

W0. Introduction

W0.1

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

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

As a responsible corporate citizen, FirstEnergy is committed to managing our environmental impacts and addressing climate-related risks and opportunities. We recognize that climate change is a significant global challenge and we are taking proactive steps to reduce our carbon footprint and support the transition to a low-carbon economy. Our Climate Change Strategy aligns with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations and includes identifying and assessing climate risks and opportunities, setting emissions reduction targets, and developing plans to mitigate risks and capitalize on opportunities. We have set ambitious goals to reduce our carbon footprint and achieve net-zero carbon emissions from our operations (Scope 1) by 2050. To achieve this, we are investing in renewable energy, exploring innovative technologies, considering a thoughtful transition from coal generation, and promoting energy efficiency. At FirstEnergy, we believe that managing climate-related risks and opportunities is essential to our long-term success and the well-being of our communities. We are committed to transparency and open communication about our approach to climate oversight and environmental stewardship and will continue to monitor and assess our impacts and take proactive steps to address them.

For the purposes of this CDP report, all financial and emissions information is based on FirstEnergy’s 2022 year-end portfolio.

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

W-EU0.1a

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

- Electricity generation
- Transmission
- Distribution

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	3082	100	18398665
Lignite			
Oil			
Gas			
Biomass			
Waste (non-biomass)			
Nuclear			
Fossil-fuel plants fitted with carbon capture and storage			
Geothermal			
Hydropower			
Wind			
Solar			
Marine			
Other renewable			
Other non-renewable			
Total	3082	100	18398665

W0.2

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

Reporting year	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?

No

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	US3379321074

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	Direct: Water is essential to FirstEnergy's ability to generate electricity. All of our plants use water for steam production, material delivery, and plant cooling purposes. This is evidenced by our total withdrawal averaging almost 177 megaliters of water per day. Indirect: Municipal Water supply is important to support many of our water, sanitation and hygiene (WASH) operations for our employees.
Sufficient amounts of recycled, brackish and/or produced water available for use	Not very important	Neutral	Of the three generation and synchronous condenser facilities operated by FirstEnergy in 2022, two of them (Harrison Power Station and Fort Martin Power Station) recycle their non-contact cooling water; however, FirstEnergy facilities are not located in areas that require use of recycled, brackish and/or produced water due to supply constraints.

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		Total water withdrawals are measured and/or monitored at all FirstEnergy generation and synchronous condenser facilities, as required by NPDES permit and state water withdrawal permit/license requirements.
Water withdrawals – volumes by source	100%	Continuously		Water withdrawals by source are measured and/or monitored at all FirstEnergy generation and synchronous condenser facilities.
Entrained water associated with your metals & mining and/or coal sector activities - total volumes [only metals and mining and coal sectors]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Continuously		Total water withdrawal quality is measured and/or monitored at all FirstEnergy generation and synchronous condenser facilities, as required by NPDES permit requirements.
Water discharges – total volumes	100%	Continuously		Water discharges (total volume) are measured and monitored at all FirstEnergy generation and synchronous condenser facilities
Water discharges – volumes by destination	100%	Continuously		Water discharge (volumes by destination) are measured and monitored at all FirstEnergy generation and synchronous condenser facilities.
Water discharges – volumes by treatment method	100%	Continuously		Water discharge (volumes by treatment method) are measured and monitored at all FirstEnergy generation and synchronous condenser facilities.
Water discharge quality – by standard effluent parameters	100%	Continuously		Water discharge quality data (by standard effluent parameters) are measured and monitored at all FirstEnergy generation and synchronous condenser facilities.
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	Not monitored	<Not Applicable>	<Not Applicable>	
Water discharge quality – temperature	100%	Continuously		Water discharge quality data, including temperature, are measured and monitored at all FirstEnergy generation and synchronous condenser facilities
Water consumption – total volume	100%	Yearly		Water consumption (total volume) at all FirstEnergy generation and synchronous condenser facilities is calculated using engineering estimates.
Water recycled/reused	100%	Yearly		Water recycling for non-contact cooling water is measured/estimated at all FirstEnergy generation and synchronous condenser facilities with recycling capabilities.
The provision of fully-functioning, safely managed WASH services to all workers	26-50	Monthly		Facilities providing fully functioning WASH services for all workers are measured.

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	64690.8	About the same	Increase/decrease in efficiency	Lower	Increase/decrease in efficiency	We are targeting a 20% reduction in water consumption at our two regulated coal plants by 2030 from our 2019 baseline.
Total discharges	51037	About the same	Increase/decrease in efficiency	Lower	Increase/decrease in efficiency	We are targeting a 20% reduction in water consumption at our two regulated coal plants by 2030 from our 2019 baseline.
Total consumption	13653	About the same	Increase/decrease in efficiency	Lower	Increase/decrease in efficiency	We are targeting a 20% reduction in water consumption at our two regulated coal plants by 2030 from our 2019 baseline.

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	No	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	WRI Aqueduct	WRI Aqueduct was used on multiple scales. Whether reviewing overall water risk or water stress, none of the areas where our generation or synchronous condensers are located constitute a high risk or above.

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	64116	About the same	Increase/decrease in efficiency	
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Brackish surface water/seawater is not withdrawn as part of our operations.
Groundwater – renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Groundwater - renewable as a source of withdrawal is not accounted for as part of our operations.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Groundwater - non-renewable as a source of withdrawal is not accounted for as part of our operations.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Produced/entrained water as a source of withdrawal is not accounted for as part of our operations.
Third party sources	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	While third party sources as a source of withdrawal do occur during operation of our facilities, they are not a material part of our operations.

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	51037	About the same	Increase/decrease in business activity	
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Brackish surface water/seawater does not receive any water discharge as part of our operations.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Discharge to Groundwater is a not part of our operations.
Third-party destinations	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	While FirstEnergy may utilize third party sources for employee sanitation purposes, the discharge to third party destinations is not material to our operations.

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	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	We are installing the tertiary treatment as required by the 2020 ELG Rule. Although we are seeking cost recovery through the WV PSC, the installation of the treatment is not subject to PSC approval.
Secondary treatment	Relevant but volume unknown	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	Fort Martin - Outlet 003 and 102 receive secondary treatment Harrison - Outlet 001 and 002 (plant water) receive secondary treatment Eastlake Synchronous Condenser - Outlet 002 and 003 receive secondary treatment
Primary treatment only	Relevant but volume unknown	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	Some Fort Martin and Harrison stormwater receive primary treatment
Discharge to the natural environment without treatment	Relevant but volume unknown	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	Fort Martin - Outlet 002 and some stormwater receive primary treatment Harrison - Outlet 001 and 002 cooling towers and some stormwater receive primary treatment
Discharge to a third party without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	Eastlake Synchronous Condenser sewage discharge
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	

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	1245900000	64690		We are targeting a 20% reduction in water consumption at our two regulated coal plants by 2030 from our 2019 baseline.

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
0.66	Total water consumption	MWh	Lower	Both of our regulated coal plants – Harrison and Fort Martin – function with 100% closed-cycle cooling systems (with cooling towers), which use approximately 90% less water compared to once-through, open-cycle cooling systems. This has helped our regulated generation fleet avoid about 90 billion gallons in water withdrawals every year, reducing our use of this important natural resource. We also run additional reuse processes at Harrison and Fort Martin to further minimize water use at the plants.

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	No	

W1.5

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

	Engagement	Primary reason for no engagement	Please explain
Suppliers	Yes	<Not Applicable>	<Not Applicable>
Other value chain partners (e.g., customers)	No	Important but not an immediate business priority	

W1.5a

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

Row 1

Assessment of supplier impact

No, we do not assess the impact of our suppliers and have no plans to do so within the next two years

Considered in assessment

<Not Applicable>

Number of suppliers identified as having a substantive impact

<Not Applicable>

% of total suppliers identified as having a substantive impact

<Not Applicable>

Please explain

FirstEnergy has all suppliers comply with our Supplier Code of Conduct. The Supplier Code of Conduct specifies that suppliers will safeguard the environment and minimize the use of materials of concern, which includes water. We have made a commitment to environmental stewardship and want to ensure that the businesses we work with comply with our values and expectations with regards to water and other environmental topics. In addition, Supply Chain's mission includes further improvement and prioritization of environmental, social, and governance topics in our supply chain strategy. Also, we partner with suppliers who embrace sustainable business practices.

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	Comment
Row 1	No, and we do not plan to introduce water-related requirements within the next two years	FirstEnergy has all suppliers comply with our Supplier Code of Conduct. The Supplier Code of Conduct specifies that suppliers will "safeguard the environment" and "minimize the use of materials of concern", which includes water. We have made a commitment to environmental stewardship and want to ensure that the businesses we work with comply with our values and expectations with regards to water and other environmental topics. In addition, FirstEnergy's supply chain mission includes further improvement and prioritization of environmental, social, and governance topics in our supply chain strategy. Also, we partner with suppliers who embrace sustainable business practices.

W1.5d

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

Type of engagement

No other supplier engagements

Details of engagement

<Not Applicable>

% of suppliers by number

<Not Applicable>

% of suppliers with a substantive impact

<Not Applicable>

Rationale for your engagement

FirstEnergy does not knowingly engage in business relationships with suppliers that cannot adhere to our Supplier Code of Conduct. One measure of success in this area is the number of environmental enforcement actions that occur within FirstEnergy. Overall, this approach to supplier relationships will help build a more sustainable supply chain in alignment with our Supply Chain Mission.

Impact of the engagement and measures of success

<Not Applicable>

Comment

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
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Type of impact driver & Primary impact driver

Regulatory	Regulation of discharge quality/volumes
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Primary impact

Impact on company assets

Description of impact

On August 31, 2020, USEPA finalized a rule that revised the regulations for the Steam Electric Power Generating category. The rule sets strict limits on the discharge of pollutants in flue gas desulfurization wastewater and also limits the discharge of coal ash transport water. The new requirements directly affect FirstEnergy generation facilities, and compliance costs will be in the millions of dollars.

Primary response

Comply with local regulatory requirements

Total financial impact

Description of response

FirstEnergy has engaged with various stakeholders regarding the regulations and pending permits. FirstEnergy actively works with stakeholders to promote mutually beneficial outcomes where possible. FirstEnergy will comply with all requirements from the outcome of the final implemental rules.

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	Fines	There was an exceedance of federal pollution limits at two coal ash landfills. FirstEnergy agreed to pay a fine and build new discharge pipelines.

W2.2a

(W2.2a) Provide the total number and financial value of all water-related fines.

Row 1

Total number of fines

1

Total value of fines

610000

% of total facilities/operations associated

90

Number of fines compared to previous reporting year

About the same

Comment

There were exceedances of federal pollution limits (NPDES permit limits) at two coal ash landfills. FirstEnergy agreed to pay a fine and build a new discharge pipeline at each facility moving the discharge point from a smaller to a larger receiving water body.

W2.2b

(W2.2b) Provide details for all significant fines, enforcement orders and/or other penalties for water-related regulatory violations in the reporting year, and your plans for resolving them.

Type of penalty

Fine

Financial impact

610000

Country/Area & River basin

United States of America

Mississippi River

Type of incident

Effluent limit exceedances

Description of penalty, incident, regulatory violation, significance, and resolution

the violation was related to exceedances of federal pollution limits (NPDES permit limits) at two coal ash landfills. The wastewater exceeded permitted levels of boron, a naturally-occurring element found in rocks, soil, and coal ash. FirstEnergy agreed to construct a new discharge pipeline at each facility moving the discharge point from a smaller to a larger receiving water body.

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 potential water pollutants	How potential water pollutants are identified and classified	Please explain
Row 1	Yes, we identify and classify our potential water pollutants	FirstEnergy generation facilities are regulated under various federal, state and local water quality regulations, the majority of which result from the Clean Water Act and its amendments.	<Not Applicable>

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

Inorganic pollutants

Description of water pollutant and potential impacts

Coal-fired power plants discharge wastewater into waterways such as ponds, lakes, rivers, and streams. The discharges may include pollutants such as selenium, mercury, arsenic, nickel, bromide, chloride, and iodide, as well as nutrient pollution and total dissolved solids.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Water recycling

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

Please explain

Water quality management involves closely monitoring the contents of water used at our two plants, carefully managing wastewater, and appropriately cleaning and treating water to remove metals and other compounds before release. FirstEnergy monitors water releases to help ensure the company is protecting surface water and groundwater in the areas where our plants operate, and aligning with compliance standards set by the West Virginia Department of Environmental Protection and U.S. Environmental Protection Agency. The scrubber process at the Harrison plant is a zero-discharge system, which means no water is released as part of those operations. Instead, the company carefully collects water from the landfill at Harrison and either recycle it for use in the scrubber or treats the landfill water to clean it before release. At Fort Martin, FirstEnergy uses a sophisticated water treatment method to remove metals and other compounds before release.

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 part of an established enterprise risk management framework

Frequency of assessment

More than once a year

How far into the future are risks considered?

3 to 6 years

Type of tools and methods used

Tools on the market

Enterprise risk management

International methodologies and standards

Databases

Tools and methods used

WRI Aqueduct

Other, please specify (PENTOXSD, Cormix, as appropriate)

Contextual issues considered

Stakeholder conflicts concerning water resources at a basin/catchment level

Water regulatory frameworks

Status of ecosystems and habitats

Stakeholders considered

Customers

Local communities

Comment

FirstEnergy has a formal, comprehensive Enterprise-Wide Risk Management (EWRM) program in place to evaluate water risks on an as-needed basis. Plant water quality is frequently assessed under National Pollutant Discharge Elimination System (NPDES) permit conditions and development. FirstEnergy proactively analyzes and mitigates risks through stakeholder participation, various tools and available resources.

Value chain stage

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

Not defined

How far into the future are risks considered?

Unknown

Type of tools and methods used

Other

Tools and methods used

Internal company methods

Contextual issues considered

Implications of water on your key commodities/raw materials

Stakeholders considered

Suppliers

Comment

FirstEnergy utilizes a strategic sourcing model. As part of that model, we may assess suppliers' environmental commitments and risks, including those related to water. FirstEnergy's Supply Chain group also collaborates with suppliers on Employee, Environmental, Social and Governance (EESG) initiatives, which could include water, to achieve mutually beneficial solutions.

Value chain stage

Other stages of the value chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

Annually

How far into the future are risks considered?

3 to 6 years

Type of tools and methods used

Databases

Other

Tools and methods used

Regional government databases

Internal company methods

Contextual issues considered

Stakeholder conflicts concerning water resources at a basin/catchment level

Stakeholders considered

Customers

Local communities

Comment

FirstEnergy has developed an extensive internal emergency response organization. As such, an incident command structure is employed and drills are conducted at least annually. FirstEnergy participates in working groups, training opportunities and conferences at all levels of the public and private sectors to ensure readiness, build relationships and stay abreast of technological advances.

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	FirstEnergy has a formal, comprehensive Enterprise-Wide Risk Management (EWRM) program in place to evaluate water risks on an as-needed basis.	As part of FirstEnergy's ERM identification and assessment process, the company categorizes risks according to our risk taxonomy – strategic, financial, operational, compliance and litigation, and reputational. With subject-matter expert support, FirstEnergy assesses risk size and scope and makes risk prioritization decisions by quantifying potential impact, identifying time horizon for onset and assessing likelihood of occurrence.		Oversight and accountability are key facets of our ERM process for monitoring and managing risks. The company assigns risk owners as well as responsibilities for control and mitigation of risks. The Corporate Risk department works with those owners cyclically as part of the ERM process to certify risk controls and make any needed management adjustments.

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?

No

W4.1a

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

Other than the ever-present potential for regulatory change, or the unlikely disruption of water sources, FirstEnergy has not identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on its business.

W4.2b

(W4.2b) Why does your organization not consider itself exposed to water risks in its direct operations with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	Other than the ever-present potential for regulatory change, or the unlikely disruption of water sources, FirstEnergy has not identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on its business.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Not yet evaluated	FirstEnergy has not yet evaluated the impact of water risks from our supply chain

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

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

FirstEnergy's generation fleet operates closed loop systems, which recirculate cooling water.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

FirstEnergy does not account for savings resulted from closed cycle cooling.

Type of opportunity

Resilience

Primary water-related opportunity

Resilience to future regulatory changes

Company-specific description & strategy to realize opportunity

Evolving regulatory landscapes can also alter the operations and maintenance of power stations. FirstEnergy actively evaluates those potential risks along with means to avoid those risks. The Harrison flue gas desulfurization (FGD) system with its zero liquid discharge design allows it to control air pollution without the need to discharge wastewater to surface waters, like other FGD systems. As such, future water regulatory actions are not expected to affect the FGD system at Harrison. Another project FirstEnergy conducted is the Harrison Leachate return line. The line will return leachate from the Harrison Landfill back to the scrubber at Harrison Power Station, which is a zero liquid discharge process. Such actions will absolve approximately 52.5 million gallons per year from future regulatory changes.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

FirstEnergy does not have a centralized accounting system to account for cost avoidances from changes in regulatory structure.

Type of opportunity

Efficiency

Primary water-related opportunity

Cost savings

Company-specific description & strategy to realize opportunity

FirstEnergy regularly purchases water for water, sanitation and hygiene (WASH) services from our local utility stakeholders. FirstEnergy's Environmental group was presented with the President's Award in 2018 for being able to reduce our consumption of utility drinking water, thereby reducing purchased water by about 25 million gallons per year at two facilities.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

FirstEnergy does not account for varying changes in water consumption.

Type of opportunity

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

FirstEnergy developed storm water pollution prevention plans (SWPPPs) as part of our transmission and distribution project planning process. These SWPPPs are project specific and rely on best practices for both preventing erosion from stormwater runoff and protecting the quality of local waterways and tributaries from construction-related silt and sediment. Plans are developed by our Environmental group and provided to the Construction & Design Services group to make sure we comply with all applicable rules and regulations.

FirstEnergy also focuses on preventing erosion and protecting waterways outside the scope of project planning. For example, we built retention basins around our LEED-certified Center for Advanced Energy Technology (CAET) to prevent flooding and erosion by restricting the flow of rainwater back to streets and storm drains. As part of the Energizing the Future transmission program, FirstEnergy also installed a similar retention basins around newly constructed substations to protect communities and local waterways from flooding and erosion. In addition, FirstEnergy's CAET facility features a bioretention system that uses soil, sand and vegetation to help remove pollutants from rainwater before releasing the water back to the community's storm drain system.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

FirstEnergy does not have a centralized accounting system to account for savings resulted from LEED certification designs.

Type of opportunity

Markets

Primary water-related opportunity

Strengthened social license to operate

Company-specific description & strategy to realize opportunity

FirstEnergy's partnership with the Western Reserve Land Conservancy's conservation project at the Chagrin River Landing in Eastlake, Ohio. The landing will include greater water recreational activities and restore areas back to their natural floodplain habitat.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Unknown

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

The financial impact is a direct donation to the Western Reserve Land Conservancy that allows FirstEnergy to have a positive impact on, and better interact with our value chain, thereby promoting the company's EESG activities, core values, and social license to operate.

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	Commitment to reduce water withdrawal and/or consumption volumes in direct operations	FirstEnergy has a publicly available Environmental Policy that states our intent to minimize impacts and use natural resources wisely. In 2020, the company also created a goal to reduce water consumption at our two coal plants by an aggregate 20 percent by 2030 based on 2019 levels.

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	The board has five standing committees that, through their respective oversight responsibilities, assist in guiding FirstEnergy's Climate Strategy and related efforts. The Corporate Governance, Corporate Responsibility and Political Oversight Committee has general responsibility for oversight of EESG matters and regularly receives climate-related updates at its meetings. In coordination with the Corporate Governance, Corporate Responsibility and Political Oversight Committee, the Operations and Safety Oversight Committee reviews and monitors environmental-related strategies, initiatives and policies, including in the area of climate change. The Finance, Audit and Compensation Committees also provide specific oversight of EESG matters that fall within the scope of the responsibilities set forth in each of their charters. Reports to the board and its committees are typically provided by members of the senior leadership team or other company leaders, with input and support from the relevant cross-functional, management-level committees and other subject matter experts. Discussions occurring at the board Committee level, in turn, are regularly reported to the full board, including climate-related topics as appropriate.

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	Sporadic - as important matters arise	Monitoring implementation and performance Overseeing major capital expenditures Overseeing the setting of corporate targets Providing employee incentives Reviewing and guiding corporate responsibility strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Setting performance objectives	The board has five standing committees that, through their respective oversight responsibilities, help guide FirstEnergy's Climate Strategy and related efforts. The Corporate Governance, Corporate Responsibility and Political Oversight Committee has general responsibility for oversight of EESG matters and regularly receives climate-related updates at its meetings. In coordination with the Corporate Governance, Corporate Responsibility and Political Oversight Committee, the Operations and Safety Oversight Committee reviews and monitors environmental-related strategies, initiatives and policies, including in the area of climate change. The Finance, Audit and Compensation Committees also provide specific oversight of EESG matters that fall within the scope of the responsibilities set forth in each of their charters. Reports to the board and its committees are typically provided by members of the senior leadership team or other company leaders, with input and support from the relevant cross-functional, management-level committees and other subject matter experts. Discussions occurring at the board committee level, in turn, are regularly reported to the full Board, including climate-related topics as appropriate.

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	Primary reason for no board-level competence on water-related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row 1	Not assessed	<Not Applicable>	<Not Applicable>	<Not Applicable>

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

Assessing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

As important matters arise

Please explain

The CEO has oversight of environmental-related risks and opportunities. As important topics arise, the CEO provides guidance to those with direct responsibility.

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

Environment/Sustainability manager

Water-related responsibilities of this position

Managing water-related risks and opportunities

Monitoring progress against water-related corporate targets

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

FirstEnergy's Director, of Environmental has direct management responsibility of water-related risks and opportunities.

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	As a part of FirstEnergy's STIP, there is an operations index that represents 10% of total incentive. The operation index comprises five equally-weighted key operating metrics including water management and compliance.

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	Board chair Corporate executive team Chief Executive Officer (CEO) Chief Financial Officer (CFO) Chief Operating Officer (COO) Other C-suite Officer Other, please specify (All employees)	Other, please specify (Reduction in NOVs, which include water related violations)	FirstEnergy has environmental metrics (with associated incentive compensation) for employees, an executive management committee, and a board of director's committee.	
Non-monetary reward	Board chair Board/Executive board Director on board Corporate executive team Chief Executive Officer (CEO) Other, please specify (Policy applies to all employees of FirstEnergy.)	Reduction in water consumption volumes – direct operations	Reduction of water withdrawals Reduction in consumption volumes Improvements in efficiency - direct operations Improvements in waste water quality - direct operations Implementation of employee awareness campaign or training program Supply chain engagement Implementation of water-related community project	FirstEnergy regularly celebrates the efforts of employees to produce and deliver electricity in an environmentally sound manner. FirstEnergy has issued several news releases and public communications spotlighting employee efforts to reduce our environmental impact.

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?

FirstEnergy seeks insight from various stakeholder groups to inform the strategies, programs and policies on a variety of issues. The company's External Affairs organization executes a comprehensive stakeholder engagement process across our service area. Through this process, the team actively discusses energy-related matters with local, state and federal policymakers, as well as consumer advocates, peer utilities, customers, investors and non-governmental organizations.

W6.6

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

No, and we have no plans to do so

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	FirstEnergy has set a goal for a 20% reduction in water consumption at the two regulated coal plants by 2030 from our 2019 baseline
Strategy for achieving long-term objectives	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	FirstEnergy continues to improve sustainability, including water conservation efforts, though FirstEnergy facilities are not in water-stressed areas and water-related risks are minor with low probabilities.
Financial planning	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	FirstEnergy continues to improve sustainability, including water conservation efforts, though FirstEnergy facilities are not in water-stressed areas and water-related risks are minor with low probabilities.

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)

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

Water-related OPEX (+/- % change)

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

Please explain

FirstEnergy does not separately account for water-related expenditures. The company has set a goal to reach a 20% reduction in water consumption by 2030 from a 2019 baseline, but the forecasted CAPEX or OPEX is not expected to change dramatically.

W7.3

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

	Use of scenario analysis	Comment
Row 1	Yes	In 2022, FirstEnergy conducted a scenario that includes insights from low-carbon (approximately 1.5°C) and high-carbon (approximately 4.5°C) scenarios. We believe FirstEnergy is well-positioned to mitigate the risks and act on the opportunities that could emerge in both the low-carbon and high-carbon scenarios we leveraged.

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	<p>In 2022, FirstEnergy conducted a scenario that includes insights from low-carbon (approximately 1.5°C) and high-carbon (approximately 4.5°C) scenarios. We believe FirstEnergy is well-positioned to mitigate the risks and act on the opportunities that could emerge in both the low-carbon and high-carbon scenarios we leveraged.</p> <p>Physical risks from climate change are expected to emerge in both low and high carbon scenarios, but a significantly greater and corresponding costs are projected in the high-carbon scenario. Among many efforts, Our Energizing the Future and Distribution Grid of the Future programs, which remain focused on reducing the frequency and duration of outages and strengthening grid reliability and resiliency, can help us prepare to mitigate the potential physical impacts of climate change.</p> <p>Transition risks and opportunities, such as new climate-related regulations, the rise of electrification and increased renewables, are presented in both a low- and high-carbon scenarios but are expected to be significantly more impactful in a low-carbon scenario. Investments needed in transmission and distribution systems to enable economy wide electrification, renewables and other energy transition trends are well aligned with our company strategy. Our transmission and distribution programs provide a solid foundation from which we can prepare to mitigate risks associated with increased demand and complex distributed resources and capitalize on opportunities to enable the energy transition.</p>	Our analysis did not include water related outcomes	<p>FirstEnergy's scenario analysis describes the rapid and widespread electrification of end-use technologies, including motor vehicles and heat pumps, required to achieve a 90% reduction in U.S. CO2 emissions. Additionally, it assumes that renewables and other zero-carbon resources dominate the generation mix by 2050. Achieving this level of decarbonization would require significant increase in utility-scale renewable energy projects. These findings emphasize the idea that FirstEnergy needs to increase investments in transmission and distribution network, including investments in a smarter, more flexible grid.</p> <p>A highly electrified economy will increase the load on our system dramatically. Utilities, such as FirstEnergy, will play a central role in modernizing and hardening systems to meet service obligations, accommodating a changing generation mix, and moving towards electrification of end-use technologies.</p>

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, and we do not anticipate doing so within the next two years

Please explain

While FirstEnergy continues to improve sustainability, including water conservation efforts, FirstEnergy facilities are not in water-stressed areas and water-related risks are minor with low probabilities.

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	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	No, and we do not plan to address this within the next two years	<Not Applicable>	Judged to be unimportant, explanation provided	WRI Aqueduct was used on multiple scales. Whether reviewing overall water risk or water stress, none of the areas where our generation or synchronous condensers are located constitute a high risk or above.

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	No, and we do not plan to within the next two years	
Water withdrawals	Yes	<Not Applicable>
Water, Sanitation, and Hygiene (WASH) services	No, and we do not plan to within the next two years	
Other	No, and we do not plan to within the next two years	

W8.1b

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

Target reference number

Target 1

Category of target

Target coverage

Business activity

Quantitative metric

Other, please specify (Water Consumption)

Year target was set

2020

Base year

2019

Base year figure

19951

Target year

2030

Target year figure

15961

Reporting year figure

12200

% of target achieved relative to base year

Target status in reporting year

Achieved

Please explain

FirstEnergy has met its goal ahead of schedule, we will continue to monitor and implement consistent measures to retain our 20% reduction by 2030

W9. Verification

W9.1

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

No, we do not currently verify any other water information reported in our CDP disclosure

W10. Plastics

W10.1

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

	Plastics mapping	Value chain stage	Please explain
Row 1	Not mapped – and we do not plan to within the next two years	<Not Applicable>	

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	Not assessed – and we do not plan to within the next two years	<Not Applicable>	

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	Value chain stage	Type of risk	Please explain
Row 1	Not assessed – and we do not plan to within the next two years	<Not Applicable>	<Not Applicable>	

W10.4

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

	Targets in place	Target type	Target metric	Please explain
Row 1	No – and we do not plan to within the next two years	<Not Applicable>	<Not Applicable>	

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	Mgr, Corp Resp & Rating Agencies	Environment/Sustainability manager

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.

No

Please confirm below

I have read and accept the applicable Terms