Welcome to your CDP Water Security Questionnaire 2020

W0. Introduction

W0.1

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

NRG Energy, Inc., or NRG or the Company, is an energy company built on dynamic retail brands with diverse generation assets. NRG brings the power of energy to consumers by producing, selling and delivering electricity and related products and services in major competitive power markets in the U.S. in a manner that delivers value to all of NRG's stakeholders. NRG is perfecting the integrated model by balancing retail load with generation supply within its deregulated markets, while evolving to a customer-driven business. The Company sells energy, services, and innovative, sustainable products and services directly to retail customers under the brand names NRG, Reliant, Green Mountain Energy, Stream, and XOOM Energy, as well as other brand names owned by NRG, supported by approximately 23,000 MW of generation as of December 31, 2019. NRG was incorporated as a Delaware corporation on May 29, 1992. Certain matters discussed in this survey are forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that are subject to risks and uncertainties. Please see statement below about forward-looking statements.

SAFE HARBOR: In addition to historical information, the information presented in this report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Exchange Act. These statements involve estimates, expectations, projections, goals, assumptions, known and unknown risks and uncertainties and can typically be identified by terminology such as “may,” “should,” “could,” “objective,” “projection,” “forecast,” “goal,” “guidance,” “outlook,” “expect,” “intend,” “seek,” “plan,” “think,” “anticipate,” “estimate,” “predict,” “target,” “potential” or “continue” or the negative of these terms or other comparable terminology. Such forward-looking statements include, but are not limited to, statements about the Company’s future revenues, income, indebtedness, capital structure, plans, expectations, objectives, projected financial performance and/or business results and other future events, and views of economic and market conditions.

Although NRG believes that its expectations are reasonable, it can give no assurance that these expectations will prove to be correct, and actual results may vary materially. Factors that could cause actual results to differ materially from those contemplated herein include, among others, general economic conditions, hazards customary in the power industry, weather conditions, competition in wholesale power markets, the volatility of energy and fuel prices, failure of customers to perform under contracts, changes in the wholesale power markets, changes in government regulations, the condition of capital markets generally, our ability to access capital markets, cyberterrorism and inadequate cybersecurity, unanticipated outages at

our generation facilities, adverse results in current and future litigation, failure to identify, execute or successfully implement acquisitions, repowerings or asset sales, our ability to implement value enhancing improvements to plant operations and company-wide processes, our ability to implement and execute on our publicly announced transformation plan, including any cost savings and margin enhancement, our ability to achieve our net debt targets, our ability to proceed with projects under development or the inability to complete the construction of such projects on schedule or within budget, the inability to maintain or create successful partnering relationships, our ability to operate our businesses efficiently, our ability to retain retail customers, our ability to realize value through our commercial operations strategy, the ability to successfully integrate businesses of acquired companies, our ability to realize anticipated benefits of transactions (including expected cost savings and other synergies) or the risk that anticipated benefits may take longer to realize than expected, and our ability to execute our Capital Allocation Plan.

NRG undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. The foregoing review of factors that could cause NRG's actual results to differ materially from those contemplated in the forward-looking statements included in this report should be considered in connection with information regarding risks and uncertainties that may affect NRG's future results included in NRG's filings with the Securities and Exchange Commission at www.sec.gov.

W-EU0.1a

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

Electricity generation

W-EU0.1b

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

	Nameplate capacity (MW)	% of total nameplate capacity	Gross electricity generation (GWh)
Coal – hard	7,919	34.36	32,746,000
Lignite	0	0	0
Oil	3,621	15.67	544,000
Gas	9,987	43.21	16,212,000
Biomass	0	0	0
Waste (non-biomass)	0	0	0
Nuclear	1,126	4.87	9,018,000
Fossil-fuel plants fitted with carbon capture and storage	0	0	0

Geothermal	0	0	0
Hydropower	0	0	0
Wind	75	0.32	0
Solar	382	1.66	782,956
Marine	0	0	0
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	23,110	100	59,302,956

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, 2019	December 31, 2019

W0.3

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

Australia
United States of America

W0.4

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

USD

W0.5

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

Companies, entities or groups in which an equity share is held

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	Important	NRG's power generation operations demand sufficient good quality freshwater; direct use is vital for operations. In 2019, 43% of the water used in operations was freshwater for direct use. The primary direct use of freshwater is for the cooling of condensers in the generation of power, with a small amount for steam and WASH (water, sanitation, and hygiene) for workers. Indirect use of good quality freshwater is important for NRG's fuel supply because it is necessary for natural gas production and the manufacturing of chemicals used in the generation of power, therefore indirect use is listed as important. NRG expects the importance of sufficient amounts of good quality freshwater for direct and indirect uses to remain substantially the same in the future. The total volume of freshwater required for direct operations is expected to decline, but sufficient amounts of freshwater will remain vital. Sufficient amounts of freshwater are expected to remain important in NRG’s supply chain.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	NRG's operation of power generation stations depends on sufficient amounts of recycled, brackish and ocean water to be available, therefore direct use is listed as vital for operations. In 2019, 23% of the water used in operations was recycled, brackish or ocean water for direct use. The primary direct use of brackish and ocean water is for the cooling of condensers in the generation of power. NRG does not use produced water for its operations. NRG suppliers do not indicate that they depend on recycled, brackish or produced water for operations. It is likely that some chemical manufacturing facilities use brackish or recycled water for cooling water in

			their manufacturing processes; as such, indirect use is listed as important. NRG expects the importance of sufficient amounts of these types of water for direct and indirect uses to remain substantially the same the future.

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	100%	NRG measures and monitors water withdrawal total volumes at 34 generation plants, one repair shop, and at office locations. Totals are measured, monitored, and recorded at intervals according to the terms of their permits and are recorded at least monthly in NRG systems. Monitoring frequency and method vary by individual site and permit but are typically measured monthly via a meter or calculated using specific pump rating specifications and hours of operation. The 34 generating locations comprise 99.9% of NRG's total water withdrawal. KPMG verifies NRG's water inventory annually. NRG has a trained environmental professional assigned to each of the generating stations who tracks withdrawal by source. All generation facilities report the cubic meters in NRG's environmental management information system. Withdrawals at non-reporting locations are calculated by the number of site personnel. This data is used to benchmark, manage water withdrawals, and evaluate water total withdrawal.
Water withdrawals – volumes by source	100%	NRG measures and monitors water withdrawal total volumes in millions of gallons that are converted to cubic meters, at 34 generation plants, one repair shop, and at office locations. Totals are measured, monitored, and recorded at intervals according to the terms of their permits. Monitoring frequency and method vary by individual site and permit but are typically measured /monthly via a meter or calculated using specific pump rating specifications and

		hours of operation. The generating locations comprise 99.9% of NRG's total water withdrawal. KPMG verifies NRG's water inventory annually. NRG has a trained professional assigned to each of the generating stations who tracks withdrawal by source using observed metered data and reports the cubic meters in NRG's environmental management information system. Withdrawals at non-reporting locations are calculated by the number of site personnel. This data is used to benchmark, manage water withdrawals, and evaluate water withdrawal sources.
Water withdrawals quality	76-99	NRG measures and monitors water withdrawal quality at select facilities where it is a regulatory requirement. Quality is measured, monitored, and recorded at intervals according to the terms of plant permits, and while means of measurement vary by individual site and permit, is typically measured through sampling and testing on at least a monthly basis. NRG also measures and monitors water withdrawal quality on a voluntary basis at select facilities. NRG holds 56 waste water discharge permits. The generating locations with wastewater discharge permits comprise 99.9% of NRG's total water withdrawal . NRG has a trained environmental professional assigned to each generating station who tracks withdrawal quality by source using established on-site and off-site sample testing methodologies and reports the data in NRG's environmental management system.
Water discharges – total volumes	100%	NRG measures and monitors water discharges total volume in millions of gallons that are converted to cubic meters, at generating operations with waste water discharge permits. Totals are measured, monitored, and recorded at intervals according to the terms of their permits, and are recorded at least monthly in NRG systems. The generating stations with wastewater discharge permits represent 99.9% of the total water discharged by volume. NRG has staff trained on water accounting and follows the GRI water reporting standards to report observed metered data at each of the

		generating stations that tracks discharge by volume and reports the cubic meters in NRG's environmental management information system. This data is reported to state agencies as required by each site's wastewater permit. This data is used to benchmark and manage water discharges.
Water discharges – volumes by destination	100%	NRG measures and monitors water discharges volumes by destination in millions of gallons that are converted to cubic meters, at 34 generation plants, one repair shop, and at office locations . Totals are measured, monitored, and recorded at intervals according to the terms of plant permits, and are recorded at least monthly in NRG systems. The generating stations are 99.9% of the total water discharged by destination. NRG has a water expert that is trained on water accounting and follows the GRI water reporting standard to report observed metered data, tracks discharge by destination and reports in NRG's environmental management information system. This data is reported to state agencies as required by each site's wastewater permit. This data is used to benchmark and manage water discharge by destination.
Water discharges – volumes by treatment method	100%	NRG measures and monitors water discharge - volume by treatment method at generation plants with waste water discharge permits. Totals are measured, monitored, and recorded at intervals according to the terms of plant permits and are recorded at least monthly in NRG systems. The generating stations with wastewater discharge permits represent 99.9% of the total water discharge - volume by treatment method. Data is reported to state agencies as required by each site's wastewater permit. Permit non-compliance incidents are reported and tracked in NRG's environmental management system.
Water discharge quality – by standard effluent parameters	100%	NRG measures and monitors water discharge quality data, quality by standard effluent parameters, at its generating operations with waste water discharge permits. Quality is measured, monitored, and recorded at intervals

		according to the terms of plant permits, and while means of measurement vary by individual site and permit, is typically measured through sampling and testing at a third-party lab on at least a monthly basis. Locations are 99.9% of the total water discharge quality data/quality by standard effluent parameters. Trained plant personnel track discharge quality data by standard effluent parameters using established onsite and offsite sample testing methodologies. This data is reported to state agencies as required by each site's wastewater permit. Permit non-compliance incidents are tracked in NRG's environmental management system.
Water discharge quality – temperature	100%	NRG measures and monitors water discharge quality data, quality monthly or more frequently by standard effluent parameters, at its generating operations with waste water discharge permits. Quality is measured, monitored, and recorded at intervals according to the terms of plant permits, and while means of measurement vary by individual site and permit, is typically measured at the outlet site on at least a monthly basis. The plants with waste water discharge permits represent 99.9% of the total water discharge quality data/quality by standard effluent parameters. This data is reported to state agencies as required by each site's wastewater permit. Permit noncompliance incidents are reported and tracked in NRG's environmental management information system.
Water consumption – total volume	100%	NRG measures and monitors total volume of water consumption, in cubic meters, at its generating operations with its waste water discharge permits. Totals are measured, monitored, and recorded at intervals according to the terms of plant permits, and are recorded at least monthly in NRG systems. The generating locations with waste water discharge permits represent 99.9% of the total water consumption. Water consumption is calculated as the difference between total withdrawal and total discharge. This data is used to benchmark and manage water consumption.

Water recycled/reused	Not monitored	NRG indirectly recycle/reuse water but they are currently not measured or monitored. For example, some generation stations, such as the one in Limestone, intake and release water used from cooling towers and other power plant processes from and to the same water body. As a result, those plants use the same water in their cooling process multiple times, but that water is mixed with other water. Thus, amount of recycled/reused process water are not fully quantified due to commingling from other water sources.
The provision of fully-functioning, safely managed WASH services to all workers	100%	NRG measures and monitors all facilities and provides fully functioning WASH services for all workers. NRG operations are primarily in the United States and OSHA requires WASH services for all workers. Sites are inspected by federal regulators in person when randomly selected as part of an OSHA enforcement process, and are informally monitored daily by site management, who report any outages. 100% of NRG facilities have WASH services.

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	3,955,000	Lower	NRG total water withdrawals decreased by 14% in 2019. The decrease in total water withdrawal is due market conditions and plant retirements. About 96% of the water withdrawn is returned to the water body. Future water volumes withdrawn are expected to stay flat or drop over a 1-2 year period due to market conditions and plant retirement, while following an overall downward trend. To ensure consistency and relevance, changes to the generation asset portfolio are reflected in 2019 and past data.
Total discharges	3,836,000	Lower	NRG total water discharges decreased by 13% in 2019. The decrease in total water discharge

			is due to market conditions and plant retirements. 96% of the fresh surface water withdrawn is returned to the water body. Future discharges are expected to stay flat or drop over a 1-2 year period due to market conditions and plant retirement, while following an overall downward trend.
Total consumption	119,000	Much lower	NRG total water consumption decreased by 35%. 96% of water withdrawn is returned to the water body. The decrease in total water consumption is due to market conditions and plant retirements. Facility water experts evaluate data and calculation methods to ensure data accuracy. Consumption figures are calculated using this formula: water withdrawals - water discharges = water consumption. Consumption volumes are expected to remain the same in the future.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	26-50	Higher	WRI Aqueduct	The proportion of NRG's 2019 water withdrawals from water stressed areas remains the same from 2018. This is due in part to more NRG relevant U.S. territories being designated as high physical risk zones by WRI Aqueduct. In addition, marked increases in the volumes of water NRG withdraws at two of the 35 units included in the WRI Aqueduct analysis were recorded due to increased power plant capacity factors. NRG utilizes various tools to assist with Water Risk Assessments. We model water

					risk using the WRI Aqueduct tool by entering 35 facility coordinates to map our facilities by region and water basin, then applying facility water withdrawal data to arrive at a volume from stressed areas.14 facilities were found to be located in regions with high or extremely high baseline water stress. WRI Aqueduct data is applied internally to help determine candidates for internal audit and third-party assurance.

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	1,715,000	Much lower	The primary direct use of freshwater is for the cooling of condensers in the generation of power, with a small amount for steam and WASH (water, sanitation, and hygiene) for workers. NRG fresh surface water withdrawals decreased by 30% in 2019. The decrease in fresh water withdrawal is due to decreased generation at high water use plants. Future fresh water volumes withdrawn are expected to stay the same or drop slightly over a 1 to 2 year period due to market conditions following an overall downward trend.
Brackish surface water/Seawater	Relevant	2,240,000	About the same	The primary direct use of brackish surface

				water/seawater is for the cooling of condensers in the generation of power. NRG brackish surface water/seawater withdrawals slightly increased in 2019 showing a 5% increase from 2018. Future brackish water volumes withdrawn are expected to drop over a 1 to 2 year period due to plant retirements, following an overall downward trend.
Groundwater – renewable	Not relevant			NRG does not differentiate between renewable and non-renewable groundwater in our water accounting and is considering new data collection methodologies to be implemented in the future to distinguish between the two. Currently, as a conservative measure, all groundwater for the purposes of this disclosure is reported under non-renewable groundwater. We anticipate renewable groundwater to make up a portion of our groundwater use in the future, when measurement of this resource is available.
Groundwater – non-renewable	Relevant	11,162	About the same	The primary direct use of groundwater is for the cooling of condensers in the generation of power, with a small amount for steam and WASH (water, sanitation, and hygiene) for workers. NRG recorded about the same non-renewable groundwater volumes withdrawn compared to 2018, although the relative

				amount of groundwater used is very small as compared to other sources of water. The increase in non-renewable groundwater volumes is due to run times at plants that use groundwater. Future volumes are expected to remain relatively constant.
Produced/Entrained water	Not relevant			NRG does not use produced/processed water at any of our generating assets because it is not generated in onsite processing of raw materials. Future volumes are expected to remain constant.
Third party sources	Not relevant			NRG does not use third party sources for water at any of our generating assets because of availability. Future volumes are expected to remain constant.

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	1,629,000	Much lower	Discharges to fresh surface water are relevant to NRG because plants are sited based on available cooling water and the ability to discharge to appropriate locations based on permits. Plants located near rivers will discharge to that destination, and plants near lakes will discharge to that destination. NRG fresh surface water discharges decreased by 28% in 2019. The decrease in fresh water discharge is due to decreased generation at high water use plants. Future fresh

				water volumes discharged are expected to stay the same or drop slightly over a 1 to 2 year period due to market conditions following an overall downward trend.
Brackish surface water/seawater	Relevant	2,207,000	About the same	Discharges to brackish surface water/seawater are relevant to NRG because plants are sited based on available cooling water and the ability to discharge to appropriate locations, therefore plants located near brackish surface water bodies will discharge to that destination, and plants near the ocean will discharge to that destination, etc. NRG brackish surface water/seawater discharges stayed the same in 2018 showing a 4% increase from 2018. Future brackish water volumes withdrawn are expected to drop over a 1 to 2 year period due to plant retirements, following an overall downward trend.
Groundwater	Relevant	400	About the same	NRG typically discharges a very small amount of water into the ground relative to other discharge destinations, as plants are typically sited near other destinations better suited for power generation water discharge processing. The amount of discharge was about the same compared to 2018. Future volumes are expected to remain substantially the same.
Third-party destinations	Relevant	10,800	About the same	NRG discharges water to third party destinations when available, as it often creates a revenue stream. NRG discharged about the same water volume to third party destinations in 2019. WA Parish Generating Station comprises all of NRG's water

				discharged to others, with approximately 75% going to rice farmers and 25% going to other users for industrial purposes. Future volumes are expected to remain relatively constant.

W-EU1.3

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

Yes

W-EU1.3a

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

Water intensity value (m3)	Numerator: water aspect	Denominator	Comparison with previous reporting year	Please explain
0.08	Total water withdrawals	MWh	Higher	In 2019 NRG's total water withdrawal intensity per unit of electricity generation was 0.077 megaliters (20,341 gallons) per MWh. This is about the same compared to the previous reporting year figure. The water withdrawal intensity is due to idling at plants that are kept online at times without generating electricity, as well as increased runtimes at higher water use plants and plants that were offline in 2017. It had been anticipated that intensity may increase over the next one to two years based on shifting generation asset fuel mix and portfolio makeup but will decrease in the longer term in line with reduction in once through cooling systems associated with coal generation. This metric is used internally to support the development of sustainability initiatives related to water, for instance the development of new water targets. In 2019 NRG worked to reduce water withdrawal intensity by undergoing detailed water desktop audits at three high use generation stations to

				reveal gaps in measurement and reporting quality as well as reasons behind high water use, with the goal of developing strategies to reduce water withdrawal intensity at the fleet level.

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

Yes, our customers or other value chain partners

W1.4c

(W1.4c) What is your organization's rationale and strategy for prioritizing engagements with customers or other partners in its value chain?

With customers, NRG's Business Solutions' team provides value-add and/or stand-alone sustainability advisory services to customers in need of specific or holistic approach to their corporate sustainability program. Among resources frequently discussed during engagement is water conservation. We are at the early stages of our sustainability advisory service offering and engagement with our current and future customers. In 2019, the percentage of customers asking for NRG business solutions services is estimated between 50-60%, considering that we have not fully implemented the sustainability advisory services marketing plan for the year. In the next reporting cycle, we will be able to provide more specific data on our engagement frequencies and successes.

With partners in the value chain, NRG is a founding member of the Natural Gas Supply Collaborative (NGSC). NRG has worked with this group on establishing environmental and social indicators for natural gas producers, one of which is water. Among the indicators for water are: (1) Quantitative: water use (total and freshwater intensity), water testing, spill reporting; (2) Management Strategy (qualitative): freshwater use strategy, well planning and integrity strategy, wastewater management strategy.

We are internally evaluating a supplier engagement strategy for our natural gas suppliers to engage them on water management.

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?

NRG identifies and classifies potential water pollutants according to regulatory requirements. We obtain all required permits and report results of water discharges to regulatory agencies monthly, typically the U.S. state. We have 56 wastewater discharge permits in the U.S. 5 total exceedances were found and promptly recorded in 2018. Exceedance information is entered in our incident management system, which enables NRG management to identify the root cause and correct it. We assess our operations each month through our environmental key performance indicator (EKPI), which measures leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws. Our goal for 2019 was to have all of our plants meet their plant-specific targets, and we achieved a 100 percent success result.

NRG follows EPA regulations pertaining to waste from the power generation process. On April 17, 2015, the EPA enacted a rule which regulates the disposal of CCRs (coal combustion residuals). We maintain a CCR Rule Compliance Data and Information page on nrg.com as required. In 2019, NRG has 12 surface impoundments defined by 40 CFR 257.2 as a facility or part of a facility that is a natural topographic depression, human-made excavation or diked area formed primarily of earthen materials. The CCR regulations require impoundments that meet the criteria of 40 CFR 257.73 to have a third-party professional engineer conduct a hazard potential classification assessment. 7 out of 12 impoundments subject to the rule were found to be of satisfactory (the highest rating available) structural integrity in 2019. While the remaining 5 have been classified under not applicable (N/A) category.

Reducing effluents and waste is important to us as stewards of the environment. NRG relies on regulatory agencies to evaluate potential water-related impacts on ecosystems and human health caused by potential pollutants, and set appropriate standards. These impacts include potential adverse wildlife, plant life, and human health impacts of wastewater permit exceedances. Should a wastewater permit exceedance occur, we determine the root cause and correct it. Spill Prevention Countermeasure and Control Plans and Stormwater Pollution Prevention Plans at every facility include requirements such as secondary containment procedures for materials; emergency responder procedures; and emergency equipment ready for deployment such as booms and absorbents to prevent hydrocarbons reaching any body of water. NRG requires these measures at every facility regardless of local regulation. In 2019,

NRG owned and operated facilities generated 1.03 million metric tons of coal combustion residuals (CCR), more than 680,000 metric tons (66 percent) of which were recycled. That's slightly higher than the percentage of recycled CCR in 2018.

NRG is continuously in the process of identifying water related risks in our supply chain, primarily related to fuels. Natural gas is an increasingly important fuel to keep power affordable and to add flexible fast-start capacity that allows faster scaling of renewables on the grid. Specific human health ecosystem water impacts possible in this part of our value chain, according to the EPA, include activities in the hydraulic fracturing water cycle, which may negatively impact the quality or quantity of drinking water or air quality. To encourage responsible natural gas production, NRG is part of the Natural Gas Supply Collaborative, which calls on natural gas producers to disclose information related to methane and air emissions, water quality, chemicals and community health and safety. Water impacts included in the Collaborative's call for disclosure include Water Use (Total and Freshwater Intensity), Water Testing, Spill Reporting, Freshwater Use Strategy, Well Planning and Integrity Strategy, and Wastewater Management Strategy. Regulators and civil society groups have been engaging natural gas producers for years, but the Collaborative is the first example of major corporate consumers articulating their sustainability priorities as a group. NRG is continuing to engage with the Collaborative to further incentivize production practices that minimize negative environmental and social impact.

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
Hydrocarbons	In the case of a spill or unpermitted discharge, hydrocarbons present at generation facilities could cause groundwater contamination or water body contamination. The scale and magnitude of the potential impact would depend on the size of the spill or unpermitted discharge, the location of the impact, as well as the type of hydrocarbon, ranging from minimal to substantive. We operate within the limits of wastewater discharge permits. Those limits	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Emergency preparedness	NRG's system maintenance and operations procedures are designed to ensure compliance with effluent quality standards at every facility. NRG has in place comprehensive spill prevention plans at every generation facility. Spill Prevention Countermeasure and Control Plans and Stormwater Pollution Prevention Plans at every facility include requirements such as secondary containment procedures for materials; emergency responder procedures; and emergency equipment ready for deployment

	are dictated, developed, and prepared by the states based on their rigorous analysis and monitoring.		such as booms and absorbents to prevent hydrocarbons reaching any body of water. NRG requires these measures at every facility regardless of local regulation. Operations are assessed each month through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws. Our goal for 2019 was to have all of our plants meet their plant-specific targets, and we achieved a 100 percent success result. To continuously improve environmental performance, we use an Environmental Management Information System (EMIS). This system provides us the tools and transparency to efficiently track our generation fleet's environmental performance. We use EMIS and root cause applications to report incidents, analyze root causes and ensure completion of corrective actions.
Coal combustion residuals	An unpermitted discharge from a coal combustion residual impoundment could cause groundwater contamination or water body contamination. The scale and magnitude of the potential impact would depend on the size of the spill or unpermitted discharge and the location of the impact, ranging from minimal to substantive. We operate within the limits of our permits. Those limits are dictated, developed, and prepared by the states based	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Emergency preparedness	NRG's system maintenance and operations procedures are designed to ensure compliance with effluent quality standards at every facility. NRG has in place comprehensive spill prevention plans at every generation facility. Spill Prevention Countermeasure and Control Plans and Stormwater Pollution Prevention Plans at every facility include requirements such as secondary containment procedures for materials; emergency responder procedures; and emergency

	on their rigorous analysis and monitoring.		equipment ready for deployment such as booms and absorbents to prevent hydrocarbons reaching any body of water. NRG requires these measures at every facility regardless of local regulation. Operations are assessed each month through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws. NRG follows EPA regulations pertaining to waste from the power generation process. On April 17, 2015, the EPA enacted a rule which regulates the disposal of CCRs (coal combustion residuals). We maintain a CCR Rule Compliance Data and Information page on nrg.com as required. NRG has 12surface impoundments defined by 40 CFR 257.2 as a facility or part of a facility that is a natural topographic depression, human-made excavation or diked area formed primarily of earthen materials. The CCR regulations require impoundments that meet the criteria of 40 CFR 257.73 to have a third-party professional engineer conduct a hazard potential classification assessment. Success is measured by number of impoundments subject to the rule found to be of satisfactory (the highest rating available) structural integrity. 7 out of 12 impoundments subject to the rule were found to be of satisfactory structural integrity in 2019. To continuously improve

			environmental performance, we use an Environmental Management Information System (EMIS). This system provides us the tools and transparency to efficiently track our generation fleet's environmental performance. We use EMIS and root cause applications to report incidents, analyze root causes and ensure completion of corrective actions.
Contaminated cooling water	In case of a release, chemicals used in cooling tower blowdown could cause groundwater contamination or water body contamination. The scale and magnitude of the potential impact would depend on the size of the spill or unpermitted discharge and the location of the impact, ranging from minimal to substantive. We operate within the limits of our permits. Those limits are dictated, developed, and prepared by the states based on their rigorous analysis and monitoring.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Emergency preparedness	NRG's system maintenance and operations procedures are designed to ensure compliance with effluent quality standards at every facility. NRG has in place comprehensive spill prevention plans at every generation facility. Spill Prevention Countermeasure and Control Plans and Stormwater Pollution Prevention Plans at every facility include requirements such as secondary containment procedures for materials; emergency responder procedures; and emergency equipment ready for deployment such as booms and absorbents to prevent hydrocarbons reaching any body of water. NRG requires these measures at every facility regardless of local regulation. Operations are assessed each month through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws. Our goal for 2019 was to have all of our plants meet their plant-specific targets, and we achieved a 100 percent success result. To

			continuously improve environmental performance, we use an Environmental Management Information System (EMIS). This system provides us the tools and transparency to efficiently track our generation fleet's environmental performance. We use EMIS and root cause applications to report incidents, analyze root causes and ensure completion of corrective actions.
Thermal pollution	Water is drawn into our facilities for cooling purposes, is warmed in the process of cooling the equipment, and is then discharged. The delta-T between intake and discharge temperatures is subject to regulatory monitor and permit due to potential ecological impacts of warmed water. The scale and magnitude of the potential impact on ecosystems and human health is relatively low as water temperature is able to be controlled using various methods, including reducing the amount of power a facility is generating (derating) in order to maintain discharge temperatures within the limits. We operate within the limits of our permits. Those limits are dictated, developed, and prepared by the states based on their rigorous analysis and monitoring.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Emergency preparedness	NRG's system maintenance and operations procedures are designed to ensure compliance with thermal water discharge standards at every facility. In accordance with local permit criteria water temperature is controlled using various methods, including reducing the amount of power a facility is generating (derating) in order to maintain discharge temperatures within the limits. Operations are assessed each month through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws. To continuously improve environmental performance, we use an Environmental Management Information System (EMIS). This system provides us the tools and transparency to efficiently track our generation fleet's environmental performance. We use EMIS and root cause applications to report incidents, analyze root causes and ensure completion of

			corrective actions. Our goal for 2019 was to have all of our plants meet their plant-specific targets, and we achieved a 100 percent success result.
Other, please specify Metals, TSS, Oil, and Grease	NRG monitors for metals in discharge at several generation stations, as well as total suspended solids (TSS), and oil and grease. The scale and magnitude of the potential impact would depend on the size of the spill or unpermitted discharge and the location of the impact. Relatively small volumes of these materials onsite make impacts less substantive. We operate within the limits of waste water discharge permits. Those limits are dictated, developed, and prepared by the states based on their rigorous analysis and monitoring.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Emergency preparedness	NRG's system maintenance and operations procedures are designed to ensure compliance with effluent quality standards at every facility. NRG has in place comprehensive spill prevention plans at every generation facility. Spill Prevention Countermeasure and Control Plans and Stormwater Pollution Prevention Plans at every facility include requirements such as secondary containment procedures for materials; emergency responder procedures; and emergency equipment ready for deployment such as booms and absorbents to prevent hydrocarbons reaching any body of water. NRG requires these measures at every facility regardless of local regulation. Operations are assessed each month through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws. To continuously improve environmental performance, we use an Environmental Management Information System (EMIS). This system provides us the tools and transparency to efficiently track our generation fleet's environmental performance. We use EMIS and root cause applications to report incidents, analyze root causes

			and ensure completion of corrective actions. Our goal for 2019 was to have all of our plants meet their plant-specific targets, and we achieved a 100 percent success result.

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as a standalone issue

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

International methodologies

Tools and methods used

WRI Aqueduct

Other, please specify

Facility-specific annual risk assessments, annual permit reviews, tracking trends and emerging regulations and trade organizations

Comment

NRG evaluates water risk at all generating stations in our direct operations. A comprehensive company-wide risk assessment approach is taken because water risk is linked with other risks, such as air emissions. Each generating facility is unique and NRG's approach identifies and addresses water risks for each location. Risks are identified, evaluated and responded to by managing plant operations.

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market
Enterprise Risk Management
International methodologies

Tools and methods used

Other, please specify

Internal Company Methods, Reporting protocols and standards from GRI, DTF, CDP and IPIECA. Management Strategies on Freshwater Use, Well Planning and Integrity, and Wastewater Management.

Comment

NRG is a founding member of the Natural Gas Supply Collaborative (NGSC). NRG has worked with this group on establishing environmental and social indicators for natural gas producers, one of which is water. Among the indicators for water are (1) Quantitative: water use (total and freshwater intensity), water testing, spill reporting; (2) Management Strategy (qualitative): freshwater use strategy, well planning and integrity strategy, wastewater management strategy.

We are internally evaluating a supplier engagement strategy for our natural gas suppliers to engage them on water management. For reference see: https://www.mjbradley.com/sites/default/files/NGSCIndicatorsFinal.pdf.

Other stages of the value chain

Coverage

None

Comment

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Water is a key input for many of NRG's power generating stations. Water availability is relevant to NRG's business because individual power generating stations must withdraw water from local basins. Relevance of this issue is assessed by plant staff in the course of regular operations. NRG is a member of local water stakeholder groups that plan for current and future water availability. In Texas, NRG supported a Water Master for the lower Brazos River. The Water Master monitors water use and works with stakeholders to ensure critical water needs are met. NRG is a member of local water stakeholder groups that plan for current and future water availability, which follow the CEO Water Mandate's "Understanding Key Water Stewardship Terms". NRG is a founding member of the Lower Brazos River Coalition to protect water availability and ensure environmental flows to estuaries. The WRI definition of water stress, internal company methods (to assess current water concerns at generating stations that are related to quantity), and regional government databases (USGS and River data are used to assess current conditions) are used for water availability parameters at the local level.
Water quality at a basin/catchment level	Relevant, always included	Water quality at the basin/catchment level is important to our operations because poor quality water requires special treatment before it can be used, which increases costs and adds risks. Relevance of this issue is assessed by plant staff in the course of regular operations. We have designed our approach to water-related risk assessment with the understanding that water issues are site specific. The WRI definition of water stress, internal company methods (to access current water concerns at generating stations that are related to quality), and regional government databases (USGS and River data are used to assess current conditions) are used for water quality parameters at the local level. Individual plant managers assess our operations each month through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws. Our goal for 2019 was to have all of our plants meet their plant-specific targets, and we achieved a 100 percent success result. Water quality of withdrawals is important to our operations, and is measured according to regulatory requirements at

		select generating stations, and on a voluntary basis at other generating stations.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Water is a key input for many of NRG's power generating stations and it is important to understand stakeholder conflicts concerning water resources at the local level in order to ensure our operational needs are able to be supplied. Relevance of this issue is assessed on an ongoing basis by regional operations and government affairs staff through coordination with stakeholder coalitions and governments. NRG tracks, monitors and works to resolve stakeholder conflicts. NRG tracks water requests on the Brazos River and protests all new water requests. The water in the Brazos River is 100% accounted for and additional withdrawals will further stress this basin. Region H develops the water plan for the Houston area and NRG participates by reviewing and providing comments. NRG uses regional government databases, internal company methods and membership in stakeholder coalitions to understand and plan for stakeholder conflicts concerning water resources at a local level. NRG's use of internal knowledge of water needs and regulatory frameworks is used with membership in stakeholder coalitions (Lower Brazos River Coalition), industry groups (Association of Electric Companies of Texas), WRI Aqueduct (water stress modelling), and Regional government database (USGS water data) to resolve stakeholder conflicts.
Implications of water on your key commodities/raw materials	Relevant, always included	NRG uses internal company knowledge and regional government database to assess risk for the current implications of water on key commodities/raw materials. Relevance of this issue is assessed on an ongoing basis by procurement and asset management staff through coordination with stakeholder coalitions and suppliers. The primary raw material that requires water for production is natural gas. Water use in hydraulic fracturing for natural gas extraction is an issue to the industry. NRG monitors the concerns with fracking, the current oil and gas market has reduced fracking and current production is from established well sites. Natural gas is an increasingly important fuel to keep power affordable and to add flexible fast-start capacity that allows faster scaling of renewables on the grid. To encourage responsible natural gas production, NRG has joined with companies that comprise 13% of the market for delivered gas in the U.S. as part of the Natural Gas Supply Collaborative. NGSC members encourage natural gas producers to build on recent progress and continue to

		improve transparency and voluntarily report on the collaborative's previously published 14 social and environmental performance indicators, including water. This type of voluntary reporting goes beyond demonstrating compliance with regulations and helps a company communicate directly with its stakeholders. Water impacts included in the Collaborative's work include Water Use (Total and Freshwater Intensity), Water Testing, Spill Reporting, Freshwater Use Strategy, Well Planning and Integrity Strategy, and Wastewater Management Strategy. Regulators and civil society groups have been engaging natural gas producers for years, but the Collaborative is the first example of major corporate consumers articulating their sustainability priorities as a group. NRG is continuing to engage with the Collaborative to further incentivize production practices that minimize negative environmental and social impact.
Water-related regulatory frameworks	Relevant, always included	Water is a key input for many of NRG's power generating stations and as such, it is important to understand current water regulatory frameworks and tariffs at the local level. Relevance of this issue is assessed on an ongoing basis by government affairs staff through coordination with industry coalitions, regulators, and governments. NRG uses internal company methods, regional government databases, and membership in stakeholder coalitions to assess risk for current water regulatory frameworks and tariffs at a local level. Examples of membership for water regulatory frameworks: • Association of Electric Companies of Texas • Lower Brazos River Coalition • Galveston Bay Foundation • EPRI Environmental Sustainability Interest Group
Status of ecosystems and habitats	Relevant, always included	Ecosystems and habitats at the local level are relevant to NRG's business because they are vital for the health and wellbeing of our employees' and customers' communities and because our operations rely on the availability of water those ecosystems provide. Relevance of this issue is assessed on an ongoing basis by regional operations and environmental staff through coordination with NGOs, stakeholder coalitions, and governments. NRG uses regional government databases, internal company knowledge and Stakeholder Coalitions to monitor the current status of ecosystems and habitats at the local level. NRG conducts annual environmental audits at select generating facilities through a third party consulting firm. Beginning in 2014, these audits include a review of each site's Biodiversity Plan. Facilities review and update

		Biodiversity Plans and existing environmental impact assessments annually using internal company knowledge. NRG is on the board of the Galveston Bay Foundation and works to maintain, restore, and protect habitats. This membership is an example of how NRG stays abreast of local habitat and ecosystem concerns.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	A fully-functioning WASH service for all employees is important to NRG. NRG provides access to fully-functioning WASH services for all employees. Relevance of this issue is assessed on an ongoing basis by onsite plant staff in coordination with corporate asset management. A safe water supply is a legal requirement at all NRG U.S. locations and monitored by each state agency. Internal company methods of facility water systems by the employees at each location is used to collect information about WASH at NRG facilities.
Other contextual issues, please specify	Not considered	

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Relevant, always included	NRG considers customers in water risk assessments. The power grid is dependent on continuous power supply. To ensure that NRG meets production demands internal company knowledge, stakeholder coalitions, WRI Aqueduct and the WBCSD Global Water Tool are used for water risk assessments. NRG also uses internal company knowledge, and regional government databases for water risk assessments. NRG has two primary types of customers. 1) 3 million-plus retail customers that have the power chose their retail power provider. 2) Wholesale and Independent System Operators that purchase power from the generating stations. NRG considers the physical water risks faced by retail customers as well as system operators and wholesale purchasers of electricity. An example of a customer risk consideration is that NRG offers our retail customers the ability to address physical water quantity risk in their communities by conserving water with their selection of an electricity provider. NRG retail brand Green Mountain Energy engages with its customers through the provision of a water saver electricity plan in Texas. Based on extensive

		market research and customer interaction, Texas customers can conserve water by choosing 100% wind energy and receive free water saving products such as irrigation system controllers. Customers are included in water risk assessments because take part in granting NRG its social license to operate, and because their purchasing decisions are integral to NRG's success. An example of wholesale customer risk consideration is one on one discussions with customers regarding shared water risk in a basin or region.
Employees	Relevant, always included	NRG considers employees in water risk assessments. Employees are included in risk assessments because they are the eyes and ears of the NRG operational organization and are able to identify and resolve water related risks and other issues. All facilities have a water expert that leads their generating station in water conservation and reuse. The method of engagement is through environmental recognition programs stations are rewarded for environmental stewardship. Participants use internal company knowledge, to track, report, and identify improvements in water management at NRG generating facilities. Employees that work in NRG offices are encouraged to participate in green teams and become a "Green Ambassador", that look for opportunities to make our offices more sustainable.
Investors	Relevant, always included	NRG considers investors in water risk assessments. Investors are concerned about water issues that may negatively impact power generation and impact earnings. Physical water quantity risk is an example of the type of risk considered. Investing in new efficient, low water use technologies for power generation may assist in modernizing our portfolio of power generation technologies. For example, the Carlsbad peakers (located in California) have dry cooling technology, and were completed and brought online. NRG engages with investors in quarterly earnings calls, annual investor meetings, CDP Climate and Water responses, and annual Sustainability Reporting.
Local communities	Relevant, always included	NRG considers local communities in water risk assessments. There are areas in which NRG generating facilities and the local community rely on the same water source. Local communities are included in risk assessments because they compete for and collaborate to equitably distribute water resources that serve facilities that comprise a large proportion of NRG's gross margin from power generation. Local communities also take part in granting NRG its social license to operate. For example, the South Texas Project nuclear plant withdraws water from the Colorado River, however, the plant does not pull water directly from the river; nor does it discharge directly into the river. Water

		is pulled via pumps into a 7,000-acre reservoir, where it is held for the plant's use. The reservoir that serves the South Texas Project can hold slightly more than 200,000 acre-feet of water. STP is allowed to withdraw 55 percent of the river's flow above 300 cubic feet per second to fill its reservoir. This means the plant can only withdraw water during periods of high availability and gets nothing when the river runs low. This strategy ensures that water in the Colorado River is available for the communities and not in competition with power generation. NRG engages with the community at the South Texas Project nuclear plant, employees serve on school boards, city councils, chambers, navigation districts and charitable organizations. This investment by employees, supported by the company, has resulted in strong community support for STP which, in turn, has championed more than 60 different charitable agencies, schools, organizations and fundraising activities.
NGOs	Relevant, always included	NRG considers NGOs in water risk assessments. NGOs participate in long-term planning for water resources and stakeholder engagement for water discharge permits. NRG works with NGOs to ensure water concerns are addressed. For example the Galveston Bay Foundation works with water basin stakeholders to ensure that there is adequate fresh water inflows for the estuaries along the Texas Gulf Coast. NRG is a Galveston Bay Foundation Board Member, attends meetings, supports research (such as HARC Galveston Bay Report Card), to better understand the issues and supports the efforts to address the issues and improve Galveston Bay. In 2018, NRG leased its 15.4 acre EcoCenter to the Galveston Bay Foundation for $1 per year through 2022, including an administration and training building, a maintenance facility and 24 floodable earthen ponds and two above ground constructed ponds that grow cordgrass.
Other water users at a basin/catchment level	Relevant, always included	NRG considers other water users, including communities, agricultural and industrial users, and many others, in water risk assessments. These users are identified primarily through NRG's participation in stakeholder groups, trade associations, and regional water planning efforts, and risks are analyzed and escalated as relevant by regional Environmental and Regulatory Affairs staff. NRG is a member of local water stakeholder groups that plan for current and future water availability for other water users at a basin/catchment level. For example, NRG is a founding member of the Lower Brazos River Coalition to protect water availability for all and ensure environmental flows to estuaries. Other water users are included in risk assessments because they compete for and collaborate to equitably distribute

		water resources that serve facilities that comprise a large proportion of NRG's gross margin from power generation.
Regulators	Relevant, always included	NRG considers regulators at a local level in water risk assessments. Regulators set reporting standards and implement regulations. This process identifies regulatory risks such the EPA Steam Electric Power Plant Effluent Guidelines Rule and EPA 316(b) requirements. For example, these regulations were included in recent water risk assessments related to the Waukegan Generation Station, where compliance with anticipated ELG (Effluent Limitation Guidelines) and 316(b) requirements was anticipated to add cost. NRG uses Internal Company knowledge of water supply needs, Regional Government databases such as the Texas Commission on Environmental Quality website, and Local Regional Water Membership such as the Texas Industry project to assess regulatory risk. NRG participates in rule making by providing comments and attending stakeholder meetings at the state level.
River basin management authorities	Relevant, always included	NRG considers river basin management authorities in risk assessments. Relevant authorities are identified primarily through NRG's participation in stakeholder groups, trade associations, and regional water planning efforts, and risks are analyzed and escalated as relevant by regional Environmental and Regulatory Affairs staff. NRG is a founding member of the Lower Brazos River Coalition to protect water availability for all and ensure environmental flows to estuaries. NRG supported the addition of a River Master for the lower Brazos River in Texas. The River Master's job is to ensure that flows are met for contract water holders and to work with all stakeholders. This consideration of river basin management authorities is relevant to NRG because WA Parish Generating Station and Limestone Generating Station are both located in the Brazos River basin, and make up a large proportion of NRG's gross margin from power generation. River basin management authorities are included in risk assessments because they manage water resources that serve facilities that comprise a large proportion of NRG's gross margin from power generation.
Statutory special interest groups at a local level	Relevant, always included	NRG considers statutory special interest groups in water risk assessments. Relevant special interest groups are identified primarily through NRG's participation in stakeholder groups, trade associations, and regional water planning efforts, and risks are analyzed and escalated as relevant by regional Environmental and Regulatory Affairs staff. An example of an organization NRG considers in water-related risk assessments The TWDB was established by the legislature and is

		responsible for Texas water planning. The mission of the TWDB is to provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas. The TWDB represents a wide range of stakeholders in the Texas River Basins who are concerned about fair management of water in Texas. These efforts use Internal Company Knowledge and Other: Local/Regional Water Membership. The TWDB consists of 450 regional water planning group voting members. The members are made up of government agencies, concerned individuals, organizations, municipalities, ranchers and farmers, environmentalists and conservationists, businesses and industries, seeking fair and effective water supply management. Statutory special interest groups are included in risk assessments because they control water resources that serve facilities that comprise a large proportion of NRG's gross margin from power generation.
Suppliers	Relevant, not included	While we have engaged our suppliers in the past to disclose water consumption in their value chain, we have refocused our efforts in our renewed and increasing commitments to meet our climate change targets. In the next years or so, we will revisit this effort, prioritize and allocate specific internal resources to engage our suppliers on water related disclosure.
Water utilities at a local level	Relevant, always included	NRG considers water utilities at a local level in water risk assessments. Individual facilities leaders engage with their local water utilities to assess, understand, and escalate water risk to operations as appropriate. Often, this occurs through regional stakeholder or trade groups or partnerships. NRG works with the City of Rosenberg to supply drinking water to city using NRG's pump station. This is of mutual benefit to the city and NRG by controlling costs for the city and utilizing an established pump station. Water utilities are included in risk assessments because NRG operations and local water utilities in many locations depend on the same water source for operations. In addition, some NRG locations depend in part on the local water utility for supply of water needed for operations and treatment of water that is discharged.
Other stakeholder, please specify	Not considered	

W3.3d

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

NRG identifies and assesses water risk for all direct operations using a company-wide risk assessment approach because water risk is linked with other risks, such as air emissions. The risk identification, assessment, and response process applies to both direct operations and supply chain. NRG uses measures, metrics and indicators leveraging management and professional judgment in:

1. Financial impact: Corporate earnings and capital expenditure on technologies to reduce water consumption and withdrawal
2. Plant operation: Operation disruption due to shortage; Increase in water cost; Value chain risks
3. Environmental impact: Availability; Quality of river basins; Regulations on supply or management of water

Water risk is monitored by the risk owners (individual plant operators) on an ongoing basis and reported to management upon material changes with a threshold of 20% in water consumption and withdrawal levels. If determined through risk management analysis appropriate to the scenario that a water supply risk exists that could impact projected generation levels at any plant within a two-year time frame, risk mitigation efforts are identified and economically evaluated for implementation. NRG Plant Ops reviews modelling scenarios generated. Plant water usage is reviewed annually. Analysis is reviewed by the senior leaders of NRG Operations, Engineering and Commercial Operations. On a case by case basis if an issue is identified it is escalated to the appropriate business unit to be addressed in line with risk, context of the issue, and budget. WRI Aqueduct tool is used annually to develop a high-level view of basin level risk that informs strategic decision-making and the setting of goals and targets. This tool was chosen because of its open source nature and ease of use. Each generating facility is unique. The water risk approach identifies and addresses risks for each covering:

1. Availability
2. Quality
3. Regulatory
4. Stakeholders
5. Value chain impacts
6. Financial
7. Operational
8. Environmental

Risk response decisions are primarily made and executed by managing plant operations to maintain compliance with all regulations.

W4. Risks and opportunities

W4.1

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

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

W4.1a

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

NRG's definition of substantive water risk is the possibility that an event will occur and significantly alter the achievement of NRG's business goals. Risk identification and assessment process applies to both direct operations and supply chain. NRG uses the measures, metrics and indicators for water risk assessment leveraging the management and professional judgment from the following perspectives:

Financial impact

1) Corporate earnings
2) Capital expenditure on technologies to reduce water consumption and withdrawal

Plant operation

1) Operation disruption due to water shortage
2) Increase in costs of water usage
3) Value chain risk

Environmental impact

1) Water availability
2) Water quality of river basins
3) Regulations that impact supply and/or management of water

Water risk is monitored by the risk owners (individual plant operators) and reported to management upon material changes with a threshold of 20% in water consumption and withdrawal levels. Water risks for the purposes of this disclosure are considered to have substantive financial impact to NRG's business if they could impact a significant proportion of the company's gross margin from power generation in a given region. An example is the risk of water shortage in the Brazos River and its potential to interrupt operations at the WA Parish plant. If it is determined that a water supply risk exists that could impact projected generation levels within any plant within the subsequent two-year time frame, risk mitigation efforts are identified and economically evaluated for implementation. NRG SVP, Plant Operations reviews modelling scenarios generated for water risk determination. Plant level NRG Water usage analysis is reviewed annually. NRG water usage analysis is reviewed by the senior leaders of NRG Operations, Engineering and Commercial Operations.

W4.1b

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	2	1-25	NRG considers 2 facilities to represent exposure to water risks with the potential to have a substantive financial or strategic impact on our business, comprising less than 25 percent of our company-wide facilities.

W4.1c

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

Country/Area & River basin

United States of America
Brazos River

Number of facilities exposed to water risk

2

% company-wide facilities this represents

1-25

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

1-25

% company's total global revenue that could be affected

21-30

Comment

NRG has 2 stations on the Brazos River, Limestone Generating Station and WA Parish Generating Station that are exposed to water risk. Together, Limestone and WA parish annual gross margins represent a significant amount of NRG's annual economic gross margin of $3,730 million as reported in the company's Form 10-K. The Brazos River has many stakeholders that depend on water. Drought conditions have the potential to make water unavailable for stakeholders.

W4.2

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

Country/Area & River basin

United States of America
Brazos River

Type of risk & Primary risk driver

Physical
Drought

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

NRG has 2 stations on the Brazos River, Limestone Generating Station and WA Parish Generating Station that are exposed to water risk. The Brazos River is important to NRG operations. The Brazos River has many stakeholders that depend on water. The water in the Brazos River is 100% accounted for through water rights. Drought conditions have the potential to make water unavailable for stakeholders. Lack of water availability at these generating stations could lead to interruptions in operations. This impact is current and is modeled to 2060. This risk was identified using internal company methods. NRG Comm Ops Managers and internal forecasting resources manage risk associated with water availability.

Timeframe

1-3 years

Magnitude of potential impact

High

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

0

Potential financial impact figure - maximum (currency)

1,000,000

Explanation of financial impact

2019 gross margins for WA Parish and Limestone Generating Stations are anticipated to be the highest in NRG's Texas fleet total gross margin, reported in the 2018 Form 10-K as $605 million, with 38,214,000 MWh total generated in the region. In the unlikely event of water unavailability in the Brazos River basin, it is assumed that Limestone Generating Station would be most at risk of an operational interruption due to water contracts, with the potential for gross margin losses roughly estimated at $1 million per day.

Primary response to risk

Engage with regulators/policymakers

Description of response

NRG has secured "firm" water supplies through contracts with the Brazos River Authority (BRA) for 150,000 ac.ft/yr through state-issued permits; issued in 1926. The BRA control more than 750,000 ac.ft of water stored in 11 large reservoirs across the Brazos River Basin. "Firm" water is the amount of water that has been modelled by the Texas Commission on Environmental Quality as being available on a year-to-year basis through the 9 year "drought of record" in the Brazos River Basin. NRG was one of several parties that successfully petitioned for implementation of a watermaster program in the Brazos River Basin, a Texas Commission on Environmental Quality program that regulates diverters in accordance with state water law during periods of water shortage.

Cost of response

3,200,000

Explanation of cost of response

These NRG stations are located in the Gulf Coast Region. The cost for firm water and the annual cost of the watermaster (which is paid for by all customers on the Brazos River) are $3.2 million annually for 145,000 acre feet of water. The cost of the strategy is derived from 1 FTE + the cost of the water + the cost of the Watermaster, which is annual.

W4.2a

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

Country/Area & River basin

United States of America
Brazos River

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Reputation & markets

Changes in consumer behavior

Primary potential impact

Constraint to growth

Company-specific description

NRG has identified natural gas as a key focus area in our supply chain. A recent supply chain materiality assessment showed our riskiest spend categories are associated with fuels (supply and transport), and spending data analyzed in the assessment suggested that NRG should prioritize risk reduction in natural gas due to the shifting asset base. Natural gas, which makes up more than 42% of our nameplate capacity, is an increasingly important fuel to keep power affordable and to add flexible fast-start capacity that allows faster scaling of renewables on the grid, and as a result it will be vital to NRG's supply chain for years to come. Lack of visibility into water impacts in the natural gas supply chain poses a risk to NRG.

Timeframe

4-6 years

Magnitude of potential impact

Medium

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Many variables are involved in this value chain risk, and the first step toward developing an understanding of the financial impact is to increase our visibility into the magnitude of the risk through increased disclosure by suppliers and continued assessment of our value chain.

Primary response to risk

Supplier engagement

Promote adoption of waste water management procedures among suppliers

Description of response

To encourage responsible natural gas production, NRG partners with 12 companies that comprise more than 13% of the market for delivered gas in the U.S. as part of the Natural Gas Supply Collaborative. NGSC members encourage natural gas producers to build on recent progress and continue to improve transparency and voluntarily report on the collaborative's environmental performance indicators, including water, detailed in the October 2017 report "Environmental and Social Performance Indicators for Natural Gas Production." Regulators and civil society groups have been engaging natural gas producers for years, but the Collaborative is the first example of major corporate consumers articulating their sustainability priorities as a group. NRG is continuing to engage with the Collaborative to further provide incentives to production practices that minimize negative environmental and social impact. Water impacts included in the Collaborative's report include Water Use (Total and Freshwater Intensity), Water Testing, Spill Reporting, Freshwater Use Strategy, Well Planning and Integrity Strategy, and Wastewater Management Strategy.

Cost of response

40,000

Explanation of cost of response

20% of 1 FTE to develop NRG's approach to responsible sourcing and engage with Natural Gas Supply Collaborative (NGSC) in 2019.

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

Climate change may affect the availability of a secure and economical supply of water in some locations, which is essential for the continued operation of NRG's generation plants. As such, the ability to conserve water use is advantageous.

Through internal and third-party water audits, NRG has identified its plant in the generation fleet located at Joliet, Illinois, with the opportunity to reduce its water use

while idling. This plant is kept online at times without generating electricity, and pumps continue to run to keep the plant ready. Evaluation is on-going to quantify the magnitude of the potential financial impact of the water being used vs. the potential solutions. In 2019, we submitted a permit application for implementation and the application process is still on-going . We anticipate project implementation, at the very least, in 2021.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Low-medium

Are you able to provide a potential financial impact figure?

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

Many variables may be involved in the increased water use at the plant, including a repowering to natural gas, changes in idling durations, and changes in net capacity factor. As a result, financial impact of potential solutions is complex to calculate and will happen later in the project once variables have been adequately analyzed.

W5. Facility-level water accounting

W5.1

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

Facility reference number

Facility 1

Facility name (optional)

Limestone Generating Station

Country/Area & River basin

United States of America

Brazos River

Latitude

31.4231

Longitude

-96.2526

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Coal - hard

Total water withdrawals at this facility (megaliters/year)

21,057

Comparison of total withdrawals with previous reporting year

About the same

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

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

21,057

Comparison of total consumption with previous reporting year

Higher

Please explain

The Limestone Generating Station maintains waste water discharge permit; it did not discharge in 2019. This station has operated as a zero-discharge facility for 12 years. Freshwater is pumped from Lake Limestone to supply water to cooling towers. The amount of water consumed is directly correlated with the withdrawal increase. Increase is due to increased generation due to market conditions. Withdrawal and Discharge are directly measured. Consumption is calculated.

Facility reference number

Facility 2

Facility name (optional)

WA Parish Generating Station

Country/Area & River basin

United States of America
Brazos River

Latitude

29.4754

Longitude

-95.6322

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Coal - hard

Total water withdrawals at this facility (megaliters/year)

68,990

Comparison of total withdrawals with previous reporting year

Lower

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

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

15,890

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

53,100

Comparison of total consumption with previous reporting year

Higher

Please explain

Fresh surface water is withdrawn from the Brazos to Smithers Lake to cool the WA Parish facility. Groundwater is used for WASH and steam. Rain is diverted to Smithers Lake. Fuels are coal and natural gas. Consumption increased due to increased runtimes. Withdrawal and Discharge are directly measured. Consumption is calculated.

W5.1a

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

Water withdrawals – total volumes

% verified

76-100

What standard and methodology was used?

The review was conducted in accordance with the attestation standards established by the American Institute of Certified Public Accountants. Total water withdrawals-total volumes include total withdrawals. Municipal water utility is determined from invoices. Surface water and ground water is determined by company owned metering devices, pump operating characteristics with pump operating logs, water balance engineering estimates, rainfall data applied to surface areas with run-off coefficients.

Water withdrawals – volume by source

% verified

76-100

What standard and methodology was used?

The review was conducted in accordance with the attestation standards established by the American Institute of Certified Public Accountants. The review includes total withdrawals from surface water (lakes, rivers or oceans), ground water, rainwater and municipal water utilities. Municipal water utility is determined from invoices.

Water withdrawals – quality

% verified

Not verified

Water discharges – total volumes

% verified

76-100

What standard and methodology was used?

The review was conducted in accordance with the attestation standards established by the American Institute of Certified Public Accountants. Total water discharge is the total of all water discharge reported by each facility in its monthly Discharge Monitoring Report (DMR) to maintain compliance with waste water discharge permits and discharges to publicly owned treatment works determined by volumes indicated on water/sewer invoices.

Water discharges – volume by destination

% verified

76-100

What standard and methodology was used?

The review was conducted in accordance with the attestation standards established by the American Institute of Certified Public Accountants. Total water discharge is the total of all water discharge reported by each facility in its monthly Discharge Monitoring Report (DMR) to maintain compliance with waste water discharge permits and discharges to publicly owned treatment works determined by volumes indicated on water/sewer invoices.

Water discharges – volume by treatment method

% verified

76-100

What standard and methodology was used?

All discharges are regulated by state environmental agencies and are regulated by NPDES permits. Permits require water testing to meet EPA and/or Standard Methods. Water testing laboratories are required to be NELAC accredited.

Water discharge quality – quality by standard effluent parameters

% verified

76-100

What standard and methodology was used?

All discharges are regulated by state environmental agencies and are regulated by waste water discharge permits. Permits require water testing to meet EPA and/or Standard Methods. Water testing laboratories are required to be NELAC accredited.

Water discharge quality – temperature

% verified

76-100

What standard and methodology was used?

All discharges are regulated by state environmental agencies and are regulated by waste water discharge permits. Permits require water testing to meet EPA and/or Standard Methods. Water testing laboratories are required to be NELAC accredited.

Water consumption – total volume

% verified

76-100

What standard and methodology was used?

The review was conducted in accordance with the attestation standards established by the American Institute of Certified Public Accountants. The difference between total quantity of water withdrawn and total quantity of water discharged in cubic meters for the year ending December 31, 2018 at the Company's facilities under operational control.

Water recycled/reused

% verified

Not verified

W6. Governance

W6.1

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

Yes, we have a documented water policy, but it is not publicly available

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance	Water availability and quality are material sustainability issues for NRG. Power generating operations account for 99.9% of water withdrawn. NRG's water policy is incorporated in the 1/2014 environmental policy and sets performance standards for direct operations to meet or exceed applicable laws related to water; reduce our environmental impacts by integrating water-related considerations in business ops and strategy, operate efficiently, use cleaner, cost effective technologies; promote biodiversity; engage in the regulatory process; and measure the effectiveness of water programs. The policy supports international standards and recognized initiatives including GRI, DJSI, and CDP. It also includes reference to responding to procurement data requests from customers and NGOs. The Environmental Group, our policy implementing entity, will assist with sustainability reporting such as the NRG Sustainability Report, the Global Reporting Initiative (GRI) table and other

		Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	voluntary reporting or benchmarking determined by NRG. The Environmental Group also provides data required to complete U.S. Securities and Exchange Commission (SEC) disclosure. The water policy is aligned with the company's water targets and goals, including the 2016 reduction goal. NRG's operates primarily in the United States and it is a federal requirement to provide WASH for all employees.

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Board-level committee	NRG water resources, compliance, regulatory issues are discussed with the board. The Governance & Nominating Committee (which hears briefings from the Chief Sustainability Officer [VP Sustainability] at least twice annually) handles water issues including the nature, ambition, and timescale of goals; the assessment of environmental water risks; and the overall direction of the company's water strategy as formulated by Sustainability, Environmental, and Regulatory staff. This board committee's risk oversight focus areas include: "Strategies and efforts to manage the company's environmental, economic and social impacts, including, environmental,

	climate change and sustainability policies and programs," which include water. Other committees and the board as a whole will also deal with water issues as relevant, for instance a water issue related to the South Texas Project nuclear power plant would be overseen by the Nuclear Oversight Committee; a water risk issue materially impacting the company financially would be overseen by the Finance and Risk Management Committee. In 2019, there are no water related issues that would require a board-level committee decision.

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 acquisitions and divestiture Overseeing major capital expenditures Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy	In 2019, the NRG board's Governance and Nominating Committee continued to oversee strategies and efforts to manage environmental, economic and social impacts, including environmental, climate change and sustainability policies and programs. This includes water-related issues. NRG's VP of Sustainability presents updates more than half yearly. In addition, other disciplines (Engineering & Construction, Asset Management, Environmental and Government Affairs) present at other cadences and may include a discussion of water where relevant to the matter presented. A typical board update from the VP of Sustainability includes progress and projections on achievement of NRG climate and water goals. As with other organizations that have chosen to make sustainability part of their strategic imperative, sustainability at NRG means driving business results, reducing risk and enhancing the company's brand value. Sustainable Business lies at the core of our five-pillar strategy because it encompasses initiatives that embed sustainability in the organization. This includes our objectives for NRG to be recognized as a leader on transparency to measure key sustainable business goals and to manage stakeholder engagement. Our Sustainable Business strategy ties financial performance with

			decarbonization efforts. It also advances dialogue around future corporate reporting while engaging with our broad stakeholder network. This is supported by a strong governance structure that starts with the Board of Directors and the CEO and extends to all business leaders within our organization. The governance mechanisms into which NRG integrates water-related issues contribute to the board's oversight of those issues by acknowledging that water is an integral aspect of a wide-ranging and diverse set of business imperatives – not simply an operational issue at the plant level. Along with financial objectives, company sustainability objectives including water reduction goals are integrated into long-term business planning for fossil fuel generation, including the overall types of plants that may be of strategic interest in the company's mergers, acquisitions, and divestitures plans. All major decisions are reviewed by the board to specifically assess exposure to and management of sustainability-related risks, including water risk.

W6.3

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

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

Chief Sustainability Officer (CSO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The NRG Chief Sustainability Officer (CSO) has responsibility for water related issues, and reports to the Senior VP-Corporate Affairs, who reports to the CEO. CSO duties related to water include coordination with SVP, Environmental/Asst. General Counsel, Environmental Policy to ensure alignment on water reporting; leadership of water strategy including public commitments; and alignment with standards (UN SDGs). CSO leads staff that work with risk, finance, environmental, regulatory, and plant staff to manage water. In 2019, the board's Governance and Nominating Committee oversaw

efforts to impact environmental, climate change and sustainability policies and programs. Outcomes of water issues are reported to CDP and in Sustainability Report. The water portion of the report to the Board typically contains relevant water-related issues, eg. progress toward achievement of water target, and an opportunity for the Board to provide substantive input.

W6.4

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

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

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?

NRG engages in activities to directly and indirectly influence public policy on water. In 2019 NRG continues to engaged with policy makers and indirectly engaged in policy influence through trade associations. The development of all significant policy positions is coordinated through appropriate senior management, ensuring overall consistency with NRG's water stewardship strategy. NRG is a member of trade associations that engage generally in education and advocacy efforts on a number of industry issues. The Company's Policy provides additional information regarding criteria for, and oversight of, the Company's participation in these associations. The political activity of such associations is not necessarily representative of a position of the Company, and the benefits that the Company receives from these trade or business associations are primarily expertise and the ability to gain insight on industry-setting standards. Payments made to business or trade associations are subject to the Company's Political Contribution Policy and are reviewed annually by the Governance and Nominating Committee. All NRG's policy positions that are published or disclosed go through a consistent review process involving NRG's Investor Relations, Legal, Marketing and Communication teams. If inconsistency is discovered at any point in the process, the Legal department acts as the final arbiter to correct the inconsistency with relevant subject matter experts.

W6.6

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

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

NRG 2019 10-K Final.pdf

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	Water issues are integrated into NRG's long-term business objectives. Along with financial objectives, company sustainability objectives including water reduction goals are integrated into long-term business planning for fossil fuel generation, including the overall types of plants that may be of strategic interest in the company's mergers, acquisitions, and divestitures plans. NRG's long-term business objectives include investment in other low water use businesses, including refocused participation in the renewables marketplace. For example, in 2018 NRG Business Solutions rolled out Renewable Select, an offsite renewable energy solution that helps shift the company's revenue center (and customers' energy buying options) from fossil fuel generation to less water- and GHG-intensive processes. Long-term plans are made by business units as well as the Strategy team and aligned with water use reduction goals set by the Sustainability team in close collaboration with other business units charged with forecasting business opportunities, challenges, and needs.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	Water issues are integrated into NRG's long-term business strategy. Company water reduction goals are integrated into long-term business planning for fossil fuel generation, including the overall types of plants that may be of strategic interest in the company's mergers, acquisitions, and divestitures plans. Individual generation plant long-term planning integrates water availability, quality, regulatory and reputational water risk, and cost. Water availability is also considered in

			long-term strategic planning for new lines of business, for instance the ongoing integration of water audit availability for customers into the new NRG Business Solutions Energy Efficiency division as well as the long-term plan to invest to grow NRG's 3-million customer Retail business, as a low water use source of revenue generation. NRG's long-term plans include investment in other low water use businesses, including refocused participation in the renewables marketplace.
Financial planning	Yes, water-related issues are integrated	11-15	Company water reduction goals are integrated into short and long-term financial planning for fossil fuel generation, especially around the negotiation of water contracts and long-term water rights protection in river basins with the potential to experience scarcity. For example, as a founding member of the Lower Brazos River Coalition, NRG works closely with fellow stakeholders to protect water availability for all, a long-term financial planning measure in addition to a water stewardship activity. Goals are integrated into financial planning around the types of plants that may be of strategic interest in the company's M&A and divestitures plans. Individual plant long-term financial planning integrates water availability, quality, regulatory and reputational water risk, and cost. Water availability is also considered in strategic planning for new lines of business, i.e. water audit availability for customers of Energy Efficiency solutions and the long-term plan to invest to grow NRG's Retail business as a low water use revenue generator. NRG's long-term plans include investment in other low water use businesses, including refocused participation in the renewables marketplace.

W7.2

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

Row 1

Water-related CAPEX (+/- % change)

26

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

10

Water-related OPEX (+/- % change)

-0.7

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

-5

Please explain

Water OPEX such as water supply costs, permits renewals, periodic on-site and off-site training for staff and equipment maintenance, remained nearly constant due to few new operations-related projects. CapEx spend such as current and future equipment and fixture change outs and periodic installations of water pollution prevention devices where necessary, are expected to increase slightly over the 5-year plan (when compared to 2017), mostly due to projects associated with compliance with new or modified regulations including 316(b). OpEx spend will decrease by about 5% over the next 5 years, due primarily to continuing decrease in water related O&M projects and changes in operating profile.

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	NRG uses qualitative climate-related scenario analysis but we plan to add quantitative in the next two years. NRG's strategy addresses long and short term risks and opportunities and aims to reduce the company's own GHG risks and those of its customers. We believe carbon is one of the biggest sources of risk in our portfolio. We already pay for carbon emissions under RGGI and AB32 and carbon taxes are a growing possibility. Other physical risks include sea level rise and extreme weather events which can affect the productivity of our power generating assets as well as customer demand. NRG's most substantive decision to date is the setting of our certified science-based targets that remain some of the industry's most aggressive. NRG remains committed to executing against our goals to reduce carbon emissions from a 2014 baseline by 50% by 2025 and net-zero by 2050. This is aligned with the 1.5 degree celsius pathway put forth by the 2015 Paris Agreement.

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, but we are currently exploring water valuation practices

Please explain

NRG recognizes that the true value of water is not accounted for in many markets and that the costs of treatment and delivery, as well as opportunity costs and environmental and social costs, are not well captured. Diverse water contract structures and costs as well as differences between basin ecosystems adds complexity to the consistent valuation of water in markets across the business, which we continue to evaluate.

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	Company-wide targets and goals Site/facility specific targets and/or goals Brand/product specific targets and/or goals Basin specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	Ensuring success and clearly communicating our ambition around water stewardship requires setting goals and tracking and reporting progress. NRG does not set public goals for every key water performance indicator we track in order to simplify stakeholder communication. We aim to continually (annually or more frequently) evaluate the relevance as well as the progress of our goals and targets to ensure that we incorporate emerging risks and opportunities. There is no single process to set goals and targets. For instance, in 2016 NRG set a goal to reduce water withdrawal 40 percent by 2030 from 2014 levels. This goal was set by a water working group led by Sustainability and comprising leaders and hands-on staff from divisions across the company that dealt with water,

			including Commercial Operations, Environmental, Engineering and Construction, Asset Management, Business Operations, and Regulatory Affairs. The water working group met quarterly over the period of a year with the objective of steering water strategy and setting a goal. The objective was to include the right expertise from across the company to understand once-through cooling at power plants, business strategies such as repowering plants from coal to gas, capacity factor net decreases due to market conditions, and ecological concerns. Other goals and targets are set based on basic-specific issues.

W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

Target reference number

Target 1

Category of target

Water withdrawals

Level

Company-wide

Primary motivation

Water stewardship

Description of target

In 2016 NRG set a target to reduce water withdrawal 40 percent by 2030 from a 2014 baseline across all of NRG's direct operations, including 35 generation facilities, one repair station, and offices.

Quantitative metric

% reduction in total water withdrawals

Baseline year

2014

Start year

2016

Target year

2030

% of target achieved

39

Please explain

In 2019 our withdrawals were 39% less than in 2014. The primary direct use of this water is cooling of condensers during power generation. We have designed our approach to water management with the understanding that water issues are site-specific. Changes to the composition of our generation fleet and market conditions have added complexity to our expected pathway to achieving this goal, creating a changing baseline. Using less water remains a priority, and we are evaluating how to have a more consistent impact on water in the environment and in the communities where we operate if our business composition changes.

W8.1b

(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.

Goal

Watershed remediation and habitat restoration, ecosystem preservation

Level

Site/facility

Motivation

Risk mitigation

Description of goal

With 4,390,248 megaliters of water discharged per year, it is important for NRG to set goals that reduce risk and consider the health of water basins NRG and our communities rely on. Water pollution prevention is an annual goal; each facility has a goal of zero permit exceedances. NRG has 59 stormwater and/or wastewater discharge permits; the goal for permit compliance is 100%. Each generation facility has assigned Environmental professionals responsible for monitoring compliance. We assess our operations each month through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws.

Baseline year

2017

Start year

2018

End year

2019

Progress

Our goal for 2019 was to have all of our plants meet their plant-specific targets such as water pollution prevention and zero permit exceedances. We assess our operations through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws.

EKPIs are reported monthly via a Q&A module in Intelex, an EH&SQ management software that collects environmental data to track facilities' risks, performance and compliance. Each of the company's Environmental Compliance Specialists (ECS) assigned to monitor our operations facilities are required to complete and submit the EKPI report by the 7th of each month. The Facility Manager and Environmental Manager/Director must then review and approve the EKPI report by the 10th of the month. Intelex, in turn, is evaluated periodically by Environmental Compliance and improvements will be made as appropriate. Intelex are reviewed to:

1. ensure that it continues to support environmental requirements and responsibilities;
2. verify that it is effectively producing desired results and performance; and
3. facilitate continual improvement of environmental performance.

In 2019, all our plants meet their respective targets. As such, we achieved a 100 percent success result.

W9. Verification

W9.1

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

No, we are waiting for more mature verification standards and/or processes

W10. 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.

1. NRG 2019 Sustainability Report
2. NRG 2019 10-K Report

2019-nrg-sustainability-report.pdf

W10.1

(W10.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer	Chief Executive Officer (CEO)

W10.2

(W10.2) 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 how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms