CDP 2015 Water 2015 Information Request Entergy Corporation

Module: Introduction

Page: W0. Introduction

W0.1

Introduction

Please give a general description and introduction to your organization.

Entergy Corporation is an integrated energy company engaged primarily in electric power production and retail distribution operations. Entergy owns and operates power plants with approximately 30,000 megawatts of electric generating capacity, including more than 10,000 megawatts of nuclear power, making it one of the nation's leading nuclear generators. Entergy delivers electricity to 2.8 million utility customers in Arkansas, Louisiana, Mississippi and Texas. Entergy has annual revenues of more than \$12 billion and approximately 13,000 employees.

See the attached 2014 Annual Report, 2014 Integrated Report, and 2014 SEC Form 10-K Report.

W0.2

Reporting year

Please state the start and end date of the year for which you are reporting data.

Period for which data is reported

Wed 01 Jan 2014 - Wed 31 Dec 2014

CDP

W0.3

Reporting boundary

Please indicate the category that describes the reporting boundary for companies, entities, or groups for which water-related impacts are reported.

Companies, entities or groups over which financial control is exercised

W0.4

Exclusions

Are there any geographies, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?

No

W0.4a

Exclusions

Please report the exclusions in the following table

Exclusion	Please explain why you have made the exclusion

Further Information

Additional information can be found at www.entergy.com

Attachments

https://www.cdp.net/sites/2015/53/5653/Water 2015/Shared Documents/Attachments/Water2015/W0.Introduction/2015 10-K.pdf https://www.cdp.net/sites/2015/53/5653/Water 2015/Shared Documents/Attachments/Water2015/W0.Introduction/2014_Annual_Report.pdf https://www.cdp.net/sites/2015/53/5653/Water 2015/Shared Documents/Attachments/Water2015/W0.Introduction/2014 Entergy Corporation Integrated Report.pdf

Module: Current State

Page: W1. Context

W1.1

Please rate the importance (current and future) of water quality and water quantity to the success of your organization

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital for operations	Important	Direct Use - Entergy produces electricity from steam electric power plants that use large amounts of freshwater. 84% of Entergy's 30,000 MWs of generating capacity use freshwater for cooling, boiler make-up water and house service water needs. The water quantity, quality, biological diversity and ambient temperatures for each freshwater body are all factors that are vitally important for Entergy's current and future power plant operations. Indirect Use - Entergy's suppliers use freshwater to produce various products that are important to company operations. An interruption in supply of freshwater could result in a disruption in product availability.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	Direct Use - 10% of Entergy's approximately 30,000 MWs of generating capacity uses brackish water, 3% uses salt water and 3% uses recycled water. The water quantity, quality, biological diversity and ambient temperatures for each of these sources are all factors that are important for Entergy's current and future power plant operations. Indirect Use - Entergy's suppliers use brackish, salt, and recycled water to produce various products that are important to company operations. An interruption in supply of these water sources could result in a disruption in product availability.

For your total operations, please detail which of the following water aspects are regularly measured and monitored and provide an explanation as to why or why not

Water aspect	% of sites/facilities/operations	Please explain
Water withdrawals- total volumes	76-100	Entergy monitors 100% of its sites for water withdrawals. The volume of water withdrawals at the power generation plants are measured either by direct metering or, in many cases, estimated using water pump capacity and run time. Other company locations (service centers, office buildings, etc.) are supplied primarily by municipal water sources.
Water withdrawals- volume by sources	76-100	Entergy monitors 100% of its sites for water withdrawals. The volume of water withdrawals at the power generation plants are measured either by direct metering or, in many cases, estimated using water pump capacity and run time. Other company locations (service centers, office buildings, etc.) are supplied primarily by municipal water sources.
Water discharges- total volumes	76-100	Entergy monitors 100% of its sites for water discharges. Water discharges from the power generation plants are permitted by the appropriate regulatory agency. These permits identify the receiving water body, require an estimate of discharge flow, identify the treatment method, and require monitoring of various water quality parameters. All of this information is reported to the permitting agency on a regular basis. Other company locations (service centers, office buildings, etc.) are serviced primarily by municipal treatment systems.
Water discharges- volume by destination	76-100	Entergy monitors 100% of its sites for water discharges. Water discharges from the power generation plants are permitted by the appropriate regulatory agency. These permits identify the receiving water body, require an estimate of discharge flow, identify the treatment method, and require monitoring of various water quality parameters. All of this information is reported to the permitting agency on a regular basis. Other company locations (service centers, office buildings, etc.) are serviced primarily by municipal treatment systems.
Water discharges- volume by treatment method	76-100	Entergy monitors 100% of its sites for water discharges. Water discharges from the power generation plants are permitted by the appropriate regulatory agency. These permits identify the receiving water body, require an estimate of discharge flow, identify the treatment method, and require monitoring of various water quality parameters. All of this information is reported to the permitting agency on a regular basis. Other company locations (service centers, office buildings, etc.) are serviced primarily by municipal treatment systems.
Water discharge quality data- quality by standard effluent parameters	76-100	Entergy monitors 100% of its sites for water discharges. Water discharges from the power generation plants are permitted by the appropriate regulatory agency. These permits identify the receiving water body, require an estimate of discharge flow, identify the treatment method, and require monitoring of various water quality parameters. All of this information is reported to the permitting agency on a regular basis. Other company locations (service centers, office buildings, etc.) are serviced primarily by municipal treatment systems.

Water aspect	% of sites/facilities/operations	Please explain
Water consumption- total volume	76-100	Entergy monitors 100% of its sites for water consumption. Water consumption at the power generation plants occurs primarily through evaporative losses during the cooling process. Entergy estimates these losses based on the technology employed at each power plant using industry loss factors. Water consumption at other company locations (service centers, office buildings, etc.) is only a small fraction of the evaporative losses described above.
Facilities providing fully- functioning WASH services for all workers	76-100	Entergy monitors 100% of its sites service water. All of Entergy's workers are provided with clean water for drinking, cooking and cleaning purposes; adequate facilities for excreta purposes, solid waste management and drainage are provided and monitored by public water systems provider. For those facilities that have private water systems, we have groundwater or surface water withdrawal limits.

W1.2a

Water withdrawals: for the reporting year, please provide total water withdrawal data by source, across your operations

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Fresh surface water	7173910.74	Much lower	Reduce 9 percent
Brackish surface water/seawater	5390810.73	Much lower	Reduced 7 percent
Rainwater	0	Not applicable	
Groundwater - renewable	44147.93	Lower	Reduced 1 percent
Groundwater - non-renewable	0	About the same	
Produced/process water	0	About the same	
Municipal supply	2375.18	Much lower	Reduce 40 percent
Wastewater from another organization	0	About the same	
Total	12611245.00	Much lower	Reduced 8 percent

Water discharges: for the reporting year, please provide total water discharge data by destination, across your operations

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Fresh surface water	7039581.00	Much lower	Reduced 9 percent
Brackish surface water/seawater	5348176.00	Much lower	Reduced 7.5 percent
Groundwater	0	About the same	
Municipal treatment plant	1227.00	Much lower	Reduced 52 percent
Total	12388984.00	Much lower	Reduced 8.6 percent

W1.2c

Water consumption: for the reporting year, please provide total water consumption data, across your operations

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
178113.00	About the same	

W1.3

Do you request your suppliers to report on their water use, risks and/or management?

W1.2b

No

Please provide the proportion of suppliers you request to report on their water use, risks and/or management and the proportion of your procurement spend this represents

Proportion of suppliers % Total procurement spend % Rationale for this coverage	
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W1.3b

Please choose the option that best explains why you do not request your suppliers to report on their water use, risks and/or management

Primary reason	Please explain
Other:	Entergy has 111 critical Tier 1 suppliers. Selection Rationale: Tier 1 suppliers are defined and identified by several risk factors (e.g., financial, safety, environmental (water), business interruption, etc.). Proportion of Spend: 25%. Entergy was a founding member of the Electric Utility Industry Sustainable Supply Chain Alliance (EUISSCA). Throughout 2014, Entergy engaged key suppliers through EUISSCA in order to determine water-related risks associated with its key Tier 1 suppliers. EUISSCA sent surveys to suppliers asking questions related to how they were addressing sustainability, including water-related risks, within their organizations. The Alliance collaborates with contractors/suppliers by allowing them to participate in work teams that come up with recommended best practices that the industry should follow. The collaboration techniques directly impact Entergy in that we are able to gauge the progress our suppliers are making with respect to sustainability as well as include sustainability criteria in the bid evaluation-decision making process.

W1.4

Has your organization experienced any detrimental impacts related to water in the reporting period?

No

W1.4a

Please describe the detrimental impacts experienced by your organization related to water in the reporting year

Country River basin Impact indicator Impact	Description of impact Length of impact	Overall financial impact Respo strate	nse Description of response gy strategy
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W1.4b

Please choose the option below that best explains why you do not know if your organization experienced any detrimental impacts related to water in the reporting year and any plans you have to investigate this in the future

Primary reason Future plans

Further Information

Module: Risk Assessment

Page: W2. Procedures and Requirements

W2.1

Does your organization undertake a water-related risk assessment?

Water risks are assessed

W2.2

Please select the options that best describe your procedures with regard to assessing water risks

Risk assessment procedure	Coverage	Scale	Please explain
Comprehensive	Direct	All facilities	Entergy uses an Enterprise Risk Management (ERM) program to identify, capture, and mitigate risks that would impede Supply Chain and the rest of Entergy from accomplishing its objectives. Facilitated sessions are conducted across the Company with each business leader, along with knowledgeable financial and operational personnel from each group. Since the original implementation of ERM, Internal Audit continues to monitor the functional groups with updating their risk profile. Water is identified Entergy has identified water as a "Risk Factor" in its public disclosures and this risk is described in the SEC Form 10-K (pgs. 291-292) and is evaluated/updated on a quarterly basis. Additionally, the Water Peer Group, which includes representatives from all of Entergy's business functions, monitors water stressed areas on a quarterly basis using the WRI Aqueduct map and data or similar resources. Some suppliers are not included in this assessment if they are judged to not be material users of water.
company-wide risk	operations and	and	
assessment	supply chain	suppliers	

W2.3

Please state how frequently you undertake water risk assessments, what geographical scale and how far into the future you consider risks for each assessment

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Country	>6 years	Entergy has identified water as a "Risk Factor" in its public disclosures. This risk is described in the SEC Form 10-K (pgs. 291-292) and is evaluated/updated on a quarterly basis. Additionally, the Water Peer Group, which includes representatives from all of Entergy's business functions, monitors water stressed areas on a quarterly basis using the WRI Aqueduct map and data or similar resources.

W2.4

Have you evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy?

Yes, evaluated over the next 10 years

W2.4a

Please explain how your organization evaluated the effects of water risks on the success (viability, constraints) of your organization's growth strategy?

One of Entergy's three strategic imperatives in 2014 was to aggressively grow the utility business.

On an ongoing basis, we analyze material economic, environmental and social issues that impact our ability to create value for our stakeholders. Water was identified as a material issue in 2014. Water matters to our business because increased federal and state regulation of water pollutant discharges, cooling water intake structures for electric generating units and other water regulations, including the proposed Waters of the United States rule, continues to be a driver of business decisions regarding fuel supply, design, location, purchase, construction of electric generating units, transmission and distribution projects, and regional economic development.

Evaluation: Material environmental issues are identified by monitoring developments in environmental legislation, regulation, case law, agency guidance and other actions. Entergy's water peer group facilitates the identification and transfer of information on water-related material risks/opportunities to the business.

Example:

1) An industrial renaissance is driving economic development along the Gulf Coast. The chemical, petroleum refining, and pulp and paper industries drove significant industrial growth in Louisiana and Texas in 2014. Mississippi and Arkansas are experiencing growth in manufacturing, steel, automotive and biomass.

Economic development generates demand for power and helps us maintain rate stability; fund investments to modernize our infrastructure to enhance reliability and better serve our customers, earn our authorized returns on our investments and strengthen our communities by bringing in new jobs and boosting the local economy. The availability of useable water resources is a critical factor to enable and sustain this growth.

2) Entergy has processes and procedures, such as the Louisiana Watershed Study, by which the results of the assessment inform our growth strategy. Entergy is supporting, through its participation in the USBCSD Water Synergy Project, the development of a watershed simulation model that will forecast future trends and changes under various scenarios and assumptions.

3) The company's utility growth strategy has not changed as a result of this analysis.

W2.4b

What is the main reason for not having evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy, and are there any plans in place to do so in the future?

	Main reason	Current plans	Timeframe until evaluation	Comment
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W2.5

Please state the methods used to assess water risks

Method	Please explain how these methods are used in your risk assessment
Internal	Entergy has identified water as a "Risk Factor" in its public disclosures. This risk is described in the SEC Form 10-K (pgs. 291-292) and is evaluated/updated on a quarterly basis. Additionally, the Water Peer Group, which includes representatives from all of Enterry's business.
knowledge	functions, monitors water stressed areas on a quarterly basis using the WRI Aqueduct map and data or similar resources. Also, water-based
WRI water	risks are included in Entergy's Enterprise Risk Management (ERM) processes and in its Corporate Risk Committee (CRC) investment review

Method	Please explain how these methods are used in your risk assessment
stress definition WRI Aqueduct	processes. The three methods are integrated as part of Entergy's overall ERM process and updated by each programs subject matter expert as needed. The methods were selected based on historical accuracy and for consistency. The operational scope of the risk assessment covers all major aspects of water withdrawal, use and discharge parameters.

W2.6

Which of the following contextual issues are always factored into your organization's water risk assessments?

Issues	Choose option	Please explain
Current water availability and quality parameters at a local level	Relevant, included for some facilities/suppliers	Rationale: Entergy's Lewis Creek plant is located in Montgomery County, Texas, which is a water-restricted area as defined by the county utility district. This plant represented approximately 2% of Entergy's overall generation in 2014 and is the only plant that is currently in an area that is restricting water use. A coordinated effort to reduce groundwater consumption by 30% by 2016 was put into place in 2010 - the facility is on schedule to complete this effort by the end of 2015. Other water-stressed areas would be managed similarly.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	The method used to assess this issue was WRI Aqueduct. Entergy's power plants are governed by the Clean Water Act and regulated through state or federal water discharge permits to ensure maintenance of high levels of water quality and to ensure biological diversity of the water withdrawal and discharge receiving body. These factors are affected by ambient conditions such as the quantity, quality, temperature and environmental health of the water body. Other water-stressed areas would be managed similarly.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included for some facilities/suppliers	Rationale: Entergy's Lewis Creek plant is located in Montgomery County, Texas, a water- restricted area as defined by the county utility district. This plant represented ~ 2% of Entergy's overall generation in 2014 and is the only plant currently in an area that is restricting water use. The method used to assess this issue was internal company knowledge. At Lewis Creek, Entergy is engaged and working with stakeholders on resolving potential future conflicts with regards to water issues. An additional example of engagement is Entergy's continued its sponsorship of the USBCSD Water Synergy Project to determine beneficial uses for process water discharges across sectors. Additionally, Entergy is sponsoring development of a water simulation that will allow individuals to experience the trade-offs necessary when decisions are

Issues	Choose option	Please explain		
		made regarding water usage. See http://water-synergy.org/ for additional information		
Current implications of water on your key commodities/raw materials	Relevant, included	The method used to assess this issue was internal company knowledge .Entergy produces electricity from steam electric power plants that use large amounts of water cooling, boiler make-up water and house service water needs. The water quantity, quality, biological diversity and ambient temperatures are all factors that are vitally important for Entergy's current and future power plant operations.		
Current status of ecosystems and habitats at a local level	Relevant, included	The method used to assess this issue was WRI water stress definition. Entergy has developed extensive databases for aquatic resources from which its facilities draw cooling or service water. Extensive information has been gathered, in particular, regarding areas of the lower Hudson River, the Connecticut River, Cape Cod, Lake Ontario, and the Mississippi River near Entergy facilities. Entergy also has gathered information regarding water bodies into which it discharges, or from which it draws cooling and service water at many of its fossil-fuel facilities.		
Current river basin management plans	Relevant, included	The method used to assess this issue was WRI Aqueduct. Entergy participates in discussions with local and regional groups and interacts with local, regional, and state agencies regarding relevant river basin management plans. For example, Entergy is participating in the USBCSD and many other stakeholders on the update of the nutrient study of the Mississippi River. This study is evaluating the nutrient loading of the Mississippi River Basin as the river flows into the State of Louisiana, the additional nutrient loading as it flows through the state, and then the final nutrient levels when the river discharges into the Gulf of Mexico.		
Current access to fully-functioning WASH services for all employees	Relevant, included	The method used to assess this issue was internal company knowledge. All of Entergy's workers are provided with clean water for drinking, cooking and cleaning purposes, adequate facilities for excreta purposes, solid waste management and drainage, and hygiene information and education.		
Estimates of future changes in water availability at a local level	Relevant, included	The method used to assess this issue was WRI water stress definition. Entergy is supporting an EPRI project that provides watershed level water mapping for the Lower Arkansas River Basin, which includes our White Bluff and Arkansas Nuclear One plants. The model takes into account historical water body and groundwater usages for every consumer in the basin and models availability for the next 40 years. Then it runs scenarios to guide future decision making for water users in the basin. See also, Lewis Creek description, above.		
Estimates of future potential regulatory changes at a local level	Relevant, included	The method used to assess this issue was internal company knowledge .Scenario and impact analysis is conducted for regulatory changes at the local level and this analysis is presented to environmental and regulatory leadership for information and strategy development. Entergy has a strong risk management culture and has systems in place to track regulatory changes at the national, regional, state and local level. The regulatory tracking includes potential regulatory changes to water use, withdrawal rights, discharge standards or water pricing/tariffs.		
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	The method used to assess this issue was WRI water stress definition. Entergy estimates future potential stakeholder conflicts primarily centered on the impacts on a variety of species		

Issues	Choose option	Please explain
		and water body uses in the Hudson River, the Cape Cod area, Lake Ontario and the Connecticut River, and regarding the EPA's Clean Water Act § 316(b) cooling water intake structure rules, which deal with aquatic species in cooling water. Our Lewis Creek Plant is actively engaged in dialogue with their supplier (San Jacinto River Authority), including on potential conflicts.
Estimates of future implications of water on your key commodities/raw materials	Relevant, included	The method used to assess this issue was internal company knowledge. Entergy's product (electricity) and primary raw material (fuel) are dependent on the availability of water. Implications of water stress or shortages may include power plant curtailments and fuel availability.
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	The method used to assess this issue was WRI water stress definition. Entergy is engaged with others in encouraging meaningful action to stem the loss of coastal wetlands and barrier island systems recognizing the value these estuaries have on ensuring continued ecosystem services, biological diversity and protection of coastal communities from climate change impacts. This restoration depends upon anticipating and successfully factoring in relative sea level rise over time.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, included	The method used to assess this issue was WRI Aqueduct. Entergy worked with the U.S. Army Corp of Engineers to assess and find ways to effectively manage risks to the quality of water supply in and near New Orleans from a scenario where, during times of low flow in the Mississippi, a salt water wedge could extend 80+ miles upriver and could adversely impact drinking water supply to the city of New Orleans as well as cooling water quality for Entergy power plants. We worked out communication systems and contingency plans for minimizing the impacts.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	The method used to assess this issue was internal company knowledge. Scenario and impact analysis is conducted for regulatory changes at the local level and this analysis is presented to environmental and regulatory leadership for information and strategy development. Entergy has a strong risk management culture and has systems in place to track regulatory changes at the national, regional, state and local level. The regulatory tracking includes potential regulatory changes to water use, withdrawal rights, discharge standards or water pricing/tariffs.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, included	The method used to assess this issue was internal company knowledge. Water issues are included in a scenario analysis Entergy conducts as part of its overall due diligence review and analysis of any expansion, acquisition, new project or investment. Depending on the project, scenario analysis may include water availability issues, quality issues, intake concerns and water-related biodiversity impacts.
Scenario analysis of implications of water on your key commodities/raw materials	Relevant, included	The method used to assess this issue was internal company knowledge. Water issues are included in a scenario analysis Entergy conducts as part of its overall due diligence review and analysis of any expansion, acquisition, new project or investment. Depending on the project, scenario analysis may include water availability issues, quality issues, intake concerns and

Issues	Choose option	Please explain
		water-related biodiversity impacts.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Relevant, included	The method used to assess this issue was internal company knowledge. Water issues are included in a scenario analysis Entergy conducts as part of its overall due diligence review and analysis of any expansion, acquisition, new project or investment. Depending on the project, scenario analysis may include water availability issues, quality issues, intake concerns and water-related biodiversity impacts.
Other	Not evaluated	Not applicable.

W2.7

Which of the following stakeholders are always factored into your organization's water risk assessments?

Stakeholder	Choose option	Please explain
Customers	Relevant, included for some facilities/suppliers	Rationale: Entergy has customers that live in coastal communities. Entergy is engaged with others in encouraging meaningful action to stem the loss of coastal wetlands and barrier island systems recognizing the value these estuaries have on ensuring continued ecosystem services, biological diversity and protection of coastal communities from climate change impacts. This restoration depends upon anticipating and successfully factoring in relative sea level rise over time. Entergy's assessments work primarily with those individuals and customer groups that represent our primary stakeholders' views and offer the experience necessary for valued input.
Employees	Relevant, included	Entergy employees are the foundation for managing water risks. Entergy formed the Water Peer Group in 2002 where employee subject matter experts meet to discuss water intake, scarcity and quality issues. In 2014 the group focused on water stress mapping, water foot printing and emerging regulatory issues. Entergy employees also participates in various industry groups that monitor both water quantity and quality issues at the national, regional and state levels and benchmark performance.
Investors	Relevant, included	Communicating to investors that Entergy is effectively managing risk is vitally important. Entergy's Enterprise Risk Management (ERM) process and investment approval process (IAP) are comprehensive Company-wide processes used to analyze business risks. The analysis includes climate change issues and physical risks including those related to water quantity / quality and stakeholder water utilization issues.
Local communities	Relevant, included	Entergy is actively engaged with state and local planning groups working on the Baton Rouge groundwater

Stakeholder	Choose option	Please explain		
		and Lewis Creek groundwater issues, regulatory interest groups working on drought/water rights legislation in Texas, and in with water allocation interest groups for the watershed planning in White River and Arkansas River valleys in Arkansas.		
NGOs	Relevant, included	Entergy is working with the state of Louisiana, NGO's and businesses on the Louisiana Freshwater Assessment Project to build a baseline assessment of freshwater resources in our service territory so that we make informed as we make important decisions regarding freshwater water in the future.		
Other water users at a local level	Relevant, included	Entergy is working with local business leaders and the USBCSD to achieve tangible water conservation and quality improvements, and establish a long-term water collaboration plan in the region by harnessing collective industry capabilities and interests. Business leaders from multiple industries together to identify challenges related to water quality, quantity, and storm water; identify practical solutions; and work together to implement those solutions. http://water-synergy.org/		
Regulators	Relevant, included	As a user of water resources, Entergy is regulated by several local, state and federal regulators. These agencies and their regulations are a key consideration in evaluation of water risk.		
River basin management authorities	Relevant, included	River basin management authorities are key stakeholders in evaluation of water risk within their jurisdiction and are consulted as appropriate.		
Statutory special interest groups at a local level	Relevant, included	The Vermont Yankee Citizens Advisory Panel is a statutory special interest group for the decommissioning of the Vermont Yankee Nuclear Power Plant. This panel is regularly engaged on environmental issues including water-quality as part of the decommissioning process.		
Suppliers	Relevant, included	Entergy is a founding member of EUISSCA, formed to promote environmental stewardship among utility suppliers and to provide value to customers and shareholders. Its goal is to work with industry suppliers to improve environmental performance and advance sustainable business practices. By working as a group, member companies expect to more effectively and efficiently engage suppliers to improve impacts on air emissions, water consumption, waste disposal and energy-efficiency.		
Water utilities/suppliers at a local level	Relevant, included	Entergy works with the Lone Star Water Conservation District, a local agency affiliated with Entergy's Lewis Creek Plant, to track and monitor water availability at the local level surrounding our only plant in a water-stressed area.		
Other	Not relevant, explanation provided	Entergy does not have 'other' water stakeholders that are not already included in the stakeholder list.		

Please choose the option that best explains why your organisation does not undertake a water-related risk assessment

Primary reason Please explain

Further Information

Module: Implications

Page: W3. Water Risks

W3.1

Is your organization exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure?

Yes, direct operations and supply chain

W3.2

Please provide details as to how your organization defines substantive change in your business, operations, revenue or expenditure from water risk

Entergy views substantive change as any water risk issue having the potential to rise to the materiality level requiring SEC disclosure.

The measure(s) used in the definition of substantive change are: a) any water risk issue potentially resulting in a compliance violation, permit exceedance, or breach of an agreement, or b) any physical water risk that could interrupt operation of power plants.

The threshold used is a change in the metric/measure/indicator which indicates substantive impact on direct operations, supply chain or both. Thresholds vary by indicator. For example, any single permit exceedance would meet the threshold for that indicator.

The frequency and process for review: The metrics and thresholds above are reviewed or updated and reported quarterly, first through the Water Peer Group and

subject matter experts then again reviewed during the Enterprise Risk Mgmt Process (ERM)

W3.2a

Please provide the number of facilities* per river basin exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure and the proportion of total operations this represents

Country	River basin	Number of facilites	Proportion of total operations exposed to risk within river basin (%)	Comment
United States of America	Mississippi River	3	91-100	Includes: 1. River Bend Station, 2. Grand Gulf and 3. Waterford 3
United States of America	Other: Arkansas River	1	91-100	Includes Arkansas Nuclear One - cooling water from Lake Dardanelle
United States of America	Other: Quachita	2	91-100	Includes hydroelectric facilities: 1. Remmel Dam 2. Carpenter Dam
United States of America	Hudson River	1	91-100	Includes IPEC 1&2
United States of America	Other: Oswego River/Lake Ontario	1	91-100	Includes Fitzpatrick - once through system with diffused discharge
United States of America	Other: San Jacinto River (Lewis Creek Reservoir)	1	91-100	Includes Lewis Creek

W3.2b

Please provide the proportion of financial value that could be affected at river basin level associated with the facilities listed in W3.2a

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected within the river basin	Comment
United States of America	Other: Basins provided in 3.2a	% generation capacity	91-100	Similar for all facilities noted in 3.2a

W3.2c

Please list the inherent water risks that could generate a substantive change in your business, operations, revenue or expenditure, the potential impact to your direct operations and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
United States of America	Other: Lewis Creek Station	Physical- Flooding	Other: Reduced Electric Production	During periods of river flood stage, the electric generation from the plant may need to be reduced.	Current-up to 1 year	Probable	Medium- high	Increased capital expenditure Increased investment in new technology Promote best practice and awareness	Financial investment will depend on the specific project, unable to estimate at this time. Implementation costs vary considerably based on level of process change option selected.	Entergy undertook a long-term strategic study of water availability for its Lewis Creek Plant. The study included analysis of the groundwater wells and water plant system at Lewis Creek, the facility developed a

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										plan to meet the 30 percent reduction requirements using conservation methods through process design changes
United States of America	Mississippi River	Physical- Flooding	Other: Reduced Electric Production	River flooding curtailing operations at the power plants	Current-up to 1 year	Probable	Medium- high	River basin restoration Promote best practice and awareness	Entergy gave a \$500,000 grant to The Nature Conservancy in Mississippi to implement bottomland hardwood and wetland restoration practices. The project has the potential to restore at least 4,000 acres in the lower Yazoo River Basin and support landowners in a region that Through this effort, The Nature Conservancy and Entergy are	Continue to support watershed research; Entergy's \$500,000 grant will leverage up to \$8.4 million in funds for restoration practices. Shift energy production to other units until river levels subside

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
									seeking new ways to improve water quality and the quality of life in Mississippi and the Gulf of Mexico.	
United States of America			Delays in permitting	Impingement and Entrainment	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines, which could significantly impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of America			Delays in permitting	Entergy's ability to operate is contingent upon the receipt of relevant regulatory	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines,

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				permits and permissions. This ability may be compromised if the relevant regulatory agencies do not issue needed permits.						which could significantly impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of America			Other: Requirement for remediation	Entergy's ability to operate is contingent upon the receipt of relevant regulatory permits and permissions. This ability may be compromised if the relevant regulatory agencies and stakeholders do not have confidence in the company's ability to comply with	1-3 years	Probable	Medium			The NRC requires nuclear power plants to regularly monitor and report the presence of radioactive material in the environment. Entergy joined other nuclear utilities and the Nuclear Energy Institute in 2006 to develop a voluntary groundwater monitoring and protection program. This

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				environmental requirements.						initiative began after detection of very low levels of radioactive material, primarily tritium, in groundwater at several plants in the United States. Tritium is a radioactive form of hydrogen that occurs naturally and is also a by- product of nuclear plant operations. In addition to tritium, other radionuclides have been found in on site ground water at nuclear plants. As part of the groundwater monitoring and protection program, Entergy has: (1) performed reviews of plant groundwater

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										characteristics (hydrology) and historical records of past events on site that may have potentially impacted groundwater; (2) implemented fleet procedures on how to handle events that could impact groundwater; and (3) installed groundwater monitoring wells and began periodic sampling. The program also includes protocols for notifying local officials if contamination is found.
United States of America			Other: Reduced Electric Production	River flooding curtailing operations at the power plant.	Unknown	Unlikely	High			Entergy conducted a flood event re- evaluation for Indian Point

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										Energy Center evaluating the potential impacts from various scenarios of worst case flood hazards to ensure the design basis flood protection was able to withstand flood hazards from these scenarios. Similar studies are ongoing at other units.
United States of America			Delays in permitting	Impingement and Entrainment	4-6 years	Probable	Medium			Entergy has been actively engaged with the NYDEC and other parties in trying to determine what constitutes the Best Available Control Technology for minimizing impingement and entrainment of fish and larvae.

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										Construction costs for retrofitting with cooling towers are estimated to be at least \$1.19 billion and a proposed alternative to the cooling towers, the use of cylindrical wedgewire screens, are expected to be approximately \$250 million to \$300 million. Entergy has also conducted extensive biological monitoring in the Hudson River to characterize fish populations.
United States of America			Delays in permitting	Entergy's ability to operate is contingent upon the receipt of relevant regulatory	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines,

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				permits and permissions. This ability may be compromised if the relevant regulatory agenciesdo not issue needed permits.						which could significantly impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of America			Other: Requirement for remediation	Entergy's ability to operate is contingent upon the receipt of relevant regulatory permits and permissions. This ability may be compromised if the relevant regulatory agencies and stakeholders do not have confidence in the company's ability to comply with	1-3 years	Probable	Medium			The NRC requires nuclear power plants to regularly monitor and report the presence of radioactive material in the environment. Entergy joined other nuclear utilities and the Nuclear Energy Institute in 2006 to develop a voluntary groundwater monitoring and protection program. This

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				environmental requirements.						initiative began after detection of very low levels of radioactive material, primarily tritium, in groundwater at several plants in the United States. Tritium is a radioactive form of hydrogen that occurs naturally and is also a by- product of nuclear plant operations. In addition to tritium, other radionuclides have been found in on site ground water at nuclear plants. As part of the groundwater monitoring and protection program, Entergy has: (1) performed reviews of plant groundwater

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										characteristics (hydrology) and historical records of past events on site that may have potentially impacted groundwater; (2) implemented fleet procedures on how to handle events that could impact groundwater; and (3) installed groundwater monitoring wells and began periodic sampling. The program also includes protocols for notifying local officials if contamination is found.
United States of America			Delays in permitting	Impingement and Entrainment	1-3 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										316(b) guidelines, which could significantly impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of America			Other: Reduced Electric Production	River flooding curtailing operations at the power plant.	Unknown	Unlikely	Medium			Shift energy production to other reserve units until river levels subside
United States of America			Other: Reduced Electric Production	River flooding curtailing operations at the power plant	Unknown	Unlikely	Medium			Shift energy production to other reserve units until water levels subside
United States of America			Delays in permitting	Impingement and Entrainment	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines, which could significantly

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of America			Delays in permitting	Entergy's ability to operate is contingent upon the receipt of relevant regulatory permits and permissions. This ability may be compromised if the relevant regulatory agencies do not issue needed permits.	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines, which could significantly impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of			Other: Requirement for	Entergy's ability to operate is contingent	1-3 years	Probable	Medium			The NRC requires nuclear power plants to

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
America			remediation	upon the receipt of relevant regulatory permits and permissions. This ability may be compromised if the relevant regulatory agencies and stakeholders do not have confidence in the company's ability to comply with environmental requirements.						regularly monitor and report the presence of radioactive material in the environment. Entergy joined other nuclear utilities and the Nuclear Energy Institute in 2006 to develop a voluntary groundwater monitoring and protection program. This initiative began after detection of very low levels of radioactive material, primarily tritium, in groundwater at several plants in the United States. Tritium is a radioactive form of hydrogen that occurs naturally and is also a by- product of

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										nuclear plant operations. In addition to tritium, other radionuclides have been found in on site ground water at nuclear plants. As part of the groundwater monitoring and protection program, Entergy has: (1) performed reviews of plant groundwater characteristics (hydrology) and historical records of past events on site that may have potentially impacted groundwater; (2) implemented fleet procedures on how to handle events that could impact groundwater; and (3) installed

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										groundwater monitoring wells and began periodic sampling. The program also includes protocols for notifying local officials if contamination is found.
United States of America			Other: Reduced Electric Production	Storm surge curtailing operations at the power plant	Unknown	Unlikely	Medium			Shift energy production to other reserve units until water levels subside; advocate for public investment in cost-effective adaptation measures
United States of America			Delays in permitting	Impingement and Entrainment	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines, which could significantly impact cooling water processes

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of America			Delays in permitting	Entergy's ability to operate is contingent upon the receipt of relevant regulatory permits and permissions. This ability may be compromised if the relevant regulatory agenciesdo not issue needed permits.	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines, which could significantly impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of America			Other: Requirement for remedication	Entergy's ability to operate is contingent upon the receipt of	1-3 years	Probable	Medium			The NRC requires nuclear power plants to regularly monitor and

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				relevant regulatory permits and permissions. This ability may be compromised if the relevant regulatory agencies and stakeholders do not have confidence in the company's ability to comply with environmental requirements.						report the presence of radioactive material in the environment. Entergy joined other nuclear utilities and the Nuclear Energy Institute in 2006 to develop a voluntary groundwater monitoring and protection program. This initiative began after detection of very low levels of radioactive material, primarily tritium, in groundwater at several plants in the United States. Tritium is a radioactive form of hydrogen that occurs naturally and is also a by- product of nuclear plant operations. In

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										addition to tritium, other radionuclides have been found in on site ground water at nuclear plants. As part of the groundwater monitoring and protection program, Entergy has: (1) performed reviews of plant groundwater characteristics (hydrology) and historical records of past events on site that may have potentially impacted groundwater; (2) implemented fleet procedures on how to handle events that could impact groundwater; and (3) installed groundwater monitoring wells

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										and began periodic sampling. The program also includes protocols for notifying local officials if contamination is found.
United States of America			Other: Reduced Electric Production	River flooding curtailing operations at the power plant	Unknown	Unlikely	Medium			Shift energy production to other reserve units until water levels subside
United States of America			Delays in permitting	Impingement and Entrainment	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines, which could significantly impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										(EGUs).
United States of America			Delays in permitting	Entergy's ability to operate is contingent upon the receipt of relevant regulatory permits and permissions. This ability may be compromised if the relevant regulatory agencies do not issue needed permits.	4-6 years	Probable	Medium			Entergy is dealing with issues related to EPA's interpretation of 316(b) guidelines, which could significantly impact cooling water processes at several facilities, and EPA's development of effluent guidelines for electricity generating units (EGUs).
United States of America			Other: Requirement for remediation	Entergy's ability to operate is contingent upon the receipt of relevant regulatory permits and permissions. This ability may be compromised if the relevant	1-3 years	Probable	Medium			The NRC requires nuclear power plants to regularly monitor and report the presence of radioactive material in the environment. Entergy joined other nuclear utilities and the

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				regulatory agencies and stakeholders do not have confidence in the company's ability to comply with environmental requirements.						Nuclear Energy Institute in 2006 to develop a voluntary groundwater monitoring and protection program. This initiative began after detection of very low levels of radioactive material, primarily tritium, in groundwater at several plants in the United States. Tritium is a radioactive form of hydrogen that occurs naturally and is also a by- product of nuclear plant operations. In addition to tritium, other radionuclides have been found in on site ground water at nuclear plants. As part of the

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										groundwater monitoring and protection program, Entergy has: (1) performed reviews of plant groundwater characteristics (hydrology) and historical records of past events on site that may have potentially impacted groundwater; (2) implemented fleet procedures on how to handle events that could impact groundwater; and (3) installed groundwater monitoring wells and began periodic sampling. The program also includes protocols for notifying local officials if

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										contamination is found.

W3.2d

Please list the inherent water risks that could generate a substantive change in your business operations, revenue or expenditure, the potential impact to your supply chain and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
United States of America	Other: Arkansas River	Physical- Flooding	Other: Reduced Electric Production	Entergy's fossil generation facilities are at risk for obtaining fuel supplies during severe weather events. Examples of such occurrences are flooding in the Midwest to the extent the rail shipments of coal were curtailed and	Unknown	Probable	Low- medium	Develop flood emergency plans Increased capital expenditure Promote best practice and awareness Supplier diversification Water management incentives		Alternate sources of fuel are identified and acquired to maintain generation activities at the sites. Most of Entergy's gas units can also burn fuel oil and reserves are maintained to provide an alternative source of fuel. An inventory of coal is stockpiled

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				during hurricane event when natural gas supplies were curtailed.						onsite to minimize impacts from temporary supply interruptions.

W3.2e

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your direct operations that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain
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W3.2f

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your supply chain that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain

W3.2g

Please choose the option that best explains why you do not know if your organization is exposed to water risks that could generate a substantive change in your business operations, revenue or expenditure and discuss any future plans you have to assess this

Primary reason Future plans

Further Information

Page: W4. Water Opportunities

W4.1

Does water present strategic, operational or market opportunities that substantively benefit/have the potential to benefit your organization?

Yes

W4.1a

Please describe the opportunities water presents to your organization and your strategies to realize them

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
United States of	Carbon management	Entergy has the opportunity to invest in more efficient methods of	4-6 years	Entergy, through its fleet transformation strategy and Integrated Resource Plans is making investments that are reducing Entergy's water footprint.

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
America	Climate change adaptation Ensuring supply chain resilience Increased brand value Improved community relations Increased shareholder value Improved water efficiency	generating electricity that also reduce water use requirements while reducing customers cost of energy.		These investments include 1) acquiring closed cooling cycle, natural gas fired Combined Cycle Gas Turbine (CCGT) generating capacity; and 2) investing in cost effective demand side management and energy efficiency initiatives. Additionally, Entergy currently operates only one facility (Lewis Creek) in a water-stressed area; the relative abundance of water in Entergy's service territory can create additional value. Financial implications of the strategy: Entergy plans on spending \$1.67 billion in clean, low-emitting CCGT generating units during 2015-2017. 2014 case study: 1. Our Ninemile 6 electric generation plant was placed into service in December 2014 at an ~ cost of \$655 million to construct when spending is complete, 2. The Union Power Station, a 1,980 MW power generation facility base purchase price is expected to be approximately \$948 million (approximately \$237 million for each power block).

W4.1b

Please choose the option that best explains why water does not present your organization with any opportunities that have the potential to provide substantive benefit

Primary reason	Please explain
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W4.1c

Please choose the option that best explains why you do not know if water presents your organization with any opportunities that have the potential to provide substantive benefit

Primary reason

Please explain

Further Information

Module: Accounting

Page: W5. Facility Level Water Accounting (I)

W5.1

Water withdrawals: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 1	United States of America	Mississippi River	Facilities: 1.River Bend 2.Grand Gulf – collector wells 3.Waterford 3	2176080.00	About the same	
Facility 2	United States of America	Other: Arkansas River	Arkansas Nuclear One – cooling water from Lake Dardanelle	1756010.00	Higher	Increased capacity
Facility 3	United States of America	Other: Quachita River	Hydroelectric facilities: 1. Remmel Dam 2. Carpenter Dam	0	About the same	
Facility 4	United States of America	Hudson River	IPEC 1 and 2	3755985.00	About the same	

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 5	United States of America	Other: Oswego River/Lake Ontario	Fitzpatrick – once-through system with diffused discharge	660302.00	Lower	Reduced capacity
Facility 6	United States of America	Other: San Jacinto (Lewis Creek Reservoir)	Lewis Creek	10200.00		

Further Information

Page: W5. Facility Level Water Accounting (II)

W5.1a

Water withdrawals: for the reporting year, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.1

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non- renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 1	2176080.00	0	0	0	0	0	0	0	
Facility 2	1756010.00	0	0	0	0	0	0	0	
Facility 3	0	0	0	0	0	0	0	0	
Facility 4	0	3755985.00	0	0	0	0	0	0	
Facility 5	660302.00	0	0	0	0	0	0	0	

Facility reference number water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non- renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 6 10200.00	0	0	0	0	0	0	0	

W5.2

Water discharge: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 1	2114865.00	About the same	
Facility 2	1734091.00	Higher	
Facility 3	0	About the same	
Facility 4	3729773.00	Lower	
Facility 5	651633.00	Much lower	
Facility 6	8553.00	Much lower	

W5.2a

Water discharge: for the reporting year, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.2

Facility reference number	Fresh surface water	Municipal Treatment Plant	Seawater	Groundwater	Comment
Facility 1	21114865.00	0	0	0	
Facility 2	1734091.00				
Facility 3	0				
Facility 4		3729773.00			
Facility 5	651633.00				
Facility 6	8553.00				

W5.3

Water consumption: for the reporting year, please provide water consumption data for all facilities reported in W3.2a

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain the change if substantive
Facility 1	61215.00	About the same	
Facility 2	21919.00	Higher	
Facility 3	0	About the same	
Facility 4	26212.00	About the same	
Facility 5	8669.00	Lower	
Facility 6	1647.00	About the same	

W5.4

For all facilities reported in W3.2a what proportion of their water accounting data has been externally verified?

Water aspect	% verification	What standard and methodology was used?
Water withdrawals- total volumes	76-100	Typically pump curves and run times are used to quantify this.
Water withdrawals- volume by sources	76-100	Typically pump curves and run times are used to quantify this.
Water discharges- total volumes	76-100	Standards and methodology as contained in Federal and State NPDES Permit
Water discharges- volume by destination	76-100	Standards and methodology as contained in Federal and State NPDES Permit
Water discharges- volume by treatment method	76-100	Standards and methodology as contained in Federal and State NPDES Permit
Water discharge quality data- quality by standard effluent parameters	76-100	Standards and methodology as contained in Federal and State NPDES Permit
Water consumption- total volume	Not verified	

Further Information

Module: Response

Page: W6. Governance and Strategy

W6.1

Who has the highest level of direct responsibility for water within your organization and how frequently are they briefed?

Highest level of direct responsibility for water issues

Frequency of briefings on water issues

Comment

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Individual/Sub-set of the Board or other committee appointed by the Board	Scheduled- quarterly	Entergy's Chairman and CEO has overarching responsibility for managing risk including water management risk, executing strategy that positions the company to prosper in a constrained economy and ensuring actions are taken to meet Entergy's environmental strategy. The CEO chairs the Board of Directors and oversees Entergy's entire corporate structure, governance and management. The Audit Committee of the Board of Directors, the Executive Vice President and Chief Administrative Officer and the Vice President, Environmental Strategy & Policy have responsibility for oversight and implementation of Entergy's position, performance and advocacy associated with any material water issues. Material water issues are typically reported quarterly and contained in Entergy's 10Q. However, issues that are more immediate or of a material nature may be reported more frequently.

W6.2

Is water management integrated into your business strategy?

Yes

W6.2a

Please choose the option(s) below that best explain how water has positively influenced your business strategy

Influence of water on business strategy	Please explain
Alignment of public policy positions with water	The Board of Directors in 2002 adopted Entergy's Environmental Vision Statement which details the company's commitment to operate its business in ways that preserve and protect our environment. Along with the company's aspirations, the statement

Influence of water on business strategy	Please explain
stewardship goals	guides business policies and decisions. The statement establishes several commitments in the areas of sustainable development, performance excellence and environmental advocacy. This influence on water can impact Entergy's business by providing consistency of expected outcomes among key stakeholders. The outcome of this influence on Entergy's business is the ability to leverage stakeholder resources toward common goals that are supportive of business and the public.
Establishment of sustainability goals	Entergy developed a comprehensive environmental strategy in 2011 that addresses stakeholder concerns, potential new regulatory requirements, environmental resource limitations and financial considerations. Entergy's Environment 2020 strategy focuses on continuously reducing Entergy's environmental footprint and adapting to future resource constraints. This influence on water can impact Entergy's business by ensuring accountability toward a positive outcome as we move towards these goals. The outcome of this influence on Entergy's business has been the ability to set goals that employees can work toward via more effective business practices and innovation.
Introduction of water management KPIs	Water metrics are being expanded to include more breakdowns of water source/usage information to facilitate enhanced reporting, both internal and external. Specifically, we are seeking to collect additional details from the business functions regarding the water source (surface, ground, or municipal), water type (fresh, brackish, or saline), and water use (cooling, process, or sanitary). This influence on water can impact Entergy's business by breaking down water management into discreet metrics to assess and report on across the Entergy system so actions can be taken as needed. The outcome of this influence on Entergy's overall sustainability goals and the company's Water Management Standard.

W6.2b

Please choose the option(s) below that best explains how water has negatively influenced your business strategy

Influence of water on business strategy	Please explain
Other: Water stressed areas	Entergy's Lewis Creek plant is located in a water-restricted area. This plant represented approximately 2% of Entergy's overall generation and is the only plant that is currently in an area that is restricting water use. A coordinated effort to reduce groundwater consumption by 30% by 2016 was put into place in 2010. Entergy's Lewis Creek staff participates in integrated watershed management with the Lone Star Groundwater Conservation District by working with the Groundwater Reduction Plan.

Influence of water on business strategy	Please explain
Other: Watershed Management	Impacts of water withdrawal and discharge may impact aquatic species. Entergy has developed extensive databases regarding the aquatic resources from which its facilities draw cooling or service water. Extensive information has been gathered, in particular, regarding areas of the lower Hudson River, the Connecticut River, Cape Cod, Lake Ontario, and the Mississippi River near Entergy facilities.
Other: Flooding & storm surge	Economic losses to Entergy's customer base within the Gulf Coast region and Entergy's generation, transmission and distribution assets have resulted from flooding and storm surge after hurricanes.

W6.2c

Please choose the option that best explains why your organization does not integrate water management into its business strategy and discuss any future plans to do so

Primary reason	Please explain

W6.3

Does your organization have a water policy that sets out clear goals and guidelines for action?

Yes

W6.3a

Please select the content that best describes your water policy (tick all that apply)

Content	Please explain why this content is included
Publicly available Company-wide Performance standards for direct operations Performance standards for supplier, procurement and contracting best practice Commitment to customer education Incorporated within group environmental, sustainabiilty or EHS policy	Entergy's Environmental Management Policy, Environmental Management System Procedure, and Water Management Standard apply to all operations of the company. The purpose of this document is to provide clear direction to all employees regarding both the processes and expectations for ensuring water management excellence. The policy, procedures and standard also ensure consistency across the Entergy system. Entergy's environmental vision and environmental policy and management system are publicly available on the company's website. http://www.entergy.com/environment/. Entergy requires employees, agents and contractors to comply with applicable environmental laws and regulations. Entergy's EHS policy states that the company pledges to: Engage key stakeholders to anticipate emerging environmental issues, respond to legitimate concerns, and advocate development of sound corporate policy.

W6.4

How does your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting period compare to the previous reporting period?

v	Vater CAPEX (+/- % change)	Water OPEX (+/- % change)	Motivation for these changes
0		0	No substantial changes from the previous reporting period in capital spending or operational expenditures related to water.

Further Information

Page: W7. Compliance

W7.1

Was your organization subject to any penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting year?

No

W7.1a

Please describe the penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations and your plans for resolving them

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
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W7.1b

What proportion of your total facilities/operations are associated with the incidents listed in W7.1a

W7.1c

Please indicate the total financial impacts of all incidents reported in W7.1a as a proportion of total operating expenditure (OPEX) for the reporting year. Please also provide a comparison of this proportion compared to the previous reporting year

Impact as % of OPEX	Comparison to last year

Further Information

Page: W8. Targets and Initiatives

W8.1

Do you have any company wide targets (quantitative) or goals (qualitative) related to water?

Yes, goals only

W8.1a

Please complete the following table with information on company wide quantitative targets (ongoing or reached completion during the reporting period) and an indication of progress made

Category of targetMotivationDescription of targetQuantitative unit of measurementBase-line yearTarget yearProportion of target achieved, % value	rget lue
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W8.1b

Please describe any company wide qualitative goals (ongoing or reached completion during the reporting period) and your progress in achieving these

Goal	Motivation	Description of goal	Progress
Other: Fleet Transformation	Other: Cost Savings and increased production	Replace open cycle legacy natural gas steam electric generating capacity with closed cycle cooling combined cycle gas turbines (CCGT). The water use intensity of the Legacy Gas units is 166 M3/MWh while the water use intensity of the CCGTs is 8 M3/MWh	Entergy's Fleet Portfolio Transformation Strategy is in progress; the company has made significant progress and has added 3,928 MW of closed cycle cooling CCGT capacity since 2005. During 2014, the Ninemile Point Unit 6 facility came on-line - this is a self-built 560 MW CCGT plant. An additional CCGT acquisition was announced; Union Power Station is a 1,980 MW plant that employs closed cycle cooling. Entergy expects to close the acquisition of this plant in late-2015. Assuming 100% capacity factor, this transformation strategy would result in a withdrawal reduction of more than 800 billion gallons of water per year.
Other: Nuclear Uprates	Other: Increased production	Invest in Nuclear Unit uprates that increase generating capacity without requiring an incremental increase in water withdrawal requirements	Grand Gulf uprate is substantially completed. During 2012, Entergy completed a 178 MW capacity uprate at Grand Gulf Nuclear Station bringing the total uprates since 2001 to 700 MW of new capacity that requires little or no incremental added cooling water. Assuming a 100% capacity factor, this strategy would result in a withdrawal reduction of large quantities of water per year.
Other: Energy Efficiency	Sales of new products/services	The Entergy Utility companies are committed to pursuing cost effective DSM and have identified 990 MW of peak demand reduction that can be achieved through 2031 as a part of its Integrated Resources Plans.	Significant progress has been made. Across its six regulated utilities that operate in four states, Entergy has invested a total of \$252.8 million from 2002 to 2014 to deliver approximately 350 MW of load reduction and more than 982,000 megawatt hours (MWh) of annual energy savings resulting in a savings of nearly 23 billion gallons of water per year. Currently, more than 30 energy efficiency and DSM programs are underway across four states.

W8.1c

Please explain why you do not have any water-related targets or goals and discuss any plans to develop these in the future

Further Information

Module: Linkages/Tradeoff

Page: W9. Managing trade-offs between water and other environmental issues

W9.1

Has your organization identified any linkages or trade-offs between water and other environmental issues in its value chain?

Yes

W9.1a

Please describe the linkages or trade-offs and the related management policy or action

Environmental issues	Linkage or trade- off	Policy or action
Cooling water intake structure regulation at nuclear units	Linkage	1) Description: Extreme costs/measures required for EPA regulatory compliance would cause closure of existing nuclear units, which would be replaced by fossil-fueled units, thus damaging air quality and climate action plans. 2) Action Taken: Entergy advocates with agencies and policy-makers and litigates where necessary for reasonable CWIS regulation and permits and for the support of continued operation of nuclear units. 3) Policy for managing linkage: Ensuring unit reliability that is safe, environmentally compliant and affordable expectations of state and federal permits and regulator as well as the public's expectations.

Further Information

Module: Sign Off

Page: Sign Off

Please provide the following information for the person that has signed off (approved) your CDP water response

Name	Job title	Corresponding job category
Chuck Barlow	Vice President, Environmental Strategy & Policy	Environment/Sustainability manager

W10.2

Addressing water risks effectively, in many instances, requires collective action. CDP would like to support you in finding potential partners that are also working to tackle water challenges in the river basins you report against. Please select if your organization would like CDP to transfer your publicly disclosed risk and impact drivers and response strategy data from questions W1.4a, W3.2b, W3.2c, W4.1a and W8.1b to the United Nations Global Compact Water Action Hub.

Yes

Further Information

CDP 2015 Water 2015 Information Request