK-0000004904/849094a1-243f-4116-9c0e-335abcbe1ed5.pdf.

Primary response to risk

Increase investment in new technology

Description of response

AEP has assessed technology additions and retrofits to comply with impacts of EPA's recent actions affecting FGD wastewater, bottom ash transport water, leachate and legacy wastewater. Permit modifications for affected facilities were filed in January 2021 that reflect the outcome of that assessment. Based on the retirement exception, AEP filed Notices of Planned Participation for four facilities (Northeastern Unit 3, Rockport Units 1 and 2, Pirkey Unit 1, and Welsh Units 1 and 3) which will allow them to operate without modification until their retirement dates (Northeastern–2026, Rockport–2028, Pirkey- 2023, and Welsh–2028).

Closure and post-closure costs have been included in ARO in accordance with the requirements in the Federal EPA's final CCR rule. Additional asset retirement obligation (ARO) revisions will occur on a site-by-site basis if groundwater monitoring activities conclude that corrective actions are required to mitigate groundwater impacts.

AEP continues to engage US EPA during the development of the revised steam electric effluent guidelines and CCR requirements. In addition, AEP continues working with the Electric Power Research Institute to determine the effectiveness of new technologies that would be required to meet the new limits.

Cost of response

250,000,000

Explanation of cost of response

AEP continues to refine the cost estimates of complying with these and other environmental requirements. AEP's future investment to meet these existing and other proposed requirements for fossil generation ranges from approximately $150 million to $250 million through 2028. In anticipation of EPA's final ELG rule next spring, AEP has been working with the Utility Water Act Group and the Electric Power Research Institute to assess available technologies associated with potential new provisions.

AEP may incur significant additional costs complying with EPA's CCR Rule, including costs to upgrade or close and replace surface impoundments and landfills used to manage CCR and to conduct any required remedial actions including removal of coal ash. If additional costs are incurred and AEP is unable to obtain cost recovery, it would reduce future net income and cash flows and impact financial condition. Management will continue to participate in rulemaking activities and make adjustments based on new federal and state requirements affecting its ash disposal units. For more information, see: https://d18rn0p25nwr6d.cloudfront.net/CIK-0000004904/849094a1-243f-4116-9c0e-335abcbe1ed5.pdf

W4.2a

(W4.2a) Provide details of risks identified within your value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

United States of America
Mississippi River

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Reputation & markets
Increased stakeholder concern or negative stakeholder feedback

Primary potential impact

Constraint to growth

Company-specific description

The development of shale gas has made natural gas an economically viable fuel source for AEP generating units; however, the drilling of these gas wells requires large amounts of water. During these operations, there is a risk of contaminating local underground sources of drinking water. Improper discharge of waste waters can also negatively impact surrounding surface waters. As a result, regulators are considering restrictions, which would lead to increased costs for this important fuel source.

Timeframe

1-3 years

Magnitude of potential impact

Low

Likelihood

About as likely as not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The financial impact of future restrictions on shale gas, which could lead to increased costs for this important fuel source, has not been estimated due to the inability to predict future regulatory and financial policies.

Primary response to risk

Supplier engagement
Other, please specify
Supplier diversification

Description of response

We do not directly engage with the producers of the natural gas that we use. We buy natural gas in the commodities market and negotiate with pipeline companies to deliver the gas, who are not dependent on water for their operations. Regardless, an unfavorable environmental record could impact AEP's access to reliable sources of natural gas. Engaging with our fuel suppliers ensures our access to a reliable continuous supply of fuel resources. At the same time, AEP is transitioning its generation fleet to take advantage of the benefits of shale gas and lower cost renewables. To ensure 24/7 grid reliability, we rely on a balanced portfolio that utilizes several energy sources, including coal, gas, renewables, energy efficiency, nuclear, solar and hydro. Maintaining a balanced generation portfolio helps to minimize the impacts of a changing energy infrastructure.

Cost of response

9,000,000,000

Explanation of cost of response

AEP is transitioning to a balanced, diverse portfolio which will help mitigate risk for our customers and shareholders and ensure a more resilient and reliable energy system. Our goal is to add more than 15 gigawatts of new regulated renewable resources over the next decade, by investing $9 billion in regulated renewable generation from 2023 through 2027.

Country/Area & River basin

United States of America
Mississippi River

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Regulatory
Regulatory uncertainty

Primary potential impact

Constraint to growth

Company-specific description

As AEP builds and maintains new and existing infrastructure across our service territory, such as transmission or renewable generation facilities, we are mindful of the potential impacts we might have on wildlife species protected under the Endangered Species Act (ESA), the Migratory Bird Treaty Act and the Bald Eagle and Golden Eagle Protection Act and we take the necessary steps to ensure their protection. These same impacts

can apply to our supply chain as well limiting or delaying new sources of fuel, treatment chemicals, or materials needed for the construction of new generation or transmission facilities.

Timeframe

1-3 years

Magnitude of potential impact

Unknown

Likelihood

Likely

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Unknown

Primary response to risk

Supplier engagement

Promote greater due diligence among suppliers

Description of response

AEP assists potential commercial-scale customers with environmental due-diligence and other environmentally related activities. AEP also works with its major stakeholders and suppliers to ensure that they comply with all relevant environmental regulations.

Cost of response

Explanation of cost of response

Unknown

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Resilience

Primary water-related opportunity

Other, please specify

Transition to renewable energy

Company-specific description & strategy to realize opportunity

A resilient electric grid starts with a system that is designed and built to withstand high winds, powerful storms, and other disruptions that could cause customer outages. AEP has a long history of investing in the grid to make it more reliable, resilient and secure and has focused resources to strengthen the grid's resilience and enhance reliability for customers. AEP is transitioning to a balanced, diverse portfolio which will help mitigate risk for our customers and shareholders and ensure a more resilient and reliable energy system. We are making significant progress. AEP has already retired or sold nearly 13,500 megawatts (MW) of coal-fueled generation during the past decade. We have plans to stop burning coal at additional power plants over the next decade, representing approximately 4,800 MW of coal-fired generation. By 2032, remaining coal plants are projected to represent approximately 19% of AEP's nameplate generating capacity. These changes will reduce our reliance on water-dependent sources of electricity generation. As the grid changes, our resource planning process is changing with it. Once dominated by coal-fueled, water-dependent, generating capacity to meet demand, today's resource plans are now largely comprised of wind, solar and natural gas generating resource investments.

Estimated timeframe for realization

4 to 6 years

Magnitude of potential financial impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

9,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

AEP is transitioning to a balanced, diverse portfolio which will help mitigate risk for our customers and shareholders and ensure a more resilient and reliable energy system. Our goal is to add more than 15 gigawatts of new regulated renewable resources over the next decade, by investing $9 billion in regulated renewable generation from 2023 through 2027. AEP has already retired or sold nearly 13,500 megawatts (MW) of coal-fueled generation during the past decade. We have plans to stop burning coal at additional power plants over the next decade, representing approximately 4,800 MW of coal-fired generation. Based on an economic impact analysis, we know that the average AEP operated coal plant generates $160 million in regional economic activity, $63 million in labor income, and supports more than 700 regional jobs annually. The impact is real and significant. Our analysis shows that plant operations also stimulate significant activity in external supply chains. The most important action we can take is to notify the local community of a plant closure as soon as possible. More recently, AEP has established a new model for enabling a just transition that is collaborative, inclusive and community-driven. An example of how this new model will work involves our Pirkey Plant, a coal-fired facility which was retired in 2023. In 2021, AEP, Southwestern Electric Power Company (SWEPCO) and the Pirkey Power Plant near Hallsville, Texas, joined forces to develop a Just Transition model for plant retirements, based on proactive engagement, inclusion, collaboration and commitment to doing the right thing to support affected communities. The Task Force consisted of more than two dozen local and regional leaders, civic organizations, school districts and business owners. The Just Transition Fund served as a convener and facilitator. It helped the Task Force organize, identify priorities and resources, and develop a road map for economic diversification that can be carried forward. The Just Transition Fund committed six months to the Task Force, achieving the goals established at the outset. More information about this program can be found in our 2023 Corporate Sustainability Report: https://www.aepsustainability.com/lib/docs/2023-AEP-Sustainability-Report.pdf

Type of opportunity

Products and services

Primary water-related opportunity

Other, please specify

Develop new services that support the clean energy transition

Company-specific description & strategy to realize opportunity

As AEP reduces its reliance on fossil-fuels and water-dependent electricity generation, there will be opportunities to invest in new technologies and resources and develop new services that support the clean energy transition, optimize operations, and meet emerging customer demands. Massive amounts of renewable energy will require additional transmission and distribution investment to move the energy and manage its intermittent production. Other opportunities include reduced water usage and consumption with coal plant retirements, particularly in high-stress regions, use of low-

to-no carbon emitting generation resources, and development and/or expansion of low-emission goods and services. Benefits include increased demand and revenues, customer satisfaction, reduced operating costs, reduced exposure to rule market pricing, enhance reputation and brand, increased market valuation through resilience planning and supply chain reliability and ability to operate under various conditions.

Estimated timeframe for realization

4 to 6 years

Magnitude of potential financial impact

High

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

While we are unable to provide a financial estimate, we expect that tens of billions of dollars in capital investments will be needed for new, clean energy infrastructure. This represents a significant opportunity to reduce carbon emissions, provide stable energy costs, and grow corporate earnings while also helping to insulate customers from variable costs associated with fossil fuels.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Amos

Country/Area & River basin

United States of America
Mississippi River

Latitude

38.47306

Longitude

-81.82333

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Coal - hard

Total water withdrawals at this facility (megaliters/year)

24,231

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

24,231

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

10,727

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

10,727

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

13,504

Comparison of total consumption with previous reporting year

Much lower

Please explain

For year to year comparisons, AEP is defining the thresholds as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’ This definition applies to all water use comparisons for the AEP generation fleet. For the Amos Plant, changes in water withdrawals, discharges and consumption are due to changes in plant operation, weather and plant dispatch.

Facility reference number

Facility 2

Facility name (optional)

Dresden

Country/Area & River basin

United States of America
Mississippi River

Latitude

40.09273

Longitude

-82.0151

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Gas

Total water withdrawals at this facility (megaliters/year)

4,376

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

4,371

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

5

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

1,506

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

1,506

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

2,870

Comparison of total consumption with previous reporting year

About the same

Please explain

Based on AEP's water use comparison definitions (more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher’). While facility water withdrawals and consumption were about the same as the previous year, discharges were much higher, likely due to significant rainfall and stormwater discharges.

Facility reference number

Facility 3

Facility name (optional)
Flint Creek

Country/Area & River basin
United States of America
Mississippi River

Latitude
36.17861

Longitude
-94.73458

Located in area with water stress
No

Primary power generation source for your electricity generation at this facility
Coal - hard

Total water withdrawals at this facility (megaliters/year)
13,201

Comparison of total withdrawals with previous reporting year
Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
13,192

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
8.32

Total water discharges at this facility (megaliters/year)
9,112

Comparison of total discharges with previous reporting year
Much lower

Discharges to fresh surface water

9,112

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

4,089

Comparison of total consumption with previous reporting year

About the same

Please explain

Changes in water use accounting account for the "much lower" water withdrawal and discharge values. Water from cooling lakes is no longer considered to be a withdrawal since about 99% of this water is recycled. Instead, water diverted from nearby streams to make-up for water lost from the cooling lakes due to evaporation is now considered to be "withdrawn," resulting in a lower water withdrawal value for the Flint Creek facility. For 2022, water discharge information was compiled from Discharge Monitoring Reports (DMRs), state water use reports, or summaries prepared by AEP experts. In previous years, water discharge volumes had been estimated based on water balance diagrams, which represent nominal flows rather than actual flows. The use of data-based discharge data resulted in a more accurate and lower estimate. For year-to-year comparisons, AEP is defining the thresholds based on peer utility CDP submissions. They are as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’

Facility reference number

Facility 4

Facility name (optional)

Mitchell

Country/Area & River basin

United States of America
Mississippi River

Latitude

39.82972

Longitude

-80.81528

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Coal - hard

Total water withdrawals at this facility (megaliters/year)

13,159

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

13,146

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

13

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

6,434

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

6,434

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

6,726

Comparison of total consumption with previous reporting year

Lower

Please explain

For year to year comparisons, AEP is defining the thresholds as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’ This definition applies to all water use comparisons for the AEP generation fleet. For the Mitchell Plant, changes in water withdrawals, discharges and consumption are due to changes in plant operation, weather and plant dispatch.

Facility reference number

Facility 5

Facility name (optional)

Mountaineer

Country/Area & River basin

United States of America
Mississippi River

Latitude

38.97944

Longitude

-81.93444

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Coal - hard

Total water withdrawals at this facility (megaliters/year)

13,671

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

11,612

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

1,640

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

4,758

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

4,758

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

8,913

Comparison of total consumption with previous reporting year

Lower

Please explain

For year to year comparisons, AEP is defining the thresholds as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’ This definition applies to all water use comparisons for the AEP generation fleet. For the Mountaineer Plant, changes in water withdrawals, discharges and consumption are due to changes in plant operation, weather and plant dispatch.

Facility reference number

Facility 6

Facility name (optional)

Northeastern

Country/Area & River basin

United States of America

Mississippi River

Latitude

36.42619

Longitude

-95.70136

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Coal - hard

Total water withdrawals at this facility (megaliters/year)

6,972

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

6,972

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

2,032

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

2,032

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

4,939

Comparison of total consumption with previous reporting year

Higher

Please explain

For year to year comparisons, AEP is defining the thresholds as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’ This definition applies to all water use comparisons for the AEP generation fleet. For the Northeastern Plant, changes in water withdrawals, discharges and consumption are due to changes in plant operation, weather and plant dispatch.

Facility reference number

Facility 7

Facility name (optional)

Pirkey

Country/Area & River basin

United States of America
Sabine River

Latitude

32.50722

Longitude

-94.53333

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Lignite

Total water withdrawals at this facility (megaliters/year)

3,816

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

3,791

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

26

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

3,816

Comparison of total consumption with previous reporting year

Much lower

Please explain

Changes in water use accounting account for the "much lower" water withdrawal and discharge values. Water from cooling lakes is no longer considered to be a withdrawal since about 99% of this water is recycled. Instead, water diverted from nearby streams to make-up for water lost from the cooling lakes due to evaporation is now considered to be "withdrawn," resulting in a lower water withdrawal value for the Pirkey facility. For 2022, water discharge information was compiled from Discharge Monitoring Reports (DMRs), state water use reports, or summaries prepared by AEP experts. In previous years, water discharge volumes had been estimated based on water balance diagrams, which represent nominal flows rather actual flows. The use of data-based discharge

data resulted in a more accurate and lower estimate. For year-to-year comparisons, AEP is defining the thresholds based on peer utility CDP submissions. They are as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’

Facility reference number

Facility 8

Facility name (optional)

Rockport

Country/Area & River basin

United States of America
Mississippi River

Latitude

37.92556

Longitude

-87.03722

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Coal - hard

Total water withdrawals at this facility (megaliters/year)

16,499

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

13,695

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

2,804

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

11,924

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

11,924

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

4,575

Comparison of total consumption with previous reporting year

Much lower

Please explain

For year to year comparisons, AEP is defining the thresholds as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’ This definition applies to all water use comparisons for the AEP generation fleet. For the Rockport Plant, changes in water withdrawals, discharges and consumption are due to changes in plant operation, weather and plant dispatch.

Facility reference number

Facility 9

Facility name (optional)

Welsh

Country/Area & River basin

United States of America
Mississippi River

Latitude

33.05475

Longitude

-94.84116

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Coal - hard

Total water withdrawals at this facility (megaliters/year)

7,106

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

7,100

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

7

Total water discharges at this facility (megaliters/year)

186

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

186

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

6,920

Comparison of total consumption with previous reporting year

Much lower

Please explain

Changes in water use accounting account for the "much lower" water withdrawal and discharge values. Water from cooling lakes is no longer considered to be a withdrawal since about 99% of this water is recycled. Instead, water diverted from nearby streams to make-up for water lost from the cooling lakes due to evaporation is now considered to be "withdrawn," resulting in a lower water withdrawal value for the Welsh facility. For 2022, water discharge information was compiled from Discharge Monitoring Reports (DMRs), state water use reports, or summaries prepared by AEP experts. In previous years, water discharge volumes had been estimated based on water balance diagrams, which represent nominal flows rather than actual flows. The use of data-based discharge data resulted in a more accurate and lower estimate. For year-to-year comparisons, AEP is defining the thresholds based on peer utility CDP submissions. They are as follows: more than 50% less is ‘much lower,’ 25%-50% less is ‘lower,’ plus or minus 25% is ‘about the same,’ 25%-50% more is ‘higher’ and greater than 50% more is ‘much higher.’

W5.1a

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

% verified

Not verified

Please explain

While our water withdrawals are not third-party verified per the AFi, 2019 standards, they are reviewed and documented by the Federal Energy Regulatory Commission, the agency to which we submit out water withdrawal information. We are confident that our reporting procedures are consistent, rigorous, impartial, transparent, and documented for future access. Failure to report truthful and accurate information can lead to significant penalties, including the possibility of fines and imprisonment for knowing violations.

Water withdrawals – volume by source

% verified

Not verified

Please explain

While the sources of our water withdrawals are not third-party verified per the AFi, 2019 standards, they are reviewed and documented through our NPDES permitting submittals to state regulatory agencies, who review the information for accuracy and

compliance. We are confident that our reporting procedures are consistent, rigorous, impartial, transparent, and documented for future access. Failure to report truthful and accurate information can lead to significant penalties, including the possibility of fines and imprisonment for knowing violations.

Water withdrawals – quality by standard water quality parameters

% verified

Not verified

Please explain

The quality of water withdrawals is measured internally by AEP, but not by a third party.

Water discharges – total volumes

% verified

Not verified

Please explain

While the volumes of our water discharges are not third-party verified per the AFi, 2019 standards, they are reviewed and documented through our NPDES permitting submittals to state regulatory agencies, who review the information for accuracy and compliance. We are confident that our reporting procedures are consistent, rigorous, impartial, transparent, and documented for future access. Failure to report truthful and accurate information can lead to significant penalties, including the possibility of fines and imprisonment for knowing violations.

Water discharges – volume by destination

% verified

Not verified

Please explain

While the destinations of our water discharges are not third-party verified per the AFi, 2019 standards, they are reviewed and documented through our NPDES permitting submittals to state regulatory agencies, who review the information for accuracy and compliance. We are confident that our reporting procedures are consistent, rigorous, impartial, transparent, and documented for future access. Failure to report truthful and accurate information can lead to significant penalties, including the possibility of fines and imprisonment for knowing violations.

Water discharges – volume by final treatment level

% verified

Not verified

Please explain

While the final treatment levels of our water discharges are not third-party verified per the AFi, 2019 standards, they are reviewed and documented through our NPDES permitting submittals to state regulatory agencies, who review the information for accuracy and compliance. We are confident that our reporting procedures are consistent, rigorous, impartial, transparent, and documented for future access. Failure to report truthful and accurate information can lead to significant penalties, including the possibility of fines and imprisonment for knowing violations.

Water discharges – quality by standard water quality parameters

% verified

Not verified

Please explain

While the compliance of our water discharges with standard water quality parameters is not third-party verified per the AFi, 2019 standards, it is reviewed and documented through our NPDES permitting submittals to state regulatory agencies, who review the information for accuracy and compliance. We are confident that our reporting procedures are consistent, rigorous, impartial, transparent, and documented for future access. Failure to report truthful and accurate information can lead to significant penalties, including the possibility of fines and imprisonment for knowing violations.

Water consumption – total volume

% verified

Not verified

Please explain

While the volume of our water consumption is not third-party verified per the AFi, 2019 standards, it is determined through peer-reviewed methodologies and those established by such groups as the Texas Board of Water Engineers. Agencies such as the Texas Commission on Environmental Quality and the Texas Water Development Board review and document these submittals. We are confident that our reporting procedures are consistent, rigorous, impartial, transparent, and documented for future access. Failure to report truthful and accurate information can lead to significant penalties, including the possibility of fines and imprisonment for knowing violations.

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Commitment to prevent, minimize, and control pollution Commitment to reduce water withdrawal and/or consumption volumes in direct operations Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities Commitment to stakeholder education and capacity building on water security Commitment to water stewardship and/or collective action Reference to company water-related targets Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	Water is essential to producing electricity and is critical for many of our processes, including cooling equipment. Although approximately 88% of AEP's power-generating capacity in 2022 required water, we returned most of the water we use to its original source. Water consumption occurs when it is lost to evaporation primarily due to process cooling and flue gas scrubbing. This represents less than 3% of AEP's total water use. Our water withdrawal and consumption will continue to decrease through the addition of wind and solar assets since these energy sources do not require water input. Our water intensity will also decrease as we work toward our carbon reduction goals and retire water-dependent, fossil fuel generation capacity. Because we place a high value on transparency, we extensively report on our water management efforts. We do this through both required reporting, such as the U.S. Energy Information Administration and state-level water usage reports and voluntary efforts. For example, we annually disclose water data in our ESG Data Center and the CDP Water Survey. Our goal is zero violations and zero enforcement actions. AEP uses metrics tied to incentive compensation to encourage self-reporting of events and to improve environmental performance. AEP participates in collaborative industry research, particularly with the Electric Power Research Institute (EPRI), to find better ways to manage its use of water. AEP provides potable water for each employee that is sufficient and continuous for personal and domestic uses, is safe and free of hazards, is of an acceptable color, smell and taste, and is physically accessible within the workplace. AEP agrees that climate change is a significant issue.

			In 2019, climate change was assessed using AEP's risk management framework and added to the summary view of risks reported to the Risk Executive Committee and the Audit Committee of the Board of Directors. In 2020, AEP released its report, "Powering Forward to Net-Zero, AEP's Climate Impact Analysis," which describes our year-long effort to analyze the risks to AEP, its customers, and the communities it serves, from climate change and related water risks. The report is aligned with the Task Force for Climate related Financial Disclosure (TCFD) framework, which is the preferred approach for reporting on climate risk management, and describes AEP's plans and policies to address the issues. 1, 2

[1]EnvironmentHealthandSafetyPolicy.pdf

[2]AEPs-Climate-Impact-Analysis-2021.pdf

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual or committee	Responsibilities for water-related issues
Board-level committee	AEP's Board of Directors is actively engaged in working with management to oversee the company's planning and response to climate impacts, which includes water related issues. The Board understands the importance of these issues and their significance to our employees, customers, investors and other stakeholders. The Board regularly discusses issues related to climate change, including carbon reduction goals, public policy and legislation, renewable investments and AEP's strategy for a clean energy transition. The Committee on Directors & Corporate Governance of AEP's Board of Directors has oversight over sustainability performance reporting, which includes information on sustainability, environmental, social and governance matters. It also oversees the company's strategy for

	addressing climate change and leads the governance of climate risks. The Policy Committee is responsible for examining AEP's policies on major public issues affecting the AEP System, including environmental, technology, and industry change. During 2022, the Policy Committee held three meetings that focused on strategic issues for the industry through 2030, including a discussion on the decarbonization of power generation, climate adaptability and the role of nuclear energy in the clean energy transition, all of which relate to water. The full Board is engaged in approving AEP's strategy to invest in renewable energy and grid modernization, reduce carbon emissions, and support our local communities and regional economies. The board holds management accountable for sustainability and financial performance, as described in a board statement that we publish every year in our annual Corporate Sustainability Report: https://tinyurl.com/yhadjh7t . For more information, visit the following sections of the 2023 CSR: Climate Governance: https://tinyurl.com/3xyjekzj ESG Governance: https://tinyurl.com/49bn5ss3
Chief Executive Officer (CEO)	Due to the carbon intensive nature of our business, AEP's President & CEO is directly responsible for managing AEP's response to climate change risk including water risks. AEP's CEO serves on the board of Director and is a member of the policy committee.

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Overseeing acquisitions, mergers, and divestitures Overseeing major capital expenditures	In response to environmental issues and in connection with its assessment of AEP's strategic plan, the Board of Directors continually reviews risks posed by new environmental rules and requirements that could accelerate the retirement of coal-fired and water-dependent generation assets. The Board of Directors is informed of any new environmental regulations and proposed regulation or legislation that would significantly affect AEP. The Board's Committee on Directors and Corporate Governance oversees AEP's annual Corporate Sustainability Report, which includes information about AEP's environmental, social, governance and financial performance.

		Providing employee incentives Reviewing and guiding business plans Reviewing and guiding corporate responsibility strategy Reviewing and guiding risk management policies Reviewing innovation/R&D priorities Setting performance objectives	The AEP Board of Directors is engaged on all major projects, including those that are water-related, such as compliance with new Steam Electric Effluent Guidelines or the Coal Combustion Residual requirements. In addition, if any water issues are ever determined to be a high risk to the company, those would be presented and discussed. This occurs on a periodic basis. At AEP, we have strong governance to support sustainability and ESG performance, ensuring alignment with corporate strategies. Our Board of Directors works closely with our executive team to ensure that performance, innovation, ethics and service standards are met. The Board has delegated responsibility for overseeing the Company's annual Corporate Sustainability Report (CSR) to its Corporate Governance Committee. The Corporate Governance Committee reviews and approves the annual CSR, which in 2023 included information regarding AEP's Climate Policy, Clean Energy Strategy, and Climate Governance. The Governance Committee also receives updates twice a year from management on its sustainability initiatives and its political engagement activities. During those meetings, management reports on its engagement with stakeholders on a range of issues, including climate change and water management. For more information: 2023 Proxy Statement: https://tinyurl.com/yfxv22xk Climate Policy: https://tinyurl.com/yc2p7cvd Climate Governance: https://tinyurl.com/3xyjekzj ESG Governance: https://tinyurl.com/49bn5ss3 Water Management: https://www.aepsustainability.com/lib/docs/2023-AEP-Sustainability-Report.pdf#page=40

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues

Row 1	Yes	AEP's Board and Board committees consider climate-related issues when reviewing and guiding their development of business strategy and sets the organization's performance objectives, while overseeing major capital expenditures, acquisitions, and divestitures throughout the year, which would include environmental controls related to water use. As part of its oversight role, the Board monitors climate risks, which includes water-related risks due to storms and flooding, and reviews opportunities that may be realized with climate change. The Board also receives an environmental report from management at every regularly scheduled Board meeting. Discussions about carbon and carbon risk occur during Board meetings and those strategic planning sessions. The Board is also responsible for reviewing and approving the Company's allocation of capital. The Board has delegated responsibility for overseeing the Company's annual Corporate Sustainability Report (CSR) to its Corporate Governance Committee. The Corporate Governance Committee reviews and approves the annual CSR, which in 2023 included information regarding AEP's Climate Policy and Water Management. The Corporate Governance Committee also receives updates twice a year from management on its sustainability initiatives and its political engagement activities. During those meetings, management reports on its engagement with stakeholders on a range of issues, including climate change. In addition, one member of the Board is a former CEO of a major U.S. electric utility. Having served as a chief financial officer, they have a strong background in finance, financial reporting and shareholder outreach. They also have experience in environmental issues, operations and the energy business. Their extensive experience in the utility industry provides valuable insight into the risks we face and provides unique insight into effective management of those risks to deliver strong results over the long term. Their involvement in the utility industry also provides significant expertise on regulatory and policy issues that are central to our business. For more information, visit the following sites: 2023 Proxy Statement: https://tinyurl.com/yfxv22xk Climate Policy: https://tinyurl.com/yc2p7cvd Climate Governance: https://tinyurl.com/3xyjekzj ESG Governance: https://tinyurl.com/49bn5ss3

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Chief Executive Officer (CEO)

Water-related responsibilities of this position

Managing water-related risks and opportunities
Managing value chain engagement on water-related issues
Integrating water-related issues into business strategy
Managing major capital and/or operational expenditures related to low water impact products or services (including R&D)

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The CEO is engaged on all major projects, including those that are water-related, such as compliance with new Steam Electric Effluent Guidelines or the Coal Combustion Residual requirements. This also includes climate and water-related issues when reviewing and guiding the company's business strategy, major plans of action, risk management policies, annual budgets, and budget plans, as well as setting the organization's performance objectives, overseeing major capital expenditures, acquisitions, and divestitures throughout the year. AEP’s CEO serves on the board of Director and is a member of the policy committee.

Name of the position(s) and/or committee(s)

Other, please specify
Executive Vice President of Generation

Water-related responsibilities of this position

Assessing future trends in water demand
Assessing water-related risks and opportunities
Managing water-related risks and opportunities
Conducting water-related scenario analysis
Managing public policy engagement that may impact water security
Managing value chain engagement on water-related issues
Integrating water-related issues into business strategy
Managing major capital and/or operational expenditures related to low water impact products or services (including R&D)

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

AEP's Executive Vice President of Generation has direct responsibility for all generation and related environmental issues within the company. He is briefed on all water-related issues as they arise and is kept apprised on a regular basis, not less than every other week. This would include issues such as the new steam electric effluent guidelines or environmental compliance.

Name of the position(s) and/or committee(s)

Other, please specify

Vice President of Environmental Services

Water-related responsibilities of this position

Assessing future trends in water demand
Assessing water-related risks and opportunities
Managing water-related risks and opportunities
Conducting water-related scenario analysis
Managing public policy engagement that may impact water security
Managing value chain engagement on water-related issues
Integrating water-related issues into business strategy
Managing major capital and/or operational expenditures related to low water impact products or services (including R&D)

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

AEP's Vice President of Environmental Services has direct responsibility for water quality and quantity issues within the company. He is briefed on all water-related issues as they arise and is regularly kept apprised on a regular basis, not less than every other week.

Name of the position(s) and/or committee(s)

Chief Sustainability Officer (CSO)

Water-related responsibilities of this position

Assessing water-related risks and opportunities
Conducting water-related scenario analysis
Managing public policy engagement that may impact water security
Managing value chain engagement on water-related issues
Integrating water-related issues into business strategy

Frequency of reporting to the board on water-related issues

Half-yearly

Please explain

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

In addition to the responsibilities listed above, AEP's CSO helps to make and influence decisions pertaining to green bonds, climate, environmental and biodiversity reporting, SEC compliance and other ESG policies and initiatives.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Contribution of incentives to the achievement of your organization's water commitments	Please explain
Monetary reward	Corporate executive team Other, please specify All employees, executives and the CEO		AEP includes Environmental Stewardship in our short term incentive compensation for all employees: 2 percent for Environmental Stewardship. This measure was based on the number of significant environmental enforcement actions during the year (those resolved with a fine exceeding $1,000). To learn more, View AEP's 2023 Proxy Statement: http://aepsustainability.com/lib/docs/2023ProxyStatement.pdf	
Non-monetary reward	Other, please specify AEP employees participating in			While AEP's compensation program is based on the fundamental premise of pay for

	research and development No one is entitled to these incentives			performance, this compensation can come in several forms including the recognition of employee achievements through employee notifications, media announcements, meeting presentations, and other awards. For example, through its EPRI membership, AEP employees are eligible for "Technology Transfer" awards which recognize the implementation of technologies that improve operations or environmental protection. Examples of past awards include the use of floating "hextiles" at the AEP Turk Plant to

				prevent algal blooms in a process pond and associated water quality problems.

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

Yes, direct engagement with policy makers

Yes, trade associations

Yes, funding research organizations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

Evolving U.S. environmental policy considerations have not changed our plans for complying with all applicable environmental regulations. While the path forward for some regulations, such as the CCR or ELG rules is becoming clearer, there are many others that we must comply with and new ones that are still being finalized. As the scope and stringency of environmental regulations evolve, we are faced with technical, operational and financial challenges that are common for our industry. These challenges, including uncertainties with timing, scope and magnitude of future environmental regulations, influence our decisions to upgrade or retire generating units. They also affect the planning process for new generation and transmission projects across our industry. AEP’s active participation in the development of regulations helps to ensure that new requirements are achievable, based on sound science, consistent with statutory authority, balanced with other rulemakings, weigh the cost of compliance for customers, and can be implemented in a rational time frame. Compliance is important to us, but we also have a responsibility to our investors who make the required capital investment and to our customers, who will ultimately pay for the implementation of compliance strategies.

Learn more in AEP's 2023 Climate Lobbying Report: https://www.aep.com/Assets/docs/investors/governance/political/AEPTradeAssnClimateReportFINAL.pdf

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes (you may attach the report - this is optional)

2022 10K.pdf

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	AEP's corporate environmental compliance goal, including compliance with water requirements, is a key part of its business strategy. Potential changes to water regulatory programs have, for many years, been included in the company's long-term capital forecast, which includes our best assessment of the financial exposure due to water-related issues. This forecast is incorporated into our business strategy and communicated to the investment community. AEP's corporate environmental compliance goal, including compliance with water requirements, is a key part of its business strategy.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	Water quality, availability, use and management are increasingly important sustainability issues for AEP. We are continuing to take steps to reduce our water consumption, improve water quality and address water availability issues as we comply with current regulations and prepare for new ones. As a part of this commitment, we are providing over $696,000 of funding to the Electric Power Research Institute during 2023 in support of water-related research, focusing on ecosystem risk and resiliency, water quality, groundwater, strategic sustainability science, and water treatment technologies.
Financial planning	Yes, water-related issues are integrated	5-10	AEP's corporate environmental compliance goal, including compliance with water requirements, is a key part of its business strategy. Potential changes to water regulatory programs have, for many years, been included in the company's long-term capital forecast, which includes our best assessment of the financial exposure due to water-related issues. This forecast is incorporated into our business strategy and communicated to the investment community. AEP's corporate environmental compliance goal, including

			compliance with water requirements, is a key part of its business strategy.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

-60

Anticipated forward trend for CAPEX (+/- % change)

-90

Water-related OPEX (+/- % change)

82

Anticipated forward trend for OPEX (+/- % change)

-42

Please explain

From 2022 to 2023 the water-related CAPEX decrease is estimated to be 60%. From 2023 to 2024 we anticipate a year over year CAPEX decrease of 90%. These are based on current planning assumptions and final decisions have not been made. There are several projects that drive these numbers pending testing, technology studies, regulatory outcomes, and / or business evaluations. It was estimated that from 2019 to 2020, AEP's water-related OPEX increased 82%. Examples of water-related OPEX include permit renewals, water quality testing, consulting services, surface and groundwater monitoring, and regulatory compliance support. A decline of 42% in OPEX was estimated for 2021, based on the first six months of budget information. Estimates are based on expenses for the steam electric fleet that was operated or supported by AEP during 2019, 2020, 2021 and 2022. The declining trends are indicative of plant retirements and ownership transfers.

W7.3

(W7.3) Does your organization use scenario analysis to inform its business strategy?

	Use of scenario analysis	Comment
Row 1	Yes	In 2020, AEP completed a climate scenario risk analysis, which was consistent with the Paris Agreement. In addition to modeling plausible pathways to a low-carbon future, AEP also examined the potential physical impacts and social

		aspects related to retiring coal units in our fleet. Our analysis was guided by the Task Force on Climate-Related Financial Disclosures (TCFD) framework, setting specific parameters related to geography and macro-economic variables. We developed assumptions related to technology development and deployment, energy mix, price of key commodities or inputs, timing of potential impacts, and potential policy changes. The scenarios represented a unique approach to examine potential carbon emissions and generating fleet changes over time. With increased constraints on carbon emissions, water-independent, renewable energy, dominated the future energy portfolio. The study also revealed transition opportunities which will be used to guide future business decisions.

W7.3a

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Climate-related Other, please specify Please see response to 7.3	Scenario modeling is a process by which alternative futures or assumptions are considered to provide insights on strategic directions in the face of uncertainty. In developing our transition scenarios and our approach to analysis, we evaluated potential pathways for greenhouse gas mitigation through potential changes in AEP's generating fleet, such as coal plant retirements, which represent the bulk of AEP's emissions. We also considered existing and future technologies and resources that would enable the transition to net-zero carbon. We used a carbon price as a proxy for regulations, as we do in our Integrated Resource Plans, and developed market assumptions, such as the price of wholesale power. For purposes of this analysis, AEP mirrored the assumptions of the Annual Energy Outlook 2020 for most available parameters. For example, in the 2022 version of this report, petroleum and natural gas remain the most-consumed source of energy in the U.S. through 2050, and wind and solar incentives, along with falling technology costs, support robust competition with natural gas for electricity generation, while the shares of water-dependent coal and nuclear power decrease. In each of the modeled scenarios, there are specific assumptions around constraints on	In 2020, we completed our analysis of how climate-related risks and opportunities may play out under different scenarios, the potential impact they could have on our company, and the new business opportunities they may provide. As part of the analysis, we reviewed a	Climate change remains a top issue with many of AEP's stakeholders. We are asked for detailed plans for attaining net-zero, how we manage the transition cost for customers, and whether we can go faster. These are fair questions as the impacts

		emissions or clean energy requirements. However, there may be multiple policy mechanisms to reach these scenario outcomes. Our analysis was guided by the Task Force on Climate-related Financial Disclosures or the TCFD framework, setting specific parameters related to geography and macro-economic variables. More information can be found in AEP's Climate Impact Analysis report, "Powering Forward to Net-Zero" at: https://aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf	climate-related water risk study done by EPRI. The assessment identified potential risks to: (1) thermal generation, (2) hydroelectric generation, (3) land-based renewable generation and (4) transmission and distribution facilities. These risks may result from projected reductions in water availability (e.g., for hydroelectric or once-through cooling), increased water temperatures (e.g., decrease in cooling efficiency, inability to meet discharge	of a changing climate continue to raise questions globally, with more frequent and severe weather events, wildfires, droughts and floods that are occurring. We are working with our regulators, policymakers, customers and other stakeholders to modernize, strengthen and transition the electric power system to support growing demand for clean energy. In 2022, AEP updated our net-zero GHG emission reduction goals from 2050 to

			permit conditions) and decreased water quality (e.g., from increased transport of sediment and dissolved solids). The report noted key water-related impacts to the AEP system that would primarily occur in the Midwest, Southeast and Southern Plains areas. The potential changes in water quality, availability, temperature and quantity identified by EPRI extend beyond generation facilities. For example, we might need to take mitigating actions to stabilize a stream bank	2045 and revised our baseline from 2000 to 2005. Our goal to reduce GHG emissions 80% by 2030 is now measured against the 2005 baseline and includes all Scope 1 emissions. Consistent with this future scenario, water withdrawals and consumption will significantly decline as older fossil generation is retired and replaced with sources such as wind and solar that do not require water for energy production. AEP has already retired or sold nearly 13,500

			if we were relocating or siting new transmission or distribution infrastructure in an area at risk for this type of erosion. We also reviewed the impacts of flooding and will need to take the location of new facilities into consideration, locating them outside of areas most vulnerable to severe flooding.	megawatts (MW) of water-dependent coal-fueled generation during the past decade. We have plans to stop burning coal at additional power plants over the next decade, representing approximately 4,800 MW of water coal-fired generation. By 2032, remaining water dependent coal plants are projected to represent only about 19% of AEP's nameplate generating capacity.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

When renegotiating water rates, AEP will consider costs other than those directly related to market prices. For example, in the past, AEP paid a premium to have a firm water supply available for its now retired Oklaunion Plant, during periods of intense drought. When renewing the existing contract for grey water at our Comanche Plant, AEP will consider, among other issues, the difficulties that the City of Lawton will have in providing effluent that meets state and federal discharge limits. When renegotiating Flint Creek's water contract, AEP agreed to make improvements to the municipal system to insure adequate downstream flows. The company also accepted an increase in the water rate as a "good neighbor" policy. One last example involves the state of Texas, which allows water rights to be placed into a "trust" to be used for environmental purposes. This gives water right owners a unique option on how to manage their unused water rights.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Definition used to classify low water impact	Please explain
Row 1	Yes	AEP defines low water impact products or services as those that do not rely on or impact sources of water. In particular, wind and solar electricity generation are considered to be low water impact sources of electricity. For example, in 2021, the AEP North Central Energy Facilities (NCEF) Maverick and Sundance wind farms began generating clean, reliable electricity and reducing financial impacts for customers. A third facility, named Traverse, came online in March 2022. The Traverse project is the largest single wind farm built at one time in North America. Together, the wind farms provide 1,484 MW of low water-impact, clean energy, to customers of Public Service Company of Oklahoma and the Southwestern Electric Power	According to CDP guidance, "low water impact" products or services are those that can be considered as having a lower detrimental impact on water resources, water quality and ecosystems than the market norm or the company's previous products/services. In the case of AEP, wind and solar energy produced from photovoltaic panels use virtually no water at all. Likewise, wind turbines are used to produce electricity without the use of water. In addition, these renewable energy sources are clean and do not threaten water contamination as there are no discharges to water sources.

		Company. At the corporate level, 2021 marked an important milestone in AEP's clean energy transition when the company announced a plan to shift our generation portfolio from majority fossil fuel, which is dependent on water, to majority, water-independent, renewables by the end of this decade. AEP measures its progress annually and is transparent about our efforts. Part of this includes holding ourselves accountable to achieving our goal to add approximately 15 GW of regulated renewables to our generation portfolio by 2032.	

W8. Targets

W8.1

(W8.1) Do you have any water-related targets?

Yes

W8.1a

(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	Yes	
Water withdrawals	Yes	
Water, Sanitation, and Hygiene (WASH) services	No, and we do not plan to within the next two years	While there is no specific target regarding WASH facilities, employees at all of our facilities, excluding those that are unmanned, are provided with access to clean drinking water, sanitary facilities and solid waste management. Typically, municipal water, well water or bottled water is provided and each of these delivery methods is required to meet safe drinking water requirements. For example, at AEP locations with non-transient non-community water systems, we are required to report water quality (e.g. bacteria and nitrate) as dictated by state and federal drinking water regulations.

Other		

W8.1b

(W8.1b) Provide details of your water-related targets and the progress made.

Target reference number
Target 1

Category of target
Water withdrawals

Target coverage
Company-wide (direct operations only)

Quantitative metric
Reduction in total water withdrawals

Year target was set
2022

Base year
2005

Base year figure
134,000,000

Target year
2030

Target year figure
26,800,000

Reporting year figure
51,100,000

% of target achieved relative to base year
77.3320895522

Target status in reporting year
Underway

Please explain
As we reduce our GHG emissions through the retirement or sale of water-dependent steam-electric facilities, our water use also declines.
In 2022, AEP updated its net-zero GHG emission reduction goals from 2050 to 2045 and revised our baseline from 2000 to 2005. Our goal to reduce GHG emissions 80% by 2030 is now measured against the 2005 baseline and includes all Scope 1 emissions.

Through 2022, we achieved a 66% reduction in Scope 1 GHG emissions (inclusive of emission reductions that result from assets sold and retired), or a 62% reduction according to the GHG Protocol, which excludes reductions that result from assets sold. Our approach to accomplishing net-zero emissions includes significant investment in water-independent renewable generation and energy storage, exploring emerging low- and zero-emission generation technologies, and steadily reducing emissions over time. At the same time, since 2013, we have reduced our surface water use by nearly 66% and our surface water consumption by 82%. More information regarding these targets can be found in our CDP Climate submittal for question C4.1a and in our Corporate Sustainability Report at http://aepsustainability.com/lib/docs/2023-AEP-Sustainability-Report.pdf

Target reference number

Target 2

Category of target

Water pollution

Target coverage

Company-wide (direct operations only)

Quantitative metric

Other, please specify

100% compliance and no violations

Year target was set

2017

Base year

2017

Base year figure

7

Target year

2022

Target year figure

0

Reporting year figure

4

% of target achieved relative to base year

42.8571428571

Target status in reporting year

Underway

Please explain

Our Generation team leverages metrics to encourage self-reporting of events and improve environmental performance through our Environmental Performance Index (EPI). The EPI helps keep prevention "top of mind" and drives us to be more proactive in protecting the
environment. This program has proven successful as we saw consistency and even a decrease in the number of EPI events from 2015 through 2021. In 2022, a new standard for environmental performance was adopted in AEP Generation. This standard broadened the types of environmental events that are included in the EPI. For example, in addition to reportable spills, releases, and water discharge permit events, the EPI now includes air and land media events. An exceedance of any permitted limitation or failure to meet a regulatory
deadline for sampling, inspecting, or reporting is counted toward the EPI. Under this new standard for 2022, we had 4 water-related EPI events, 2 of which resulted in resolved enforcement actions. This EPI influences a portion of the funding for short-term incentive compensation for all Generation employees. More information regarding this target can be found in our Corporate Sustainability Report at
http://aepsustainability.com/lib/docs/2023-AEP-Sustainability-Report.pdf

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

Yes

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Though only the first section of the CDP survey has been indicated, all portions of the survey have been verified through an AEP auditing process.	Other, please specify Institute of Internal Auditors	AEP auditors followed the standards and guidance of the Institute of Internal Auditors as they conducted the audit of the company's Corporate Sustainability Report, from which much of the information used in this response was obtained.

W10. Plastics

W10.1

(W10.1) Have you mapped where in your value chain plastics are used and/or produced?

	Plastics mapping	Please explain
Row 1	Not mapped – and we do not plan to within the next two years	

W10.2

(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?

	Impact assessment	Value chain stage	Please explain
Row 1	Yes	Direct operations	Thick plastic liners are utilized across our fleet for coal combustion residual (CCR) landfills to create a physical barrier between potentially leached CCRs and groundwater impacts. Plastic tarps may also be used during staging or construction activities to prevent storm water from coming in contact with equipment or materials. Polymer insulators are utilized to support and segregate electrical conductors (wires) on distribution and transmission lines and are comprised of a fiberglass rod covered with polymer sheds. Polymer insulators are utilized for both lower voltage applications and high voltage applications up to 345kV. Compared to glass or porcelain insulators, polymer insulators are lighter and more easily handled by a lineman without a mechanical assist and result in less load on structures. Secondary pedestals are made of plastic and installed over distribution equipment. These covers are used to protect the equipment and avoid human exposure to potential electrical hazards. As with any business that utilizes electronic equipment (i.e., computers, servers, etc.), wires utilized for electronic equipment are shielded using plastic covers.

W10.3

(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.

	Risk exposure	Please explain
Row 1	No, risks assessed, and none considered as substantive	Procurement of large quantities of plastic liners or insulators are incorporated into project schedules. Typically, the duration of these projects are long where materials are procured in time to meet project schedules.

W10.4

(W10.4) Do you have plastics-related targets, and if so what type?

	Targets in place	Please explain
Row 1	No – and we do not plan to within the next two years	

W10.5

(W10.5) Indicate whether your organization engages in the following activities.

	Activity applies	Comment
Production of plastic polymers	No	
Production of durable plastic components	No	
Production / commercialization of durable plastic goods (including mixed materials)	No	
Production / commercialization of plastic packaging	No	
Production of goods packaged in plastics	No	
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	

W11. Sign off

W-FI

(W-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.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Vice President Environmental Services	Other C-Suite Officer

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Yes, CDP may share our Main User contact details with the Pacific Institute

Please confirm below

I have read and accept the applicable Terms