Based in Milwaukee, Wisconsin, WEC Energy Group is one of the nation's premier energy holding companies, with subsidiaries serving energy customers in Wisconsin, Illinois, Minnesota and Michigan.

At WEC Energy Group, we embrace our responsibility to provide safe, reliable and affordable energy in an environmentally sustainable manner. We set our strategies and run our operations with an emphasis on continuous improvement and a vision to deliver a cleaner energy future.

As we make progress on our environmental efforts, we provide information to a number of environmental, social and governance organizations and ratings firms to continually enhance transparency and encourage dialogue with stakeholders.

We have disclosed information regarding our operations and climate-related risks and opportunities to CDP for more than a decade.

Our responses in this report contain forward-looking information. For cautionary statements regarding forward-looking information, please go to http://www.wecenergygroup.com/home/terms.htm.

CDP

WEC Energy Group - Water 2018
W0. Introduction

W0.1

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

We were incorporated in the state of Wisconsin in 1981 and became a diversified holding company in 1986. We maintain our principal executive offices in Milwaukee, Wisconsin. Our wholly owned subsidiaries provide regulated natural gas and electricity, as well as nonregulated renewable energy. In addition, we have an approximate 60% equity interest in American Transmission Company (an electric transmission company operating in Illinois, Michigan, Minnesota, and Wisconsin) and an approximate 75% equity interest in ATC Holdco, LLC, a separate entity formed to invest in transmission-related projects outside of American Transmission Company's traditional footprint. On June 29, 2015, Wisconsin Energy Corporation acquired 100% of the outstanding common shares of Integrys Energy Group, Inc. and changed its name to WEC Energy Group, Inc. Wisconsin Electric Power Company, which is the largest electric utility in the state of Wisconsin, generates and distributes electric energy to customers located in southeastern Wisconsin (including the metropolitan Milwaukee area), east central Wisconsin, and northern Wisconsin, and to an iron ore mine located in Michigan. Wisconsin Public Service Corporation generates and distributes electric energy to customers located in northeastern Wisconsin. Effective January 1, 2017, Wisconsin Electric and Wisconsin Public Service transferred their electric customers (other than the iron ore mine referenced above), electric distribution assets, natural gas customers and natural gas distribution assets located in the Upper Peninsula of Michigan to Upper Michigan Energy Resources Corporation, a new stand-alone utility owned by WEC Energy Group. We own the largest natural gas distribution utilities in Wisconsin, and we operate throughout the state, including the City of Milwaukee and surrounding areas, northeastern Wisconsin, and large areas of both central and western Wisconsin. In addition, Wisconsin Electric has a steam utility that generates, distributes, and sells steam to customers in metropolitan Milwaukee, Wisconsin, for use in processing, space heating, domestic hot water, and humidification. Our Illinois natural gas utilities, The Peoples Gas Light and Coke Company and North Shore Gas Company, serve customers in Chicago and the northern suburbs of Chicago, respectively. Our other natural gas utilities include Minnesota Energy Resources Corporation, serving customers in various cities and communities throughout Minnesota, and Michigan Gas Utilities, serving customers in the southern portion of lower Michigan. Our non-utility operations include W.E. Power, LLC, which designed and built certain electric generating units that

it now leases to Wisconsin Electric; Bluewater Natural Gas Holding, LLC, which owns natural gas storage facilities in Michigan that provide approximately one-third of the current storage needs for our Wisconsin natural gas utilities; Wispark LLC, which develops and invests in real estate; and WPS Power Development LLC, which owns solar projects.

W-EU0.1a

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

Electricity generation
Distribution

W-EU0.1b

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

	Nameplate capacity (MW)	% of total nameplate capacity	Gross generation (MWh)
Coal – hard	5555	55	27316000
Lignite	0	0	0
Oil	0	0	0
Gas	3846	38.1	9624000
Biomass	58	0.6	85000
Waste (non-biomass)	0	0	0
Nuclear	0	0	0
Geothermal	0	0	0
Hydroelectric	190	1.9	887000
Wind	447	4.4	1084000
Solar	0	0	0
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	10096	100	38996000

W0.2

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

	Start date	End date
Reporting year	January 1 2017	December 31 2017

W0.3

(W0.3) Select the countries/regions for which you will be supplying data.

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.

Other, please specify (Equity share of consolidated companies)

W0.6

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

No

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	Have not evaluated	Our power plant operations use open-cycle cooling or wet cooling tower systems that withdraw from intake structures from nearby freshwater sources.
Sufficient amounts of recycled,	Important	Have not	Our Fox Energy Center beneficially reuses treated effluent to supply its process water and cooling water needs.

	Direct use importance rating	Indirect use importance rating	Please explain
brackish and/or produced water available for use		evaluated	The beneficial reuse of treated effluent results in a net reduction in the quantity of pollutants that would otherwise be discharged, resulting in a net benefit to the public and the aquatic environment in the Fox River.

W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	76-99	Water withdrawals are calculated as required by state water use reporting requirements.
Water withdrawals – volumes from water stressed areas	Not relevant	
Water withdrawals – volumes by source	76-99	Water withdrawals are calculated as required by state water use reporting requirements.
Produced water associated with your metals & mining sector activities - total volumes	<Field Hidden>	<Field Hidden>
Produced water associated with your oil & gas sector activities - total volumes	<Field Hidden>	<Field Hidden>
Water withdrawals quality	76-99	Water withdrawals quality is monitored in connection with state water discharge (N/WPDES) permit applications and for other purposes.
Water discharges – total volumes	76-99	Water discharges (volume and quality) are monitored as required by state water discharge (N/WPDES) permits and reported on Discharge Monitoring Reports.
Water discharges – volumes by destination	76-99	Water discharges (volume and quality) are monitored as required by state water discharge (N/WPDES) permits and reported on Discharge Monitoring Reports.
Water discharges – volumes by treatment method	76-99	Water discharges (volume and quality) are monitored as required by state water discharge (N/WPDES) permits and reported on Discharge Monitoring Reports.
Water discharge quality – by standard effluent parameters	76-99	Water discharges (volume and quality) are monitored as required by state water discharge (N/WPDES) permits and reported on Discharge Monitoring Reports.
Water discharge quality –	76-99	Water discharge temperature is monitored in most cases at our power plants.

	% of sites/facilities/operations	Please explain
temperature		
Water consumption – total volume	76-99	Water consumption is calculated for the annual corporate performance report and in some cases for municipal sewerage system forms
Water recycled/reused	76-99	Water recycled/reused is reported on for the Fox Energy Center. Our Fox Energy Center beneficially reuses treated effluent to supply its process water and cooling water needs. The beneficial reuse of treated effluent results in a net reduction in the quantity of pollutants that would otherwise be discharged, resulting in a net benefit to the public and the aquatic environment in the Fox River.
The provision of fully-functioning, safely managed WASH services to all workers	76-99	All staffed buildings provide clean water for drinking and adequate facilities for hygiene and waste management.

W-EU1.2a

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

	% of sites/facilities/operations measured and monitored	Please explain
Fulfilment of downstream environmental flows	100%	
Sediment loading	100%	
Other, please specify	Please select	

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	3570000	Higher	
Total discharges	3540000	Higher	
Total consumption	30000	About the same	

W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	3570000	Higher	Our power plant operations rely on open-cycle cooling or wet cooling tower systems that withdraw from intake structures on freshwater sources. Customarily, for plants with open cycle cooling systems, about 99.2% of water withdrawn for plant operations is returned to the source. (Note: All water used for cooling is returned and there are evaporative losses of under 1% due to equipment such as wet flue gas desulfurization systems.) For facilities with cooling towers, about 25% of the water is returned to the source with the balance of the water loss going to the air during the evaporative cooling process.
Brackish surface water/seawater	Not relevant	<Field Hidden>	<Field Hidden>	
Groundwater – renewable	Not relevant	<Field Hidden>	<Field Hidden>	
Groundwater – non-renewable	Not relevant	<Field Hidden>	<Field Hidden>	
Produced water	Not relevant	<Field Hidden>	<Field Hidden>	
Third party sources	Relevant	3000	About the same	

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	3540000	Higher	Our power plant operations rely on open-cycle cooling or wet cooling tower systems that withdraw from intake structures on freshwater sources. For plants with open-cycle cooling systems, in 2017, about 99.2% of water withdrawn for plant operations was returned to the source. For facilities with cooling towers, about 25% of the water is returned to the source with the balance of the water loss going to the air during the evaporative cooling process.
Brackish surface	Not	<Field Hidden>	<Field	

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
water/seawater	relevant		Hidden>	
Groundwater	Not relevant	<Field Hidden>	<Field Hidden>	
Third-party destinations	Relevant		About the same	Our Fox Energy Center beneficially reuses treated effluent to supply its process water and cooling water needs. The beneficial reuse of treated effluent results in a net reduction in the quantity of pollutants that would otherwise be discharged, resulting in a net benefit to the public and the aquatic environment in the Fox River.

W1.2j

(W1.2j) What proportion of your total water use do you recycle or reuse?

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	Less than 1%	About the same	Our Fox Energy Center beneficially reuses treated effluent to supply its process water and cooling water needs. The beneficial reuse of treated effluent results in a net reduction in the quantity of pollutants that would otherwise be discharged, resulting in a net benefit to the public and the aquatic environment in the Fox River.

W-EU1.3

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

No, and we have no plans to do so in the next two years

W2. Business impacts

W2.1

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

No

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?

No

W3. Procedures

W-EU3.1

(W-EU3.1) How does your organization identify and classify potential water pollutants associated with your business activities in the electric utilities sector that could have a detrimental impact on water ecosystems or human health?

We identify a range of pollutant discharges from our electric generating facilities during permit application processes. We follow a classification system for potential water pollutants used by the Wisconsin DNR in their water quality standards codes. The DNR classifications are established for: 1) protection of fish and aquatic life; 2) protection of human health, including carcinogenic substances; and 3) protection of wildlife from the effects of bioaccumulation in the aquatic environment.

W-EU3.1a

(W-EU3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants associated with your activities in the electric utilities sector on water ecosystems or human health.

Potential water pollutant	Description of water pollutant and potential impacts	Management procedures	Please explain
Thermal pollution	Great Lakes and tributaries	Compliance with effluent quality standards Community/stakeholder engagement Other, please specify (Cooling towers and discharge diffusers.)	
Other, please specify	Great Lakes and tributaries	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness No formal management procedure in place	All discharges at electric generating facilities are monitored for a large range of substances and evaluated to determine which limits are needed in state issued permits.

W3.3

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

No, water-related risks are not assessed

W3.3e

(W3.3e) Why does your organization not undertake a water-related risk assessment?

	Primary reason	Please explain
Row 1	Important but not an immediate business priority	Our generating facilities currently do not have constraints on water use. Our baseload generating facilities are all located at sites with direct access to water from the Great Lakes basin (Lakes Michigan and Superior) or Mississippi River basin (Wisconsin River).

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?

There are not constraints on our operations related to water use due to our Great Lakes basin and Mississippi River basin operating locations. Therefore, we do not have metrics used to define substantive change to our business, operations, revenue or expenditure from water risk.

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	Our electrical generating facilities are all located in an area of the U.S. without water shortages, including the Great Lakes and Mississippi River basin. Our largest baseload facilities are located on Lake Michigan, Lake Superior and the Wisconsin River. We also work to comply with all existing and anticipated future water regulations.

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	Risks exist, but no substantive impact anticipated	There may be water risks associated with our supply chain purchases of fuel and materials; however, we are not aware of any cases where a substantive impact could be reasonably anticipated.

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

Due to our Great Lakes basin and Mississippi River basin locations, many of our generating stations utilize open-cycle cooling. All of the water used for open-cycle cooling is returned to the water body. Among options for power plant cooling, our open-cycle systems are the most efficient technology choice. Therefore, this form of cooling maximizes plant efficiency and affords lower carbon emissions per unit of electrical generation compared to any other cooling technology options.

Estimated timeframe for realization

>6 years

Magnitude of potential financial impact

Medium

Potential financial impact

Explanation of financial impact

The company has invested in advanced cooling water intake structure technologies and analyzed cooling water thermal discharges. We have received long-term government agency approvals for these systems that will be operable for well beyond six years. A quantitative estimate of the inherent financial impacts of the opportunity is not currently available.

W6. Governance

W6.1

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

No

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) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Other, please specify (Board of individuals/Sub-set of Board)	Briefings occur via quarterly environmental report to Audit and Oversight Committee of Board of Directors

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Overseeing major capital expenditures Reviewing and guiding risk management policies Setting performance objectives Reviewing innovation/R&D priorities	

W6.3

(W6.3) Below board level, provide the highest-level management position(s) or committee(s) with responsibility for water-related issues.

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

Other C-Suite Officer, please specify (Senior Executive Vice President)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4

(W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

No, and we do not plan to introduce them in the next two years

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

Yes, other

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?

WEC Energy Group is routinely engaged in water policy review, development, and modification with federal and state agencies, such as USEPA, FERC, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, WI Dept of Natural Resources, MI Dept of Natural Resources, and MI Dept of Environmental Quality. The company also is engaged in water policy evaluation, research, and funding with trade and other nongovernment organizations such as the Electric Power Research Institute (EPRI), National Hydropower Association, Midwest Hydro Users Group, MI Manufacturers Association, MI Hydro Licensing Coalition, and River Alliance of WI. Company interactions are vetted through environmental, regulatory, and operations business support teams. Established processes include procedural based review and/or comment on policy and regulatory documents, participation at policy-based stakeholder meetings, active committee and board appointments in trade organizations, and attendance at trade and industry research meetings.

WEC Energy Group had influenced the U.S. EPA's Effluent Limitation Guidelines program, which establishes wastewater treatment requirements for steam electric power plants. The company has financially supported EPRI research and provided a pilot study site to test an emerging technology to remove selenium, nitrogen compounds and mercury from power plant scrubber discharges. This technology uses of an advanced biological metals removal process to improve discharge water quality.

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	> 30	Water resource considerations are factored into location planning for new operations and site expansions, impacting the types of facilities that can be considered.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	> 30	Water resource considerations are factored into location planning for new operations and site expansions.
Financial planning	Yes, water-related issues are integrated	> 30	Proximity to water resources is one of the most important siting criteria used for power plant location planning for new operations and site expansions. Availability of water affects choices of cooling and other systems and technologies. Also, waterfront access can facilitate ship and barge delivery of fuel and other bulk materials needed for power plant operations, impacting costs.

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?

	Water-related CAPEX (+/- % change)	Anticipated forward trend for CAPEX (+/- % change)	Water-related OPEX (+/- % change)	Anticipated forward trend for OPEX (+/- % change)	Please explain
Row 1	0	0	0	0	

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	

W7.3a

(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?

No

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

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Site/facility specific targets and/or goals	None are monitored at corporate level	We set specific goals at all of our generating facilities related to anticipated regulatory and permit compliance activities, some of which may be associated with water-related compliance requirements.

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?

Yes

W9.1a

(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.

Linkage or tradeoff

Linkage

Type of linkage/tradeoff

Other, please specify (Cooling water use/ fuel use eff/air emis)

Description of linkage/tradeoff

Open-cycle versus closed-cycle (cooling towers) cooling water system options and their impacts on the overall environment, aquatic life, water consumption, energy efficiency, aesthetics and cost when comparing trade-offs between these systems.

Policy or action

For the generation expansion project at our Oak Creek site (on Lake Michigan near Milwaukee) completed in 2011, the company evaluated both open-cycle and closed-cycle (cooling towers) cooling water system options and studied impacts on the overall environment, aquatic life, water consumption, energy efficiency, aesthetics and cost when comparing trade-offs between these systems. The open cycle approach was selected because it provides: greater energy efficiency, use of less coal to produce a kilowatt-hour of electricity; conservation of water, with virtually no evaporative water loss; reduced air emissions per kilowatt-hour, including CO2; reduced cost to build and operate; no visual impact of cooling towers and related vapor cloud; and public fishing access at an on-shore cooling water discharge. The linkage between cooling water use and fuel combustion efficiency creates direct, unavoidable trade-offs with air emissions. Our solution at Oak Creek was to construct a cooling water intake structure with wedge-wire screens to protect fish and aquatic life. Also, the thermal component of the cooling water system discharge was studied, and agency scientists agreed there were no adverse effects (in fact, we were asked for a public fishing pier at our discharge structure). Management of these trade-offs allowed the Oak Creek expansion units to be more energy-efficient, resulting in lower air emissions, including CO2, while minimizing impacts to the water environment.

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?

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

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	Senior Executive Vice President	Other, please specify (Senior Executive Vice President)

W11.2

(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes

Submit your response

In which language are you submitting your response?

English

Please confirm below

I have read and accept the applicable Terms

- W0. Introduction
- W1. Current state
- W2. Business impacts
- W3. Procedures
- W4. Risks and opportunities
- W6. Governance
- W7. Business strategy
- W8. Targets
- W9. Linkages and trade-offs
- W10. Verification
- W11. Sign off
- Submit your response